

Department of Psychology  
Center for Complex Systems and Brain Sciences  
Florida Atlantic University 777 Glades Avenue  
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## ***Professional Positions***

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**Associate Professor**, Florida Atlantic University, Department of Psychology/Center for Complex Systems and Brain Sciences, 2013-Present

**Assistant Professor**, Florida Atlantic University, Department of Psychology/Center for Complex Systems and Brain Sciences, 2007-2013

**Postdoctoral Research Fellow**, Brown University, Department of Cognitive and Linguistic Sciences, 2004-2007. Supervisor: Dr. Michael Tarr

## ***Education***

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**Ph.D., Psychology**, Rutgers, The State University of New Jersey, New Brunswick, NJ, 2004.

Dissertation: *What does the deforming contour tell us about shape?*

Advisor: Dr. Jacob Feldman

**Certificate of Cognitive Science**, Rutgers University Center for Cognitive Science, Rutgers, The State University of New Jersey, New Brunswick, NJ, 2004.

**M.S., Psychology**, Rutgers, The State University of New Jersey, New Brunswick, NJ, 2002.

Thesis: *Visual comparison within and between object parts.*

Advisor: Dr. Jacob Feldman

**B.A., Psychology**, *Summa Cum Laude*, Yeshiva University, New York, NY, 1997-1999.

## ***Grants***

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Graduate Traineeship in Data Science Technologies and Applications, National Science Foundation SF Research Traineeship (NRT)  
Total Award: \$2.4 million

National Drug Early Warning System, National Institute of Drug Abuse (NIDA/NIH). 7/01/2018-01/29/2020. Total Award: \$261,625

Development of a Gaze and Speech-Behavior Based Cognitive Exam to Assist in the Detection of Early-Stage Alzheimer's Disease and Related Disorders, Ed and Ethel Moore Alzheimer's Disease Research Program, Florida Department of Health; 01/15/2020-01/14/2019. Total Award: \$99,863

Deep learning of human gestures for control of an autonomous drone, DroneData Corp. Total Award: \$10,441

DroneData High Performance Compute Grant: 1/2018-12/30/18, Total Award: \$21,000

National Science Foundation, "Identifying Objects Within Scenes: Combining Context and Features in Visual Object Recognition". E. Barenholtz, P.I. 2010 Award Amount: \$196,647

National Geospatial Intelligence Agency (NGA) HM1582-04-C-0051, "Visual Perception of Articulating Objects," E. Barenholtz and M. Tarr, P.I.s, 2004-2007. Award Amount: \$494,352

## *Development*

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Rubin and Cindy Gruber Excellence Fund. Multiple Donors (2015-Present): \$120,000

The Rubin and Cindy Gruber Sandbox (2019). The Rubin Gruber Foundation: \$1,000,000,000

Quadraped Robotic platform and data storage server. DroneData (\$60,000)

GPU Hardware (2018). Nvidia (\$12,000)

## *Refereed Publications (Student names in italics)*

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*Kleiman, M.J., Barenholtz, E.* and Galvin, J. (In Press) Screening for early-stage Alzheimer's disease using optimized feature sets and machine learning. *Journal of Alzheimer's Disease*.

*Daskagianni, E.* and **Barenholtz, E.** (In Press). The contribution of different contextual informational sources in visual object recognition. *Visual Cognition*

Cottler, L. B., Goldberger, B. A., Nixon, S. J., Striley, C. W., **Barenholtz, E.**, *Fitzgerald, N. D* & Palamar, J. J. (2020). Introducing NIDA's New National Drug Early Warning System. *Drug and Alcohol Dependence*.

*Morris, P., St. Clair, R., Hahn, W.H.* and **Barenholtz, E.** (2020) Predicting Binding from Screening Assays with Transformer Network Embeddings. *Journal of Chemical Information and Modeling*

Sarangi, V., Pelah, A., Hahn, W. E., & **Barenholtz, E.** (2020). Neural and Neuromimetic Perception: A Comparative Study of Gender Classification from Human Gait. *Electronic Imaging, 2020(11)*, 10402-1.

**Barenholtz, E.**, *Fitzgerald, N. D.*, & Hahn, W. E. (2020). Machine-learning approaches to substance-abuse research: emerging trends and their implications. *Current Opinion in Psychiatry*, 33(4), 334-342.

Sarangi, V., Pelah, A., Hahn, W. E., & **Barenholtz, E.** (2020). Gender Perception From Gait: A Comparison Between Biological, Biomimetic and Non-biomimetic Learning Paradigms. *Frontiers in human neuroscience*, 14.

*Kleiman, M.* and **Barenholtz, E.** (2020) Perception of being observed by a speaker alters gaze behavior. *Attention, Perception and Psychophysics*

*Stark, E. N., Covington, J. A., Agbroko, S., Peng, C., Hahn, W. E., & Barenholtz, E.* (2019). Deep Learning Investigation of Mass Spectrometry Analysis from Melanoma Samples. In *2019 IEEE International Symposium on Olfaction and Electronic Nose (ISOEN)* (pp. 1-4). IEEE.

*Stark, E\*, Hoover, S\*, DeCesare, A., & Barenholtz, E.* (2018). Medicine Has Gone to the Dogs: Deep Learning and Robotic Olfaction to Mimic Working Dogs. *IEEE Technology and Society Magazine*, 37, 55-60.

*Morris, P., DaSilva, Y., Clark, E., Hahn, W. E., & Barenholtz, E.* (2018). Convolutional neural networks for predicting molecular binding affinity to HIV-1 proteins. In *Proceedings of the 2018 ACM International Conference on Bioinformatics, Computational Biology, and Health Informatics* (pp. 220-225). ACM.

*Teti, M., Barenholtz E., Martin, S.* and Hahn, W. (2018). A Systematic Comparison of Deep Learning Architectures in an Autonomous Vehicle. *Arxiv*

McGuire, M. *Morris, P., Garcia, W., Martin, S., Tutuianu, N.* and Barenholtz, E. (2017). Q-Learning in an Autonomous Rover. *FAU Undergraduate Research Journal*

*Hahn, W. Teti, M* and **Barenholtz, E.** X<sup>3</sup>: A biologically inspired, high-speed algorithm for feature learning. Proceedings of the 2018 Neuro Inspired Computational Elements Workshop, Hillsboro, OR.

*McGuire, M. Morris, P. Garcia, W. Tutuianu, N.* Hahn, W. and **Barenholtz, E.** (2017). Q-Learning in an autonomous rover. *Florida Atlantic University Undergraduate Research Journal*.

**Barenholtz, E., Mavica, Lauren\***, & Lewkowicz, D.J. (2016). Language familiarity modulates relative attention to the eyes and mouth of a talker. *Cognition*. (147), 100-105.

Schlangen, D.\* and **Barenholtz, E.** (2015). Intrinsic and contextual features in object recognition. *Journal of Vision*, 15, 1-15.

Hahn, W., LaCombe, D. and **Barenholtz, E.** A sparse neural model for visual motion classification. (2015) *Multimedia Tools and Applications*, 74, 10097-10110.

Daskagianni, E. and **Barenholtz, E.** (2014). Contextual facilitation of visual object recognition: the role of context, location and relative size. *Journal of Experimental Psychology: Human Perception and Performance*

**Barenholtz, E.**, Lewkowicz, D. J., Mavica, L., & Davidson, M. (2014). Categorical congruence facilitates multisensory associative learning. *Psychonomic Bulletin & Review*. Advance online publication. doi:10.3758/s13423-014-0612-7.

**Barenholtz, E.** (2013) Quantifying the Role of Context in Visual Object Recognition, *Visual Cognition* (21), 1-27

Mavica, L. and **Barenholtz, E.** (2013). Matching voice and face identity from static images. *Journal of Experimental Psychology: Human Perception and Performance*, 39, 307–312

**Barenholtz, E.**, Davidson, M. and Lewkowicz, D. (2011). Multisensory Associative-Pair Learning: Evidence for ‘Unitization’ as a specialized mechanism. *Proceedings of the Cognitive Sciences Society*, 33, 225-230

**Barenholtz, E.** and Tarr, M.J. (2011). Visual Learning of Statistical Relations Among Non-adjacent Features: Evidence for Structural Encoding. *Visual Cognition*, 19, 469-475.

Marques, O. **Barenholtz, E.** and Charvillat, V. (2010). Context modeling in computer vision: techniques, implications, and applications. *International Journal of Multimedia Tools and Applications*.

**Barenholtz, E.** (2010). Convexities move because they contain matter. *Journal of Vision*.

**Barenholtz, E.** & Tarr, M. J. (2009). Figure–ground assignment to a translating contour: A preference for advancing vs. receding motion. *Journal of Vision*, 9, 1-9.

**Barenholtz, E.** & Tarr, M.J. (2008). Visual judgment of similarity across shape transformations: Evidence for a compositional model of articulated objects. *Acta Psychologica*, 128, 331-338.

**Barenholtz, E.** & Tarr, M.J. (2007) Reconsidering the role of structure in vision. *The Psychology of Learning and Motivation*, Vol. 47, Markman, A., & Ross, B. (Eds.).

**Barenholtz, E.** & Feldman, J. (2006). Determination of visual figure and ground in dynamically deforming shapes. *Cognition*, 101, 530-544.

Cohen, E.H., **Barenholtz, E.**, Feldman, J. & Singh, M. (2005). What change detection tells us about the visual representation of shape. *Journal of Vision*, 5, 313-321.

**Barenholtz, E.**, Cohen, E.H., Feldman, J. & Singh, M. (2003). Detection of change in shape: An advantage for concavities. *Cognition*, 89, 1-9.

**Barenholtz, E.** & Feldman, J. (2003) Visual comparisons within and between object-parts: Evidence for a single-part superiority effect. *Vision Research*, 43, 1655-1666.

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## **Books**

Barenholtz, E., Burton, C., Mavica, L. and Wehe, H. (2018) *Cognitive Psychology: A Top Hat Interactive Text*. 2nd ed. Toronto, ON: Top Hat Monocle

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## **Conference Presentations**

Evan Clark, William Edward Hahn, Rachel St Clair, Paul Morris, Michael Teti and **Elan Barenholtz**. Advances in deep learning and their applied utility toward chemical informatics & drug discovery. Presentation at the American Chemical Society Spring 2019 National Meeting & Exposition

Paul Morris, Rachel St Clair, Mike Teti, Evan Clark, William Hahn and **Elan Barenholtz**. Virtual high-throughput screening: A combined deep-learning approach. Presentation at the American Chemical Society Spring 2019 National Meeting & Exposition

Teti, Dr. William Hahn, and **Elan Barenholtz**, Twice the Speed Accelerating Deep RL With Compressed Sensing. 2019 Neuro-Inspired Computational Elements Workshop

Hahn, William Edward, Teti, Michael and **Elan Barenholtz** X3: A biologically inspired, high-speed algorithm for feature learning. 2019 Neuro-Inspired Computational Elements Workshop

Teti, Michael, **Elan Barenholtz** and William Hahn. A Systematic Comparison of Deep Learning Architectures in an Autonomous-Vehicle. GTC 2018.

Teti, Michael, William Hahn, and **Elan Barenholtz**. Detecting Wading Bird Presence in Time-Lapse Images with a Convolutional Neural Network. *NCUR 2017*

Oliveira, S., Islam, M., Augustin, R., Whitney, S. and Barenholtz, E. The effect of stereoscopic cues on multiple object tracking in a 3D virtual environment *Annual Meeting of the Vision Sciences Society, 2017*.

Kleiman, M. and Barenholtz, E. You lookin' at me? Perception of a real-time dyadic interaction influences gaze behavior *Annual Meeting of the Vision Sciences Society, 2017*.

Kleiman, M. and **Barenholtz, E.** Can you see me? Eye fixations of the face are modulated by perception of a bidirectional social interaction.

Schlangen, D. and **Barenholtz, E.** The effect of familiar and unfamiliar context in peripheral object recognition. Presented at the 2015 meeting of the Vision Sciences Society, St. Pete, FL.

Schlangen, D. and **Barenholtz, E.** Object recognition: Features and parts. Intrinsic versus contextual features in object recognition. Presented at the 2014 meeting of the Vision Sciences Society, St. Pete, FL.

**Barenholtz, E.** and Islam, M. Parallel processing of multiple object identities from an ambiguous image: evidence from negative priming in a lexical decision task. Presented at the 2014 meeting of the Vision Sciences Society, St. Pete, FL.

Hahn, W. and **Barenholtz, E.** Alpha-Stable Distributions and Saccadic Foraging. Presented at the 2014 meeting of the Vision Sciences Society, St. Pete, FL.

Rashford, S. and **Barenholtz, E.** The effects of spatial organization on numerosity judgments in real-world scenes, St. Pete, FL.

Mavica, L. and **Barenholtz, E.** Eye fixations during encoding of familiar and unfamiliar languages. Presented at the 2013 meeting of the Vision Sciences Society, Naples FL.

**Barenholtz, E.** and Nemire, B. Visual search in natural scenes: efficient allocation of fixations to horizontal support surfaces. Presented at the 2013 meeting of the Vision Sciences Society, Naples FL.

Mavica, L. and **Barenholtz, E. and Lewkiwicz, D.** Eye fixations during encoding of familiar and unfamiliar language encoding. *Meeting of the Vision Sciences Society, 2013*

**Barenholtz, E.** and Nemire, B., Visual search in natural scenes: efficient allocation of fixations to horizontal support surfaces. . *Meeting of the Vision Sciences Society, 2013*

**Barenholtz, E.** and Daskagianni. Recognizing real-world objects: the role of familiarity, context and features. *Meeting of the Vision Sciences Society, 2012*

Schlangen, D. and **Barenholtz, E.** Recognizing objects based on location. *Meeting of the Vision Sciences Society, 2012*

Kogelschatz, L. and **Barenholtz, E.** Matching voice and face identity from static images. *Meeting of the Vision Sciences Society, 2012*

**Barenholtz, E.** and Daskagianni. The composition of context: assessing the contribution of different types of scene information in visual object recognition. *Meeting of the Vision Sciences Society, 2011*

**Barenholtz, E.** and Heine, V. Not all Relations are Created Equal: Functional vs. Categorical Relations in Picture-Pair Memory. *Annual meeting of the Psychonomic Society. 2011*

**Barenholtz, E.,** Davidson, M., Lewkowicz, D. and Kogelschatz, L. Learning to bind faces and voices: evidence for a gender-congruency advantage. *Annual meeting of the Vision Science Society, Naples, FL, 2010.*

Kogelschatz, L. **and Barenholtz, E.** How do we recognize our own stuff? Expert vs. generic recognition of household items. *Annual meeting of the Vision Science Society, Naples, FL, 2010.*

**Barenholtz, E.** Quantifying the role of context in visual object recognition. *Annual meeting of the Vision Science Society, Naples, FL, 2009.*

**Barenholtz, E.,** *Convexities move, concavities follow.* Annual meeting of the Vision Science Society, Naples, FL, 2008.

**Barenholtz, E. & Tarr, M.J.,** *Unsupervised learning of higher order statistics of visual features: Evidence for relational encoding.* Annual meeting of the Vision Science Society, Sarasota, FL, 2007.

**Barenholtz, E. & Tarr, M.J.,** *Shape shifters: Visual judgments of similarity across shape transformations.* Annual meeting of the Vision Science Society, Sarasota, FL, 2006.

Vettel, J., **Barenholtz, E. & Tarr, M.J.,** *A dynamic cue for figure ground assignment: Advancing vs. receding.* Annual meeting of the Vision Science Society, Sarasota, FL, 2006.

**Barenholtz, E. & Feldman, J.,** *Determination of figure and ground in dynamically transforming shapes.* Annual meeting of the Vision Science Society, Sarasota, FL, 2005.

**Barenholtz, E.,** Cohen, E.H., Feldman, J. & Singh, M., *Non-accidental properties and change detection.* Annual meeting of the Vision Science Society, Sarasota, FL, 2003.

Cohen, E.H., **Barenholtz, E.,** Feldman, J. & Singh, M., *Superior change detection at shape concavities.* Annual meeting of the Vision Science Society, Sarasota, FL, 2003.

Feldman, J., Singh, M., **Barenholtz, E. & Cohen, E.H.,** *A psychophysical window onto the mental representation of shape.* Annual meeting of the Vision Science Society, Sarasota, FL, 2003.

**Barenholtz, E. & Annan, V.,** *An object-superiority effect induced by a local luminance manipulation.* Annual meeting of the Vision Science Society, Sarasota, FL 2002.

**Barenholtz, E. & Feldman, J.,** *Interpretation of part boundaries and the movement of attention.* Annual meeting of the Vision Science Society, Sarasota, FL, 2001.

## *Invited Talks*

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'Robopsychology: Towards a Convergence of Deep Learning Artificial Intelligence and the Science of Mind and Behavior', Technology, Mind, and Behavior Conference of the American Psychological Association's (APA), 2019

'AI for All', Ted-X Boca Raton, 2019

Many paths (and pathways) to object recognition. FAU Neuroscience Seminar Series, 2014.

*Putting Recognition in Context.* Center for complex Systems, Florida Atlantic University, 2011

*Multisensory Unitization: A specialized form of associative learning?* Florida International University, 2011

*Toward a language of vision.* UC Riverside, Riverside, CA, 2007.

*Toward a language of vision.* Florida Atlantic University, Boca Raton, FL, 2007.

*Compositional approaches to visual object recognition.* NGA Academic Research Program (NARP) Symposium, Washington D.C., 2006.

*Visual perception of articulating objects.* NEGI Symposium, Mclean, VA, 2005.

*The visual representation of shape.* Yale University, New Haven, CT, 2004.

*The visual representation of shape.* Harvard University, Cambridge, MA, 2004.

*Parts and attention.* Meeting of the Object Group, Rutgers, The State University of New Jersey, New Brunswick, NJ, 2002.

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## *Student Awards*

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Office of Undergraduate Research and Inquiry Grant “Predicting Driver Expertise using Machine Learning Models” [Deborah Beutenmueller]

Office of Undergraduate Research and Inquiry Grant “Noninvasive Detection of Blood Glucose Changes in Type 1 Diabetics Using eNose Breath Analysis” \$1200 [Alexandra Decesare, Stephen Hoover ]

Office of Undergraduate Research and Inquiry Grant “Py Vizu Wall ” \$600 [Matt Trask]

Wave Entrepreneurial Research Competition, \$500 Seed Funding, Florida Atlantic University (October 2018 - Present) [Alexandra Decesare]

Distinction Through Discovery Summer Undergraduate Research Fellowship \$4000, Florida Atlantic University (May-August, 2018) [Stephen Hoover]

Wave Entrepreneurial Research Competition, \$500 Seed Funding & \$1500 Award, Florida Atlantic University (October 2017 - April 2018) [Evita Conway]

Wave Entrepreneurial Research Competition, \$500 Seed Funding & \$500 Award, Florida Atlantic University (October 2017 - April 2018) [Stephen Hoover]

Wave Entrepreneurial Research Competition, \$500 Seed Funding, Florida Atlantic University (October 2017 - April 2018) [Thomas Cox]

Wave Entrepreneurial Research Competition, \$500 Seed Funding, Florida Atlantic University (October 2017 - April 2018) [Rachel Wong]

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## *Course Development (Since 2013 only)*

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### **Graduate**

Machine Perception and Cognitive Robotics (2020,2019,2018)

Foundation of Perception (2014)

Multisensory Mind and Brain (2013)

### **Undergraduate**

Max Planck Data Science Applications (2020)

Max Planck Data Science Methods (2019)

Introduction to Deep Learning (2018, 2017)

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## *Referee Work*

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Editorial Board Member: *Frontiers in Psychology*

Ad-Hoc Reviewer For:

*Attention Perception and Psychophysics*

*Drug and Alcohol Dependence*

*Journal of Cognitive Neuroscience*

*Journal of Experimental Psychology: Human Perception and Performance*

*Journal of Experimental Child Psychology*

*Language and Linguistics Compass*

*Proceedings of the Cognitive Sciences Society*

*Proceedings of the Royal Society: B*

*Psychonomic Bulletin and Review*

*Perception*

*Vision Research*

*Visual Cognition*

## Curriculum Vitae

William H. Alexander  
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Boca Raton, FL 33431  
USA  
walexander@fau.edu

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### EDUCATION

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*Indiana University, Bloomington*  
**Degree: Ph.D.** **2006**  
**Major: Cognitive Psychology**  
**2<sup>nd</sup> Major: Cognitive Science**  
Dissertation: "A Real-Time Model of Attention"

*University of Nevada, Reno*  
**Degree: B.A.** **1999**  
**Major: Psychology**  
**Minor: Philosophy**

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### RESEARCH EXPERIENCE

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*Florida Atlantic University – Center for Complex Systems* **2018 - Present**  
**Assistant Professor**  
Research Topics: Computational Modeling, fMRI,  
Cognitive Control, Decision-Making

*Ghent University* **2013-2017**  
**Odysseus Laureate**  
Research Topics: Computational Modeling,  
fMRI, Cognitive Control, Decision-Making

*Indiana University, Bloomington* **2007-2013**  
**Postdoctoral Researcher – Cognitive Control Lab**  
Director: Joshua W. Brown  
Research Topics: Executive Control, Decision Making,  
Reinforcement Learning, Computational Modeling, fMRI

*Okinawa Institute of Science and Technology* **2006-2007**  
**Researcher – Neural Computation Unit**  
Director: Kenji Doya  
Research Topics: Attention, Computational  
Modeling, Neuromodulation

*Indiana University, Bloomington* **2001-2006**  
**Graduate Student – Computational Cognitive Neuroscience Lab**  
Director: Olaf Sporns  
Research Topics: Neural Bases of  
Reinforcement, Embodied Cognition, Robotics

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### FUNDING SOURCES

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Title	Role	Dates
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<b>The Neural Architecture of Reinforcement Learning in Partially Observable Environments (AFOSR). \$646,748 Total Costs</b>	Co-Principal Investigator	<b>2020 - 2023</b>
<b>A Reinforcement Learning Framework for Cognitive Control (FWO G.OC44.13N). €598,600</b>	Principal Investigator	<b>2013 - 2018</b>
<b>Integrated Cognitive Architectures for Understanding Sensemaking (subcontract). PI: Joshua Brown</b>	Co-Investigator	<b>2010-2013</b>
<b>Neural Mechanisms of Risky Behavior Avoidance NIH/NIDA R01 DA026457. PI: Joshua Brown</b>	Co-Investigator	<b>2009-2010</b>

## TEACHING EXPERIENCE

*\*Denotes Graduate-Level Course**Florida Atlantic University*

* <b>Instructor – Cognitive Neuroscience</b>	<b>Fall 2020</b>
* <b>Instructor – Computational Neuroscience</b>	<b>Yearly (2018-19)</b>
<b>Instructor – Experimental Design and Statistics</b>	<b>Yearly (2019-20)</b>

*Ghent University*

* <b>Instructor - Modeling Cognitive Processes</b>	<b>Fall, 2014</b>
* <b>Guest Lecturer - Model-Based fMRI - Introduction to Neuroimaging</b>	<b>Fall, 2014</b>
<b>Instructor - Model-Based fMRI Analysis - Practical Data Analysis and Modeling in Cognitive and Clinical Neuroscience Training School</b>	<b>April, 2014</b>

*Indiana University, Bloomington*

* <b>Assistant Instructor – Advanced Statistical Analysis</b>	<b>Fall, 2005</b>
<b>Assistant Instructor – Statistical Techniques</b>	<b>Spring, 2005</b>
* <b>Assistant Instructor –Advanced Statistical Analysis</b>	<b>Fall, 2004</b>
<b>Instructor – Methods of Experimental Psychology</b>	<b>Spring, 2004</b>

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- \* 1. Cogliatti-Dezza, I., Cleeremans, A., and **Alexander, W.H.** (revised). Independent and Interacting Value Systems for Reward and Information in the Human Brain
  - \* 2. **Alexander, W.H.** and Womesldorf, T. (revised). Interactions between medial and lateral prefrontal cortex in hierarchical predictive coding.
  - \* 3. Vassena E., Deraeve, J., and **Alexander, W.H.** (2020). Surprise, value and control in anterior cingulate cortex during speeded decision-making. *Nature Human Behavior*
  - \* 4. Cogliatti-Dezza, I., Cleeremans, A., and **Alexander, W.H.** (2019). Should we control? The interplay between cognitive control and information integration in the resolution of the exploration-exploitation dilemma.
  - \* 5. Vassena, E., Deraeve, J., and **Alexander, W.H.** (2019). Task-specific prioritization of reward and effort information: Novel insights from behavior and computational modeling. *Cognitive, Affective, & Behavioral Neuroscience*
  - \* 6. **Alexander, W.H.**, and Brown, J.W. (2018). Frontal cortex function as derived from hierarchical predictive coding. *Scientific Reports* 8, 4312.
  - \* 7. Deraeve, J. and **Alexander, W.H.** (2018). Fast, accurate and stable feature extraction using neural networks. *Neuroinformatics*
  - \* 8. Cogliatti-Dezza, I., Yu, A., Cleeremans, A., and **Alexander, W.H.** (2017). Learning the value of information and reward over time when solving exploration-exploitation problems. *Scientific Reports*, 7, 16919.
  - \* 9. **Alexander, W.H.**, and Brown, J.W. (2017). The role of anterior cingulate cortex in prediction error and signaling surprise. *Topics in Cognitive Science*
  - \* 10. Vassena, E., Holroyd, C., and **Alexander, W.H.** (2017). Computational models of anterior cingulate cortex: At the crossroads between prediction and effort. *Frontiers in Neuroscience*, 11, 316.
  - \* 11. **Alexander, W.H.**, Vassena, E., Hayden, B.Y., Brown, J.W., and Collins, A.E. (2017). Prefrontal cortex in control: Broadening the scope to identify mechanisms. *Journal of Cognitive Neuroscience*, 29.
  - \* 12. Brown, J.W., and **Alexander, W.H.** (2017). Foraging value, risk avoidance, and multiple control signals: How the anterior cingulate cortex controls value-based decision-making. *Journal of Cognitive Neuroscience*, 29, 1656-1673.
  - \* 13. **Alexander, W.H.**, Vassena, E., Deraeve, J., and Langford, Z. D. (2017). Integrative modeling of prefrontal cortex. *Journal of Cognitive Neuroscience*, 29, 1674-1683.
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- \* 14. Vassena, E., Deraeve, J., and **Alexander, W.H.** (2017). Predicting motivation: computational models of PFC can explain neural coding of motivation and effort-based decision-making in health and disease. *Journal of Cognitive Neuroscience*, 29, 1633-1645.
  - 15. Jahn, A., Nee, D.E., **Alexander, W.H.**, and Brown, J.W. (2016). Distinct regions of pain and prediction error within medial prefrontal cortex. *Journal of Neuroscience* 36(49), 12385-12392.
  - \* 16. **Alexander, W.H.**, and Brown, J.W. (2015). Hierarchical Error Representation: A computational model of anterior cingulate and dorsolateral prefrontal cortex. *Neural Computation*, 27, 2354-2410
  - \* 17. **Alexander, W.H.**, Fukunaga, R., Finn, P., and Brown, J.W. (2015). Rewardsalience and risk aversion underlie differential ACC activity in substance dependence. *Neuroimage: Clinical* 8, 59-71.
  - 18. Silvetti, M., **Alexander, W.H.**, Verguts, T., and Brown, J.W. (2014). From conflict management to reward-based decision making: Actors and critics in primate medial frontal cortex. *Neuroscience and Behavioral Reviews*. 46(1), 44-57.
  - \* 19. **Alexander, W.H.** and Brown, J.W. (2014). A general role for medial prefrontal cortex in event prediction. *Frontiers in Computational Neuroscience*, 8:69
  - \* 20. Jahn, A., Nee, D.E., **Alexander, W.H.**, and Brown, J.W. (2014). Distinct regions of anterior cingulate cortex signal prediction and outcome evaluation. *Neuroimage* 95,80-89
  - \* 21. Zarr, N, Brown, J.W., and **Alexander, W.H.** (2014). Discounting of reward sequences: a test of competing formal models of hyperbolic discounting. *Frontiers in Psychology*.
  - \* 22. **Alexander, W.H.** and Brown, J.W. (2011). Medial prefrontal cortex as an action-outcome predictor. *Nature Neuroscience* 14(10), 1338-1344.
  - \* 23. **Alexander, W.H.** and Brown, J.W. (2010). Computational models of response-outcome prediction as a basis for cognitive control. *Topics in Cognitive Science* 2(4), 658-677.
  - \* 24. **Alexander, W.H.** and Brown, J.W. (2010). Hyperbolically discounted temporal difference learning. *Neural Computation* 22(6), 1511-27.
  - \* 25. **Alexander, W.H.** and Brown, J.W. (2010). Competition between learned reward and error outcome predictions in anterior cingulate cortex. *Neuroimage*, 49(5), 3210-3218.
  - \* 26. **Alexander, W.H.** (2007). Shifting Attention Using a Temporal Difference Prediction Error and High-Dimensional Input. *Adaptive Behavior*, 15, 121-133
  - \* 27. **Alexander, W.H.** and Sporns, O. (2006). Temporal difference learning with learned attention shifts. *Proceedings of the Fifth International Conference on Development and Learning*. Bloomington, IN.
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- \* 28. **Alexander, W.H.** and Sporns, O. (2004). Interactions of environment, behavior, and synaptic patterns in a neuro-robotic model. In: *Animals to Animats 8: Proceedings of the Eighth International Conference on the Simulation of Adaptive Behavior*, pp. 13-22, Schaal, S., Ijspeert, A., Billard, A., Vijayakumar, S., Hallam, J., and Meyer, J-A. (Editors). MIT Press: Cambridge, MA.
29. Sporns, O. and **Alexander, W.H.** (2003). Neuromodulation in a learning robot: Interactions between neural plasticity and behavior. *Proceedings of IJCNN 2003*, 2789-2794.
- \* 30. **Alexander, W.H.** and Sporns, O. (2003). An Embodied Model of Learning, Plasticity, and Reward. *Adaptive Behavior*. Vol 10(3-4), Sum 2002, pp. 143-159
31. Sporns, O., and **Alexander, W.H.** (2002). Neuromodulation and plasticity in an autonomous robot. *Neural Networks*. Vol 15(4-6), Jun-Jul 2002, pp. 761-774.
- \* 32. **Alexander, W.H.** and Sporns, O (2002). Timed delivery of reward signals in an autonomous robot. In: *Animals to Animats 7: Proceedings of the Seventh International Conference on the Simulation of Adaptive Behavior*, pp. 195-204, Hallam, B., Floreano, D., Hallam, J., Hayes, G. and Meyer, J-A. (Editors), MIT Press: Cambridge, MA.
33. Sporns, O., and **Alexander, W.H.** (2002). Dopamine, reward conditioning, and robot behavior. In: *Proceedings of the 2nd International Conference on Development and Learning*, pp. 265-270, IEEE Computer Society, Los Alamitos, CA.

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#### BOOK CHAPTERS

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1. **Alexander, W.H.**, and Brown, J.W. (2015). Reciprocal interactions of computational modeling and empirical investigation. In: *Model-based cognitive neuroscience: an introduction*. pp. 321-338. Forstmann, B. and Wagenmakers, E.J. (Eds), Springer:New York, NY
2. Brown, J.W. and **Alexander, W.H.** (2011). Computational Neuroscience Models: Error monitoring, conflict resolution, and decision making. In: *Perception-reason-action cycle: Models, algorithms and systems*. pp. 169-186, Cutsurdis, V., Hussain, A, & Taylor, J.G. (Eds),Springer: New York, NY.

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#### POSTERS/PRESENTATIONS

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\* *Denotes invited talk or symposium*

- \* 1. **Alexander, W.H.** (2017). Towards a theory of prefrontal cortex. Panel member at the 13th International Conference for Cognitive Neuroscience
- \* 2. **Alexander, W.H.** (2017). Error representations in dorsolateral prefrontal cortex. Invited talk at Cosyne 17. Salt Lake City, UT

3. **Alexander, W.H.**, and Vassena, E.(2016). Context and outcome uncertainty in anterior insula. Poster at the annual meeting of the Society for Neuroscience. San Diego, CA
4. Deraeve, J., Vassena, E., and **Alexander, W.H.** (2016). Task representations in the dorsolateral prefrontal cortex. Poster at the annual meeting of the Society for Neuroscience. San Diego, CA
5. Jahn, A., Nee, D.E., **Alexander, W.H.**, and Brown, J.W. (2016). Medial prefrontal cortex signals prediction errors across domains of pain and cognitive control. Poster at the annual meeting of the Society for Neuroscience. San Diego, CA  
\*
6. **Alexander, W.H.** (2016). Function following form: Representation in Prefrontal Cortex. Invited talk at the 5th workshop on the Computational Properties of Prefrontal Cortex. Lyon, France  
\*
7. **Alexander, W.H.** (2016). Representations of prediction error in cognitive control. Talk presented at the annual meeting of the Cognitive Neuroscience Society. New York, NY  
\*
8. **Alexander, W.H.** (2015). Effects of task representation on learning and behaviour. Talk at the conference for the European Society for Cognitive Psychology. Paphos, Cyprus.
9. Deraeve, J., and **Alexander, W.H.** (2015). Task representations in dorsolateral prefrontal cortex. Poster at the conference for the European Society for Cognitive Psychology. Paphos, Cyprus.
10. Vassena, E., Verguts, T., Kochman, K., Latomme, J., and **Alexander, W.H.** (2015). Enhanced temporal prediction in musicians: evidence from behavior and model-based fMRI. Poster at the conference for the European Society for Cognitive Psychology. Paphos, Cyprus.
11. Vassena, E., **Alexander, W.H.**, Kochman, K., Latomme, J., Verguts, T. (2015). Higher-order temporal prediction in prefrontal cortex: a model-based fMRI study in expert musicians. Poster at the Conference for the Organization of Human Brain Mapping. Honolulu, HI.  
\*
12. **Alexander, W.H.** (2015). Understanding cingulate function from multiple perspectives. Invited talk at McLean Hospital/Harvard Medical.  
\*
13. **Alexander, W.H.** (2015). Error representation in dorsolateral prefrontal cortex. Invited talk at Brown University.
14. **Alexander, W.H.** (2015). The influence of order on hierarchical learning. Poster at the Fifth Symposium on Biological Decision Making. Paris, France.
15. Jahn, A., Nee, D.E., **Alexander, W.H.**, and Brown, J.W. (2014). Medial prefrontal cortex signals prediction errors across multiple domains of pain and cognitive control. Poster at the annual meeting of the Society for Neuroscience. Washington, D.C.  
\*
16. **Alexander, W.H.** (2014). E cingulus pluram: Multiple computational roles of anterior cingulate activity. Symposium talk at the International Conference on Cognitive Neuroscience. Brisbane, Australia.

17. **Alexander, W.H.** and Brown, J.W. (2014). A computational model of dorsolateral prefrontal cortex. Poster at the Cognitive Neuroscience Society annual conference. Boston, MA.
18. Jahn, A., Nee, D.E., **Alexander, W.H.**, and Brown, J.W. (2013). Distinct regions of anterior cingulate cortex signal prediction and outcome evaluation. Poster at the annual meeting of the Society for Neuroscience. San Diego, CA.  
\*
19. **Alexander, W.H.** (2013). The multiple functions of anterior cingulate: a computational reconciliation. Invited talk at the Workshop on Interfacing Models with Brain Signals to Investigate Cognition. University of California, Irvine.
20. **Alexander, W.H.**, and Brown, J.W. (2013). A general role for anterior cingulate cortex in predicting task-related events. Poster at the Cognitive Neuroscience Society annual conference. San Francisco, CA.
21. Jahn, A., **Alexander, W.H.**, Nee, D.E., and Brown, J.W. (2013). Pain, Congruency, and Surprise: Prediction Violation Across Domains in the Anterior Cingulate Cortex. Poster at the Cognitive Neuroscience Society annual conference. San Francisco, CA.
22. **Alexander, W.H.**, Fukunaga, R, and Brown, J.W. (2012). Risk aversion underlies medial prefrontal cortex activity in substance dependence. Poster at the Cognitive Neuroscience Society annual conference. Chicago, IL.  
\*
23. **Alexander, W.H.** and Brown, J.W. (2010). Medial prefrontal cortex predicts the outcomes of actions. Nanosymposium talk at the annual meeting of the Society for Neuroscience. San Diego, CA.
24. **Alexander, W.H.** and Brown, J.W. (2010). Discounting time and probability by reward perception. Poster at the Society for Neuroeconomics annual conference. Evanston, IL.
25. **Alexander, W.H.** and Brown, J.W. (2010). A common mechanism for time and probability discounting. Poster at the Air Force Office of Scientific Research Cognition & Decision Joint Program Review. Arlington, VA.
26. **Alexander, W.H.** and Brown, J.W. (2008). A computational neural model of learned response-outcome predictions by anterior cingulate cortex. Poster at the annual meeting of the Society for Neuroscience. Washington, D.C.
27. **Alexander, W.H.** and Brown, J.W. (2008). Error likelihood effects in anterior cingulate cortex modulated by average reward and reinforcement learning. Poster at the annual conference for the Cognitive Neuroscience Society. San Francisco, CA.  
\*
28. **Alexander, W.H.** (2004). Mutual influences of environment and behavior on the development of a neural model. Invited talk at the workshop for Neurobotic Models in Neuroscience and Neuroinformatics. Los Angeles, CA, July 17, 2004.

29. **Alexander, W.H.** and Sporns, O. (2003). Environmental influence on behavior and development of an autonomous robot. Poster at the Annual meeting of the Society for Neuroscience, New Orleans, LA.
30. Sporns, O., Bulwinkle, D., Chadderdon, G., and **Alexander, W.H.** (2003). Neuro-robotic models of learning and addiction. Poster at NIH Symposium (Biomedical Information Science and Technology Initiative) Digital Biology, The Emerging Paradigm. Bethesda, MD.
31. Malkoc, G., **Alexander, W.H.**, and Webster, M.A. (2001). Color and Adaptation in Perceptual Grouping. Poster at the 1<sup>st</sup> Annual Meeting of the Vision Sciences Society, Sarasota, FL.
32. Amberg, M.D., Yamashita, J.A., Merica, B.L., **Alexander, W.H.**, and Wallace, W.P. (2001). Words with overlapping phonemes in early positions facilitate correct recall. Poster at the Annual Convention of the Western Psychological Associations. Tucson, AZ.

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#### AWARDS

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Odysseus II Program – Ghent University/Flanders Research Foundation, 2012  
 Cognitive Science Summer Research Fellowship – Indiana University, 2005  
 Outstanding Paper – International Conference on Development and Learning (co-author), 2002  
 Summer Research Incentive Fellowship – Indiana University, 2002  
 Faculty Commendation – Indiana University, 2001-2002  
 National Science Foundation Graduate Research Fellowship – Honorable Mention, 2002  
 Cognitive Science Supplemental Fellowship – Indiana University, 2001

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#### PROFESSIONAL SERVICE

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*Ad-hoc Reviewer: Adaptive Behavior; Cognitive, Affective, & Behavioral Neuroscience; Cognitive Science; Cortex; Neural Computation; Journal of Experimental Psychology: General; Neuroimage; Neuropsychologia; PLOS One; Topics in Cognitive Science; Proceedings of the National Academy of Sciences; Nature Communications Biology; Nature Human Behavior*

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#### PROFESSIONAL MEMBERSHIPS

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Society for Neuroscience  
 Cognitive Neuroscience Society

## RINDY CHRISTINE ANDERSON

Florida Atlantic University  
Department of Biological Sciences  
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Davie, FL 33314

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Tel. 954.236.1144  
Email: andersonr@fau.edu  
Web: <http://rindy1.wix.com/rindyandersonlab>

### Education/Employment History

University of Miami	Ph.D., Biology
University of San Diego	M.S., Marine Science
Arizona State University	B.S., Zoology

2014 – present Assistant Professor of Biological Sciences, Florida Atlantic University  
2012 – 2014 Research Scientist, Duke University  
2007 – 2012 Postdoctoral Research Associate, Duke University  
1999 – 2001 Research Biologist, Hubbs-Sea World Research Institute

### Scholarship/Research/Creative Activity

Google Scholar h-index since 2016: 18, i10-index 28  
Citations since 2016: 1,707 as of Feb 25, 2021

### **Publications in Print**

**Refereed Journal Articles (41):** \*indicates undergraduate author, \*\*indicates graduate student author, <sup>GC</sup> indicates non-FAU graduate student collaborator, †indicates postdoctoral researcher, † indicates co-first authors. Since appointment at FAU (17) with 2 manuscripts under review.

#### **2021**

41. Joseph Niederhauser \*\*, Morgan Slevin \*\*, Erik Noonburg, **Rindy C. Anderson**. 2021. Behavior, habitat quality, and territory defense in Bachman's sparrow. *Behaviour*. Accepted Feb 22, 2021.

#### **2020**

40. Morgan Slevin<sup>GC</sup>, Jennifer Houtz<sup>GC</sup>, David Bradshaw<sup>GC</sup>, and **Rindy C. Anderson**. Evidence supporting the microbiota-gut-brain axis in a songbird. *Biology Letters*. Published 4 Nov. 2020. <https://doi.org/10.1098/rsbl.2020.0430>

39. Erik Noonburg, **Rindy C. Anderson**. Asymmetric competition and floater dynamics: a model. *Ecology* Published 31 Oct. 2020. <https://doi.org/10.1002/ecy.3238>

38. Clara Howell<sup>GC</sup>, **Rindy C. Anderson**, Elizabeth P. Derryberry (2020) Female zebra finches prefer the songs of males who quickly solve a novel foraging task to the songs of males unable to solve the task. *Ecology & Evolution*. DOI: 10.22541/au.158030917.75813308.

37. Sara E. Bebus†, Blake C. Jones, **Rindy C. Anderson** (2020) Development of the corticosterone stress response differs among passerine species. *General and Comparative Endocrinology*. <https://doi.org/10.1016/j.ygcen.2020.113417>.



## 2019

36. Clara Howell<sup>GC</sup>, **Rindy C. Anderson**, Elizabeth P. Derryberry (2019) Female cognitive performance and mass are correlated with different aspects of mate choice in the zebra finch (*Taeniopygia guttata*). *Animal Cognition* 22: 1085. <https://doi.org/10.1007/s10071-019-01299-6>

35. Jill A. Soha, Susan Peters, **Rindy C. Anderson**, William A. Searcy, Stephen Nowicki (2019) Performance on tests of cognitive ability is not repeatable across years in a songbird. *Animal Behaviour* 158:281-288. <https://doi.org/10.1016/j.anbehav.2019.09.020>

## 2018

34. Kendra B. Sewall, **Rindy C. Anderson**, Jill A. Soha, Susan Peters, Stephen Nowicki (2018) Early life conditions that impact song learning in male zebra finches also impact neural and behavioral responses to song in females. *Developmental Neurobiology* 78: 785–798. <https://doi.org/10.1002/dneu.22600>.

33. Sabah Ali\*, **Rindy C. Anderson** (2018) Song and aggressive signaling in the Bachman's sparrow. *The Auk: Ornithological Advances* 135: 521–533. <https://doi.org/10.1642/AUK-17-216.1>

32. Casey A. Klofstad, **Rindy C. Anderson** (2018) Voice pitch predicts electability, but does not signal leadership ability. *Evolution and Human Behavior* 39(3) 349-354.

31. Joseph N. Niederhauser\*\*, Adrienne L. Dubois, William A. Searcy, Stephen Nowicki, **Rindy C. Anderson** (2018) A test of the eavesdropping avoidance hypothesis as an explanation for the structure of low amplitude aggressive signals in the song sparrow. *Behavioral Ecology and Sociobiology* 72: 47.

## 2017

30. **Rindy C. Anderson**, William A. Searcy, Susan Peters, Melissa Hughes, Adrienne L. Dubois, Stephen Nowicki (2017) Song learning and cognitive ability are not consistently related in a songbird. *Animal Cognition* 20(2) 309–320.

## 2015

29. Casey A. Klofstad, **Rindy C. Anderson**, Stephen Nowicki (2015) Perceptions of Competence, Strength, and Age Influence Voters to Select Leaders with Lower-Pitched Voices. *PLoS ONE* 10(8): e0133779.

28. **Rindy C. Anderson**, Dustin G. Reichard (2015) The function and evolution of low-amplitude signals: Introduction to the Special Issue on Whispered Communication. *Animal Behaviour* 105: 215.

27. Dustin G. Reichard, **Rindy C. Anderson** (2015) Why signal softly? The structure, function and evolutionary significance of low-amplitude signals. *Animal Behaviour* 105: 253-265.

26. Caglar Akcay, **Rindy C. Anderson**, Stephen Nowicki, Michael D. Beecher, William A. Searcy (2015) Quiet threats: soft song as an aggressive signal in birds. *Animal Behaviour* 105: 267-274.

25. Molly K. Grace<sup>GC</sup>, **Rindy C. Anderson** (2015) No frequency shift in the “D” notes of Carolina chickadee calls in response to traffic noise. *Behavioral Ecology and Sociobiology* 69(2): 253–263.

Prior to appointment at FAU (24):

## 2014

24. Robert F. Lachlan<sup>1</sup>, **Rindy C. Anderson**<sup>1</sup>, Susan Peters, William A. Searcy, Stephen Nowicki. (2014) Typical versions of learned swamp sparrow songs are more effective signals than are less typical versions. *Proceedings of the Royal Society of London B* 281: 20140252.

23. **Rindy C. Anderson**, Casey A. Klofstad, William J. Mayhew, Mohan Venkatachalam. (2014) Vocal fry may undermine the success of young women in the labor market. *PLOS ONE* 9(5): e97506.

22. **Rindy C. Anderson**, Susan Peters, Nowicki, S (2014) Effects of early auditory experience on the development of local song preference in female swamp sparrows. *Behavioral Ecology and Sociobiology* 68(3): 437-447.

21. Evan L. MacLean, Brian A. Hare, Charles L. Nunn, Elizabeth Addessi, Filippo Amici, **Rindy C. Anderson** et al. (58 authors) (2014) The Evolution of Self Control. *Proceedings of the National Academy of Sciences*, 11(20): E2140–E2148.

### 2013

20. **Rindy C. Anderson**, Adrienne L. Dubois, David K Piech, William A. Searcy, Stephen Nowicki (2013) Receiver response to an aggressive visual signal, the wing-wave display, in swamp sparrows. *Behavioral Ecology and Sociobiology* 67(4): 593–600.

19. William A. Searcy, **Rindy C. Anderson**, Ballentine B, Stephen Nowicki (2013) Limits to reliability in avian aggressive signals. *Behaviour* 150(5): 1129-1145.

### 2012

18. **Rindy C. Anderson**, Casey A. Klofstad (2012) Preference for leaders with masculine voices holds in the case of feminine leadership roles. *PLoS ONE* 7(12): e51216.

17. **Rindy C. Anderson**, Melissa Hughes, William A. Searcy, Stephen Nowicki (2012) The receiver-dependent cost of soft song: a signal of aggressive intent in songbirds. *Animal Behaviour*, 83(6): 1443-1448.

16. Christopher J. Maddison, **Rindy C. Anderson**, Nora H. Prior, Michael D. Taves, Kiran K. Soma (2012) Soft song during aggressive interactions: seasonal changes and endocrine correlates in song sparrows. *Hormones and Behavior*, 62: 455–463.

15. Casey A. Klofstad, **Rindy C. Anderson**, Susan Peters (2012) Sounds like a winner: Voice pitch influences perception of leadership capacity in both men and women. *Proceedings of the Royal Society of London, Biological Sciences*, 279(1738): 2698-2704.

14. **Rindy C. Anderson**, Casey A. Klofstad (2012) For love or money?: The influence of personal resources and environmental resource pressures on human mating preferences. *Ethology*, 18(9): 841-849.

13. Ann E. Bowles, **Rindy C. Anderson** (2012) Behavioral responses and habituation of pinnipeds and small cetaceans to novel objects with and without a pinger. *Aquatic Mammals*, 38(2): 161-188.

12. Evan L. MacLean, Luke J. Matthews, Brian A. Hare, Charles L. Nunn, **Rindy C. Anderson**, et al. (21 authors) (2012) How Does Cognition Evolve?: Phylogenetic Comparative Psychology. *Animal Cognition*, 15(2): 223-238.

### 2011

11. Neeltje Boogert, **Rindy C. Anderson**, Susan Peters, William A. Searcy & Nowicki, S (2011) Song repertoire size correlates with inhibitory control, but not other measures of cognitive ability, in male song sparrows. *Animal Behaviour* 81: 1209-1216.

### 2009

10. **Rindy C. Anderson** (2009) Operant conditioning and copulation solicitation display assays reveal a stable preference for local song by female swamp sparrows. *Behavioral Ecology & Sociobiology* 64: 215-223.

9. Jonathan F. Prather, Stephen Nowicki, **Rindy C. Anderson**, Susan Peters, Richard Mooney (2009) Neural correlates of categorical perception in learned vocal communication. *Nature Neuroscience* 12: 221-228.

## 2008

8. **Rindy C. Anderson**, William A. Searcy, Susan Peters and Stephen Nowicki (2008) Soft song in the song sparrow: acoustic analysis and implications for signal function. *Ethology*, 114(7): 662-676.
7. William A. Searcy, **Rindy C. Anderson** and Stephen Nowicki (2008) Is bird song a reliable signal of aggressive intent? A reply. *Behavioral Ecology and Sociobiology*, 62: 1213–1216.
6. **Rindy C. Anderson**, William A. Searcy, Stephen Nowicki (2008) Testing the function of song matching in birds: responses of eastern song sparrow to partial song matching. *Behaviour*, 145: 347-363.

## 2007

5. **Rindy C. Anderson**, Stephen Nowicki & William A. Searcy (2007) Soft song in song sparrows: response of males and females to an enigmatic signal. *Behavioral Ecology and Sociobiology*, 61: 1267-1274.
4. Melissa Hughes, **Rindy C. Anderson**, William A. Searcy, Laurie M. Bottensek & Stephen Nowicki (2007) Song type sharing and territory tenure in eastern song sparrows: implications for the evolution of song repertoires. *Animal Behaviour*, 73: 701-710.

## 2006

3. William A. Searcy, **Rindy C. Anderson**, & Stephen Nowicki (2006). Bird song as a signal of aggressive intent. *Behavioral Ecology and Sociobiology*, 60: 234-241.

## 2005

2. **Rindy C. Anderson**, William A. Searcy & Stephen Nowicki (2005). Partial song matching in an eastern population of song sparrows (*Melospiza melodia*). *Animal Behaviour*, 69:(1), 189-196.

## 2003

1. Lawrence F. Wolski, **Rindy C. Anderson**, Ann E. Bowles & Pamela K. Yochem (2003). Measuring hearing in the harbor seal (*Phoca vitulina*): Comparison of behavioral and auditory brainstem response techniques. *Journal of the Acoustical Society of America*, 113:(1) 629-636.

## Works currently under review

Joseph Niederhauser \*\*, Rindy C. Anderson. Flexibility under fire: low repeatability of aggressiveness and boldness in Bachman's sparrow. *Under review at Behavioral Ecology and Sociobiology*.

Joseph Niederhauser \*\*, Rindy C. Anderson. Spatial pattern of song-type sharing in Bachman's Sparrow. Under review at *Ornithology* (formerly *The Auk*).

## My Refereed Presentations Since Appointment at FAU (9)

\*indicates undergraduate co-presenter, \*\*indicates graduate co-presenter, <sup>GC</sup> indicates non-FAU graduate collaborator, †indicates postdoctoral researcher

### International:

**Behavior 2019 (joint conference by the Animal Behavior Society and the International Ethological Congress), July 26, 2019.**

Rindy C. Anderson, Sabah Ali\*, Joseph Niederhauser\*\*, Paula Ziadi\*\*. Testing hypotheses about song as an agonistic signal in Bachman's sparrow. Oral presentation.

National:

**Animal Behavior Society Annual Meeting (virtual conference), July 28-31, 2020.**

Rindy C. Anderson, Joseph Niederhauser\*\*, Laura Roldan\*, Christian Hunt\*, Nicole Nalty\*. Capture and handling affects future response to playback in Bachman's sparrow. Oral presentation.

**Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2020**

Rindy C. Anderson, Sabah Ali\*, Joseph Niederhauser\*\*, Paula Ziadi\*\*. Why so many song types? Testing hypotheses about song as an agonistic signal in Bachman's sparrow. Oral presentation.

**Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2018**

Rindy C. Anderson, Sabah Ali\*. Understanding Complexity in Communication Systems: Song and Aggressive Signaling in Bachman's Sparrow. Oral presentation. [Publication 33](#)

**Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2017**

Rindy C. Anderson, Joseph N. Niederhauser\*\*, Adrienne A. DuBois, William A. Searcy, Stephen Nowicki. Are song sparrow 'soft songs' adapted for short-range communication? Oral presentation. [Publication 31](#)

**Animal Behaviour Society Annual Meeting, July 31, 2016.**

Rindy C. Anderson, William A. Searcy, Adrienne L. Dubois, Susan Peters, Stephen Nowicki. Song learning and cognitive ability in the song sparrow. Oral presentation. [Publication 30](#)

**Society for Integrative and Comparative Biology Annual Meeting, January 5, 2016.**

Rindy C. Anderson, Kendra B. Sewall, Jill Soha, Susan Peters, Stephen Nowicki. Effects of developmental stress on problem solving and song learning in the zebra finch. Oral presentation. [Publication 34](#)

**Animal Behavior Society Annual Meeting, August 11, 2014**

**Organized and hosted a symposium: "The Function, Evolution and Significance of Low-amplitude Acoustic Signals in Animal Communication."** The symposium resulted in a Special Issue in the International journal *Animal Behavior*. I co-edited the Issue and co-authored three of its papers, [publications 26, 27, 28](#).

Rindy C. Anderson, Dustin G. Reichard. Low-amplitude acoustic signaling: a symposium overview and insights from two sparrow systems. Oral presentation. [Publication 27](#)

Statewide:

**Florida Ornithological Society Fall Meeting Nov 2017**

Rindy C. Anderson. Understanding Complexity in Communication Systems: Song and Aggressive Signaling in Bachman's Sparrow. Oral presentation. [Publication 33](#)

Prior to appointment at FAU I presented my research at 11 National Meetings of the Animal Behavior Society, the Society of Integrative and Comparative and Biology, and the North American Ornithological Conference.

**Co-authored Student and Collaborative Refereed Presentations (27)**

International:

**Behavior 2019 (joint conference by the Animal Behavior Society and the International Ethological Congress), July 26, 2019.**

*Collaborators:* Clara Howell<sup>GC</sup>, Rindy C. Anderson, Elizabeth Derryberry. Solving is Sexy: the role of problem-solving ability in mate choice in zebra finches (*Taeniopygia guttata*). Student oral presentation by Howell. [Publication 36](#)

National:

**Animal Behavior Society Annual Meeting (virtual conference), July 28-31, 2020.**

*Student:* Joseph Niederhauser\*\*, Morgan Slevin\*\*, Erik Noonburg, Rindy C. Anderson.

Flexibility under fire: low repeatability of aggressiveness and boldness in Bachman's sparrows. Oral presentation by Niederhauser.

*Student:* Morgan Slevin\*\*, Jenn Houtz<sup>GC</sup>, David Bradshaw II\*\*, Rindy C. Anderson. Evidence supporting the microbiota-gut-brain axis in a songbird. Oral presentation by Slevin.

*Collaborator:* Jill A. Soha, Rindy C. Anderson. Song Repertoires in a Northern Population of Bachman's Sparrows. Oral presentation by Soha.

**Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2020**

*Collaborator/former postdoc:* Sara Bebus†, Blake Jones, Rindy Anderson. Brood-parasitized nestlings have higher baseline corticosterone concentrations. Oral presentation by Bebus. [Publication 37](#).

*Student:* Morgan Slevin\*\*, Wilner Fresin\*, Gillian Cannataro\*, Rindy C. Anderson. Smarts and Symbiosis: Elucidating the Relationships Between the Microbiome and Cognitive Performance in Birds. Oral presentation by Slevin.

**Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2019**

*Collaborator/former postdoc:* Sara Bebus†, Blake Jones, Rindy C. Anderson. Development of the corticosterone stress response among passerine nestlings. Oral presentation by Bebus. [Publication 37](#).

*Student:* Joseph Niederhauser\*\*, Paula Ziadi\*\*, Benjamin Blakely\*, Rindy C. Anderson. Spatial pattern of song sharing in Bachman's sparrows. Oral presentation by Niederhauser.

*Student:* Paula Ziadi\*\*, Benjamin Blakely\*, Brin Cerbone\*, Rindy C. Anderson. Testing hypotheses about song type matching and song sequences in songbird vocal repertoires. Oral presentation by Ziadi.

*Collaborators:* Clara Howell<sup>GC</sup>, Rindy C. Anderson, Elizabeth Derryberry. Solving is Sexy: the role of problem-solving ability in mate choice in zebra finches (*Taeniopygia guttata*). Oral presentation by student Howell. [Publication 36](#).

*Student:* Morgan Slevin\*\*, Joseph Niederhauser\*\*, Paula Ziadi\*\*, Erik Noonburg, Rindy C. Anderson. Linking territory characteristics to behavioral syndromes in Bachman's Sparrow. Poster presentation by Slevin.

**Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2018**

*Student:* Maria P. Ziadi\*\*, Rindy C. Anderson. Testing hypotheses about song type matching in Bachman's sparrow. Poster presentation by Ziadi.

*Student:* Joseph N. Niederhauser\*\*, Rindy C. Anderson. Habitat variation in relation to nesting success and nestling condition in Bachman's sparrow. Poster presentation by Niederhauser.

**American Association for the Advancement of Science Annual Meeting, February 17, 2017**

*Student:* Sabah B. Ali\*, Rindy C. Anderson. Song as an aggressive signal in the Bachman's sparrow. Poster presentation by Ali. [Publication 33](#).

**Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2017**

*Student:* Joseph N. Niederhauser\*\*, Rindy C. Anderson. Song learning and juvenile development in Bachman's sparrow. Poster presentation by Niederhauser.

*Student:* Sabah B. Ali\*, Rindy C. Anderson. Song and aggressive signaling in the Bachman's sparrow. Poster presentation by Ali. [Publication 33](#)

Regional:

**Southeastern Ecology and Evolution Conference Oct 2018**

*Student:* Joseph N. Niederhauser\*\*, Maria P. Ziadi\*\*, Benjamin Blakely\*, Rindy C. Anderson. Spatial pattern of song sharing in Bachman's sparrows. Oral presentation by Niederhauser.

Statewide:

**Florida Undergraduate Research Conference Feb 2017**

*Student:* Sabah B. Ali\*, Rindy C. Anderson Song and aggressive signaling in the Bachman's sparrow. Poster presentation by Ali. [Publication 33](#)

**Florida Ornithological Society Fall Meeting, Nov 2018**

*I organized and hosted the Florida Ornithological Society Fall Meeting in November 2018 at the FAU Davie Campus.*

*Student:* Joseph Niederhauser\*\*, Paula Ziadi\*\*, Benjamin Blakely\*, Rindy C. Anderson. Spatial pattern of song sharing in Bachman's sparrows. Oral presentation by Niederhauser.

*Student:* Paula Ziadi\*\*, Benjamin Blakely\*, Brin Cerbone\*, Rindy C. Anderson. Testing hypotheses about song type matching and song sequences in songbird vocal repertoires. Oral presentation by Ziadi.

*Student:* Morgan Slevin\*\*, Joseph Niederhauser\*\*, Paula Ziadi\*\*, Erik Noonburg, Rindy C. Anderson. Linking territory characteristics to behavioral syndromes in Bachman's Sparrow. Poster presentation by Slevin.

*Student:* Brin Cerbone\*, Paula Ziadi\*\*, Rindy C. Anderson. Bachman's Sparrows: Do they song match with their neighbors? Poster presentation by Cerbone.

**Florida Ornithological Society Fall Meeting Nov 2017**

*Student:* Maria P. Ziadi\*\*, Rindy C. Anderson. Testing hypotheses about song type matching in Bachman's sparrow. Poster presentation by Ziadi.

*Student:* Joseph N. Niederhauser\*\*, Rindy C. Anderson. Habitat variation in relation to nesting success and nestling condition in Bachman's sparrow. Poster presentation by Niederhauser.

**Florida Ornithological Society Fall Meeting Oct 2016**

*Student:* Sabah B. Ali\*, Rindy C. Anderson Song as an aggressive signal in the Bachman's sparrow. Poster presentation by Ali. [Publication 33](#)

*Student:* Joseph N. Niederhauser\*\*, Rindy C. Anderson. Song learning in Bachman's sparrow. Poster presentation by Niederhauser.

*Student:* Rachel Saless\*\*, Rindy C. Anderson. Acoustic structure, singing behavior, and vocal performance trade-offs in the Northern Cardinal. Poster presentation by Saless.

**Non-Refereed Publications, Presentations and Proceedings Since Appointment at FAU**

Publications:

Casey A. Klofstad, Stephen Nowicki, & **Rindy C. Anderson** (2016) Politics and Pitch: How Voice Influences Our Choice of Leaders. *American Scientist* 104: 282-287. ***Our piece was the cover story.***

## Creative Activities and Achievements

Presentations and Invited Seminars: (20 total, 11 invited seminars at academic institutions)

**Queens College, City University of New York**, November 4, 2020. Invited Virtual Talk. Title: “Bird songs and bird brains: the evolution of elaborate and reliable animal communication signals.” Invited by Dr. David Lahti.

**Simon Frasier University**, Burnaby, Canada, October 28, 2020. Invited Virtual Talk. Title: “The evolution of elaborate and reliable animal communication signals.” Invited by Brett Hodinka.

**Phillip and Patricia Frost Museum of Science**, Miami, Florida, May 20, 2020. Invited Virtual Talk: “Why Birds Sing, Why it Matters.”

**Nova Southeastern University**, Department of Biological Sciences, February 21, 2020. Invited by Eben Gering. Title: “Studying Bachman's sparrow: the social functions of birdsong and elaborate vocal repertoires.”

**Florida State University**, Department of Biological Science, February 3, 2020. Invited by Blake Jones. Title: “The social roles of bird song and the evolution of elaborate vocal repertoires.”

**Audubon Society of the Everglades**, December 3, 2019. Title: “Fighting and Flirting: The Social Roles of Bird Song.”

**University of Florida**, Department of Wildlife Ecology and Conservation, March 18, 2019. Invited by Professor Katie Sieving. Title: “A tale of two sparrows: song, signal reliability, and the evolution of animal communication.”

**Boca Raton Public Library**, FAU Division of Research “Research in Action” Lecture Series, March 7, 2019. Invited by Karin Scarpinato. Title: “Studying animal behavior: why birds sing, why it matters.”

**Boca Raton Institute for Learning in Retirement**, SPOTLIGHT: Science and Environment Lecture Series, February 25, 2019. Invited by Ata Sarajedini. Title: “Sounds like a winner: what animal voices teach us about human communication and politics.”

**New Mexico State University** Biology Seminar Series, March 2018. Invited by Professor Timothy Wright. Title: “Function and reliability in the evolution of animal communication systems.”

**Boca Raton Institute for Learning in Retirement**, November 2018. “Studying the evolution of animal communication: why birds sing and why it matters.”

**Fort Lauderdale Rotary**, August 2017. Invited by FAU Associate Provost of Broward Campuses Anthony Abbate. Title: “Why birds sing, why it matters.”

**College of William and Mary** Biology Seminar Series, April 2017. Invited by Professor John Swaddle. Title: “A tale of two sparrows: song function, reliability and the evolution of animal communication systems.” Seminar was cancelled due to weather-related flight cancellation.

**FAU Center for Molecular Biology and Biotechnology Seminar Series**, March 2016. Invited by Professor Herbert Weissbach. Title: “Sounds like a winner: what birdsong, the human voice, and politics teach us about vocal communication systems.”

**Archbold Biological Station**, March 2016. Invited by Dr. Reed Bowman. Title: A tale of two sparrows: song function, reliability and the evolution of animal communication systems

**Keynote speaker at FAU Integrative Biology Ph.D. Program Retreat**, February 2016. Invited by FAU IB graduate students. Title: “Sounds like a winner: what birdsong, the human voice, and politics teach us about vocal communication systems.”

**Broward College**, November 2015. Invited by Michael Pullin, Associate Dean of Science, Broward College South Campus. Title: “From bird song to candidate speeches: why honesty matters in vocal communication.”

**University of Tennessee, Knoxville**, October 2015. Invited by Professor Todd Freeberg. Title: “Signal function, reliability and the evolution of animal communication systems.”

**University of Memphis**, April 2015. Invited by the University of Memphis Graduate students. Title: “Signal function, reliability and the evolution of animal communication systems.”

**University of Southern Mississippi**, February 2015. Invited by Associate Professor Jodie Jawor. Title: “Signal function, reliability and the evolution of animal communication systems.”

Prior to appointment at FAU: Virginia Tech (November 2013), Western Carolina University (October 2012), West Georgia University (October 2011), Florida International University (October 2011), North Carolina Museum of Natural Sciences (April 2011), Swarthmore University (February 2011), University of California at Riverside (October 2010), University of Maryland College Park (December 2009) and College of Charleston (December 2008)

#### Other Creative Activities and Achievements:

##### Invited Blog Pieces:

Casey A. Klofstad, **Rindy C. Anderson** & Stephen Nowicki (2016) Sounds Like a Winner! Research shows that voters prefer candidates with lower-pitched voices. Invited Blog, *Scientific American online*.  
**Rindy C. Anderson** (2015) Do Candidates’ Voices Convey More Than Their Words? Invited Blog, *Huffington Post online*.

#### Grants Since Appointment at FAU

##### External

FUNDED \$92,199

1) Spring 2021 Sub-award from Miami-Dade College-FAU Summer Research Institute

Title: Summer Research Institute

Total award value: \$27,900; \$6,000 to my lab

PI for subcontract with MDC; I manage the program at FAU and mentor 2 MDC students in my lab with a budget of \$6,000.

Co-PI, FAU Program Manager

2) American Ornithological Society

Title: Research Award

Total award value: \$5,000 (direct costs only)

PI, no Co-PIs

3) Summer 2020 Sub-award from Miami-Dade College-FAU Summer Research Institute

Title: Summer Research Institute

Total award value: \$32,900; \$8,000 to my lab

PI for subcontract with MDC; I manage the program at FAU and mentor 2 MDC students in my lab with a budget of \$8,000.

Co-PI, FAU Program Manager



4) Spring 2020 Sub-award from MDC-FAU Spring Research Institute

Total award value: \$9,800, \$6,000 to my lab

PI for subcontract with MDC; I manage the program at FAU and mentored 2 MDC students in my lab.  
Co-PI, FAU Program Manager

5) 2019 Eastern Bird Banding Memorial Research Award

Title: Integrating studies of behavior, reproduction, and habitat quality to conserve Bachman's sparrow

Total Award Value: \$750

Direct Costs/yr: \$750, Indirect Costs/yr: \$0

PI (no co-PIs)

6) 2017 Wildlife Acoustics, Inc. Product Grant

Title: Studying female song in Bachman's Sparrow

Agency: Wildlife Acoustics, Inc.

Dates of Award: June 2017 - June 2018

Total Award Value: \$849

Direct Costs/yr: \$849, Indirect Costs/yr: \$0

7) 2016 Frank J. Schwartz Early Career Fellowship

Title: Are brood parasitic nestlings insensitive to their environment? A study of stress responsiveness in the brown-headed cowbird, *Molothrus ater*. [Publication 37](#)

Agency: University of Pittsburgh

Dates of Award: Feb – Oct 2016

Total Award Value: \$10,000

Direct Costs/yr: \$10,000, Indirect Costs/yr: \$0

PI, Co-PI: Sara Bebus, FAU postdoctoral research associate

NOT FUNDED > \$82,900

1) 2019 American Wildlife Conservation Foundation Grant

Title: Integrating studies of behavior, reproduction, and habitat quality to conserve Bachman's sparrow

Agency: The American Wildlife Conservation Foundation Grant

Total Award Value: \$2,000

2) 2019 Morris Animal Foundation Research Grant – Wildlife Study

Title: Studying the impact of stress on the health and gut microbiome of a wild songbird

Foundation: Morris Animal Foundation

Total Award Value: \$10,800.

3) 2019 The Pamela and Alexander F. Skutch Research Award for Studies in Avian Natural History

Title: Integrating studies of behavior, reproduction, and habitat quality to conserve Bachman's sparrow

Agency: The Association of Field Ornithologists

Total Award Value: \$10,000

4) 2018 American Wildlife Conservation Foundation Grant

Title: Integrating studies of behavior, reproduction, and habitat quality to conserve Bachman's sparrow

Agency: The American Wildlife Conservation Foundation Grant

Total Award Value: \$2,000

- 5) 2018 The Morris Animal Foundation Research Grant – Pilot Study  
Agency: Morris Animal Foundation  
Title: Stress, Smarts, and Symbiosis: evaluating the potential of the gut microbiome to reduce stress and improve cognition in birds.  
Total Award Value: \$10,800.
- 6) 2017 Division of Environmental Biology preliminary proposal: How habitat quality, physiological condition, and social behavior interact to affect juvenile survival and population viability in a songbird  
Agency: National Science Foundation  
Total Award Value: pre-proposal, no budget  
Duration of Award: 3 yrs
- 7) 2017 Integrative Organismal Systems preliminary proposal: Collaborative Research Co-PI Rosvall: How stress generates adult plasticity in decision-making  
Agency: National Science Foundation  
Total Award Value: none - pre-proposal, no budget  
Your role: PI, External Co-PI: Kimberly Rosvall, Assistant Professor of Biology, Indiana University
- 8) 2017 Integrative Organismal Systems preliminary proposal: The evo-devo of developmental stress: an experimental approach to understanding the evolution of brood parasitism  
Agency: National Science Foundation  
Total Award Value: pre-proposal, no budget  
PI, External Co-PI: Sara Bebus, FAU postdoctoral research associate
- 9) 2017 Brevard Zoo Conservation Fund proposal: Behavioral syndromes and the conservation of an imperiled songbird, the Bachman's Sparrow  
Title Agency: Brevard Zoo  
Total Award Value: \$5,614  
PI (no co-PIs)
- 10) 2017 National Geographic Society Standard Grant: Behavioral syndromes and the conservation of an imperiled songbird, the Bachman's Sparrow  
Agency: National Geographic Society  
Total Award Value: \$13,910  
Duration of Award: 1 yr  
PI (no co-PIs)
- 11) 2017 Eppley Foundation Research Grant: Behavioral syndromes and the conservation of an imperiled songbird, the Bachman's Sparrow  
Agency: The Eppley Foundation for Research  
Total Award Value: \$13,910  
PI (no co-PIs)
- 12) 2017 Curtis and Edith Munson Foundation Research Grant: Behavioral syndromes and the conservation of an imperiled songbird, the Bachman's Sparrow  
Agency: The Curtis and Edith Munson Foundation  
Total Award Value: \$13,910  
PI (no co-PIs)

13) 2016 Integrative Organismal Systems preliminary proposal: Collaborative Research: How stress modulates the integration of cognition and mate choice.

Agency: National Science Foundation

Total Award Value: none – pre-proposal

PI, External Co-PI: Kimberly Rosvall, Assistant Professor, Biology, Indiana Univ.

14) 2016 Whitehall Foundation Pre-proposal: Glucocorticoid mechanisms linking cognition and mate choice.

Agency: Whitehall Foundation

Total Award Value: none – pre-proposal

PI (no co-PIs)

### **Internal**

FUNDED \$79,969

1) FAU OURI grant: Ennis, Al-Hraki, Poveda

Dates of Award: Jan - May 2021

Total Award Value: \$1,200

PI and Faculty Mentor

2) FAU OURI grant: Whu

Dates of Award: May – July 2020

Total Award Value: \$600

PI and Faculty Mentor

3) FAU OURI Team Grant: Gonzales, Reynolds, Zamudio

Dates of Award: Dec 2019 – August 2020

Total Award Value: \$1,200

PI and Faculty Mentor

4) FAU OURI SURF Fellowship to Wilner Fresin

Dates of Award: May 2019 – August 2019

PI and Faculty Mentor

Total Award Value: \$4,000

PI and Faculty Mentor

5) FAU OURI Team Grant: Roldan & Hunt

Dates of Award: May 2019 – Dec 2019

Total Award Value: \$1,200

PI and Faculty Mentor

6) FAU OURI Team Grant: Fresin & Cannataro

Dates of Award: May 2019 – Dec 2019

Total Award Value: \$1,200

PI and Faculty Mentor

7) 2018 FAU CESCOS Seed Grant: Testing models of social behavior and population dynamics in a territorial bird. *Two manuscripts under review: Niederhauser et al. at Behavior, Noonburg and Anderson at Ecology*

Total Award Value: \$16,675

Duration of Award: 1 yr

PI, Co-PI: Erik Noonburg, FAU Biological Sciences

8) 2018 OURI Grant: Cerbone

Dates of Award: May 2018– Dec 2018

Total Award Value: \$600

PI and Faculty Mentor

9) 2017 Technology Fee Grant: FAU Bioacoustics Hub: Equipment to Enhance Technology-driven Education and Research Training in the Biological Sciences

Duration of Award: 1 yr

Total Award Value: \$18,094

PI

10) 2017 Brain Institute Pilot Grant: Glucocorticoid mechanisms linking cognition and mate choice

Duration of Award: 1 yr

Total Award Value: \$20,000

PI

11) 2017 OURI Grant: Blakely

Dates of Award: Dec 2017- May 2018

Total Award Value: \$600

PI and Faculty Mentor

12) 2017 OURI Grant: Hearne

Dates of Award: Dec 2017- May 2018

Total Award Value: \$600

PI and Faculty Mentor

13) 2016 OURI Grant: Applebaum

Dates of Award: Dec 2016- May 2017

Total Award Value: \$600

PI and Faculty Mentor

14) 2016 FAU OURI Summer Undergraduate Research Fellowship, Publication 33

Awarded to Mentor Anderson, student Sabah Ali

Total Award value: \$4,000

Duration of Award: Summer 2016

PI and Faculty Mentor

15) 2015 FAU OURI Team Grant: Ali and Montero

Dates of Award: Dec 2015– May 2016

Total Award Value: \$1,200

PI and Faculty Mentor

16) 2015 OURI Grant: Ali, Publication 33

Dates of Award: May – Dec 2015

Total Award Value: \$600

PI and Faculty Mentor

17) 2015 Broward Undergraduate Research Award, [Publication 33](#)  
Awarded to student Sabah Ali and Faculty Mentor Anderson  
Duration of Award: Nov 2015 – April 2016  
Total Award Value: \$1,000  
PI and Faculty Mentor

18) 2015 OURI Grant: Koukoulidis  
Dates of Award: Dec - May 2015  
Total Award Value: \$600  
PI and Faculty Mentor

19) 2015-2016 Faculty Research Mentoring Award, mentor Professor Dale Gawlik. [Publication 31](#)  
Total Award Value: \$6,000  
Duration of Award: 1 yr  
PI, Dale Gawlik was Faculty Mentor

Funding prior to appointment at FAU:

Duke University Preparing Future Faculty Fellowship, 2007-2008 (workshops and local travel provided)  
NSF ADVANCE awards to attend Faculty Development workshops, \$300 in 2007, \$700 in 2010  
University of Pittsburgh G. Murray McKinley Research Grant, \$549 in 2007, \$567 in 2008  
Duke University Sigma Xi Postdoctoral Travel Award, April 2007, total award \$1,200  
NSF Doctoral Dissertation Improvement Grant, 2005-2007, total award \$6,397  
Animal Behaviour Society Student Research Grant, March 2004, total award \$2,000

### **Courses Taught at FAU**

1) *Principles of Behavioral Ecology* (3 cr). I developed this new course in 2015 as a flipped classroom, team-based course. Cross-listed with graduate and undergraduate students. I taught the course for three semesters as a Special Topics course and then converted it to regular course added to the catalog for the spring 2019 semester. I teach this course in the spring semesters (S2015, S2016, S2017, S2018, S2019, S2020, S2021). In S2020 I taught the course from Davie with video-conferenced sections to Boca and Harbor Branch to accommodate graduate students.

2) *Comparative Animal Behavior* (3 cr). I teach this lecture course in the fall semesters (F2015, F2017, F2018, F2019) and summer full term (S2020). Enrollment 200 - 225.

3) *Seminar in Animal Behavior and Cognition* (1 cr). I developed this Special Topics course in 2016 as a seminar cross-listed for both undergraduate and graduate students. I have taught this course once in fall 2016, and will offer it occasionally during spring and summer semesters.

4) *Directed Independent Research course Songbird Behavior* (1-3 cr), 44 students to date. Undergraduate students work with myself and my graduate students on projects in both the lab and the field related to songbird social behavior, vocal communication systems, bioacoustics, sexual selection, and microbiomes.

### **Supervision of Postdoctoral Researchers**

March - October 2016 Dr. Sara Bebus, supported as a co-PI on a University of Pittsburgh Frank J. Schwartz Early Career Fellowship to PI Anderson, project title: "Are brood parasitic nestlings insensitive to their environment? A preliminary study of stress responsiveness in the brown-headed cowbird." The project resulted in an NSF pre-proposal submitted January 2017, and [Publication 37](#).

### **Supervision of Graduate Students** (28 total)

*Major Advisor* (6): *graduated* (3)

**Current Doctoral students, FAU Integrative Biology Program (3)**

Morgan Slevin, IB-N (Neurosci) Aug 2018 – present  
Heather Wolverton IB-ES (Env. Sci.) began Jan 2020  
Hans Gonzembach, IB-ES (Env. Sci.) begins Aug 2021

**Current Master's Thesis students, FAU Biology Program (1)**

Charles Daria, Biology MS, Aug 2019 - present

**Incoming Master's Thesis students**

William Abbott, Env. Sci. MS, begins Aug 2021

**Graduated Doctoral students, FAU Integrative Biology Program (1)**

Joseph Niederhauser, IB-ES (Env Sci) 2015 - graduated July 2020

**Graduated Master's Thesis students, FAU Biology Program**

Paula Ziadi, 2017 – 2019 graduated July 2019

**Graduated Non-Thesis Masters student, FAU Biology Program**

Rachel Saless, FAU Biology Master of Science Non-Thesis Program 2015 – graduated Dec 2018

*Committee Member (21): graduated (18)*

**FAU Integrative Biology Doctoral Program**

Cody Mott, 2019-present  
David Essian, 2016-present  
Beth Brady, graduated Aug 2020  
Betsy Evans, graduated Aug 2020

**FAU Biology Master's Thesis Program**

Rachel Larson, 2019-present  
Ivanna Serra, graduated Aug 2020  
Jacquelyn Evans, graduated Aug 2020  
Angela Field, graduated spring 2020

**Supervision of Graduate Students cont'd**

Charlene Korchia, graduated spring 2020  
Jamie Fraham, graduated summer 2019  
Erin Binkley, graduated fall 2018  
Meagan Gary, graduated fall 2016

**FAU Environmental Science Master's Thesis Program**

Ashley Jackson, graduated summer 2018  
Jenna May, graduated summer 2018  
Camille Herteaux, graduated spring 2018

**FAU Biology Non-thesis Master's Program**

Walker Nambu, (Comp. Examiner) graduated spring 2019  
Lauren Fremont, (Comp. Examiner) graduated fall 2018  
Ryan Bruellman, (Comp. Examiner), graduated fall 2017  
Joseph Prio (Comp. Examiner), also served as a Committee Member when student was in the M.S. Thesis Program. Graduated fall 2016.  
Amanda McIntosh, graduated fall 2016

**External graduate committees**

Luis Vargas, University of Miami Biology PhD Program (Ext. Committee Member) graduated fall 2017

### Supervision of Undergraduate Students

44 DIR students, 18 FAU Office of Undergraduate Research and Inquiry Grant Awardees, 24 volunteers  
\*indicates presenter at national/regional conference, ^indicates authorship on a publication, <sup>H</sup>indicates Biology Honors Program

#### 2017 Undergraduate Researcher of the Year

Sabah Ali<sup>\*A</sup> was awarded the distinction of Undergraduate Researcher of the Year for the College of Science. Under my mentorship Sabah also won a *SURF Fellowship* (2016), a *Broward Undergraduate Research Grant* (2016), both individual and team *OURI Grants*, and completed an *Honor's Thesis* (Song and aggressive signaling in Bachman's sparrow). He is the first author on Publication 33.

#### Directed Independent Study/Research (44 students)

2021: Leena Al-Hraki, Luisana Munoz, Kristen Palmer, Elisset Poveda<sup>H</sup>, Austin Stratt, Hannah Wahba, Emily Whu<sup>H</sup>

2020: Emily Argueta, Marisa Betancourt, Isabella Dixon, Vanessa Durand, Carson Ennis, Adriana Gonzales<sup>H</sup>, Christian Hunt, Thu Le, Jeffrey Miranda, Nicole Nalty, Laura Roldan<sup>H</sup>, Angelina Smith, Emily Whu, Maria Zamudio

2019: Gillian Cannataro<sup>H</sup>, Vanessa Durand, Sofia Feliciano, Wilner Fresin, Adriana Gonzales, Christian Hunt, Emily McAdams, Nicole Nalty, Andressa Reiss<sup>H</sup>, Laura Roldan

2018: Brin Cerbone\*, Jenna Johnson, Rohan Palkar

2017: Jennifer Applebaum, Ryan Bruellman, Benjamin Blakely, Brian Fedak, Michelle Giambrone, Haley Grosch, Willow Hearne, , Marcel Lopez, Jasmine Macedo, Magd Naguib, Delia Rodriguez, Jazz Whittaker

2016: Sabah Ali<sup>\*AH</sup>, David Lipszyc, Caitlyn Monterro, Luke Otfinowski, Delicia Pop

#### FAU Office of Undergraduate Research and Inquiry Grant Awardees (18 students, 15 awards)

2021: Carson Ennis, Leena Al-Hraki, Elisset Poveda (team grant)

2020: Emily Whu (individual grant)

2019: Adriana Gonzales, Korbin Reynolds, Maria Zamudio (team grant)

Summer 2019: Wilner Fresin SURF Fellowship

2018: Wilner Fresin NSF LEARN Award, Brin Ceborne (individual grant), Laura Roldan and Christian Hunt (team grant); Wilner Fresin and Gillian Canatarro (team grant)

2017: Benjamin Blakely (individual grant), Willow Hearne (individual grant)

Summer 2016: Sabah Ali SURF Fellowship

2016: Jennifer Applebaum (individual grant)

2015: Sabah Ali<sup>\*A</sup> and Caitlyn Monterro (team grant); Sabah Ali (individual grant); Nikki Koukoulidis 2015 (individual grant)

#### Miami-Dade College – FAU STEM Research Partnership (6 students)

2021: D'Arsey Laguerre, Ernesto Perez

2020: Tetewah Tetteh, Herlancia Lafrance, Alana Acevedo, Kianna Bailey

#### Student volunteers not included above (24)

2020: Jennifer Charo, D'Andre Nicholson, Malia Simpson, Rebecca Wahba

2019: Safiyyah Mir, Korbin Reynolds, Nicole Rita, Amaris Sukhu, Gina Valo

2018: Bradley Beer, Gillian Herbert, Anha Islam, Mathub Kalantari, Alyssa Pearson, Kyle Schwarz, Luis Torres

2017: Carolyn Johnson, Chris Carstens, Michelle Giambrone, Kristina Jones, Allesandra Lezcano,

2016: Zara Mansoor, Daniel Pertwee, Heather Gilchrist

### **Supervision of High School Students (9)**

Emily Whu (2020 – present) FAUHS dual-enrolled at FAU

Angelina Smith (2019 – present) FAUHS dual-enrolled at FAU

Emily Argueta (2019 – present) FAUHS dual-enrolled at FAU

Alina Rizvi (2018 – 2019) FAUHS dual-enrolled at FAU

Pavan Gudoor (2018) American Heritage High School

Willow Hearne (2017-2018) FAUHS dual-enrolled at FAU, OURI awardee

Taylor Knoll (2017-2018) Boca Raton Community High School

Arman Alexis (2016-2017) FAUHS student

Sabah Ali (2015-2017) FAUHS dual-enrolled at FAU, authored publication 33, won four FAU grants and fellowships (>\$7,500), and named 2017 College of Science Researcher of the Year

### **Service and Professional Development**

#### Service to the Institution

Department/School service:

- Biology Chair Search Committee 2019-2020
- Honors in Biological Sciences-Research Steering Committee Member 2018
- Integrative Biology Admissions Committee, IB-NS faculty rep 2018-present
- Judge for Environmental Science Symposium, 2017
- Personnel Committee Member 2016-present
- Keynote speaker at FAU Integrative Biology Ph.D. Program Retreat, 2016
- Guest lectures (6) for faculty in Biological Sciences (2016-2021)
- Environmental Science Admissions Committee Member 2015-present

Service to the College/University:

- Brain Institute Internal Advisory Board, College of Science representative August 2020-present
- Comparative Medicine Advisory Committee Member 2019-present
- *Ad hoc* Neuroscience and Behavior Advisory Committee Member 2019-present
- Graduate Training in Neuroscience Program Steering Committee 2017-present
- Member of the FAU Brain Institute 2017 - present
- Host Neuroscience Seminar speaker, Dr. Luke Ramage-Healy November 2019
- Host, Neuroscience Seminar speaker, Dr. Ofer Tchernichovski September 2017
- Judge, OURI Spring Symposium 2015-present
- Judge, FAU Research Day, 2015-present
- Reviewer, OURI Student Research Grant proposals, SURF Fellowship proposals, 2018
- Invited seminar for FAU Center for Molecular Biology and Biotechnology Seminar Series, 2016
- Co-founder (with Marianne Porter, Kate Detwiler), FAU Faculty Writing Group, 2016-present

Service to the Discipline/Profession

- Associate Editor, *Behaviour* (International journal) January 2018-present. I handle 6-8 manuscripts per year.
- Mentoring Program Coordinator, Society for Integrative and Comparative Biology, Division of Animal Behavior Executive Committee, 2019-present
- Animal Behavior Society, Mentoring Program participant, 2019-present
- Host and co-organizer, Florida Ornithological Society Fall Meeting, FAU Davie, Nov 2-3, 2018



- Membership in Scientific Societies: Animal Behaviour Society (International), Society for Integrative and Comparative Biology (National), Association for Field Ornithology (National), American Ornithological Society (National), Florida Ornithological Society (Regional), Florida Chapter of the Wildlife Society (Regional)
- Reviewer for journals: 56 reviews since appointment at FAU: Animal Behaviour (20 reviews), Avian Research (1), Behaviour (11), Behavioral Ecology (1), Behavioral Ecology and Sociobiology (2), Behavioral Processes (3), Biology Letters (1), Condor (1), Ethology (2), Evolution (1) Hormones and Behavior (2), Integrative and Comparative Biology (1), Scientific Reports (1)
- Reviewer for National Science Foundation Proposals: NSF ad hoc reviewer, 2014 (1 review), 2015 (1 review), 2016 (1 review), 2017 (1 review); NSF Panelist, full proposal review panel, 2014
- Reviewer for Scientific Society Proposals: Animal Behavior Graduate Student Grants (3 grants 2016, 3 grants 2017, 3 grants 2018); Society for the Study of Comparative and Integrative Biology (4 grants 2016)

#### Service to the Community/Public, Science Outreach, Media

- Frost Science Museum Virtual Lecture, May 20, 2020. Title: “Why birds sing, why it matters.”
- Science Olympiad February 2020, designed and administered the Ornithology event
- Audubon Society of the Everglades, December 3, 2019. Title: “Fighting and Flirting: The Social Roles of Bird Song.”
- Boca Raton Public Library, FAU “Research in Action” Lecture Series, March 7, 2019. Title: “Studying animal behavior: why birds sing, why it matters.”
- Boca Raton Institute for Learning in Retirement: Science and Environment Lecture Series, February 25, 2019. Title: “Sounds like a winner: what animal voices teach us about human communication and politics.”
- Frost Science Museum, Earth Day April 2019, presented “forager scramble!” game
- NPR WLRN radio and web: A Sparrow's Songs: College Students in Broward Show Off Their Research Projects At FAU Symposium, November 2019  
<https://www.wlrn.org/post/sparrows-songs-college-students-broward-show-their-research-projects-fau-symposium#stream/0>
- NPR WRN web and Hidden Brain podcast feature story of voice research: Sounds Like A Winner: What Voices Have To Do With Politics, November 2018:  
<https://www.npr.org/2018/11/05/664465019/sounds-like-a-winner-what-voices-have-to-do-with-politics>
- Science Daily web feature story of voice research, March 2018:  
<https://www.sciencedaily.com/releases/2018/03/180314092354.htm>
- Partnership with STEM Coordinator Sean Williams at Somerset Academy Miramar to bring science to the classroom. Delivered guest lectures (“What does a scientist do?”) and developed hands-on class activities (“The amazing word of Bioacoustics!”) for 6-8th graders, May 2018.
- Boca Raton Institute for Learning in Retirement, November 2018. “Studying the evolution of animal communication: why birds sing and why it matters.”
- Museum of Discovery and Science, volunteer science docent, one weekend each month, 2018
- Invited seminar for the Fort Lauderdale Rotary Club, Aug 2017
- Lecture to the Jupiter Lifelong Learning Society, Nov 2016
- New York Times web feature of voice research, January 2016:  
<https://www.nytimes.com/2016/01/26/opinion/campaign-stops/what-voters-want.html>
- Invited seminar for Archbold Biological Station, March 2016
- MSNBC web feature of voice research: Five ways to train your voice to sound powerful, March 2015: <http://www.msnbc.com/msnbc/five-ways-train-your-voice-sound-powerful>

#### Professional Development

- FAU Faculty Research Mentoring Program Awardee, 2015-2016

- Preparing Future Faculty Fellowship Program, Duke University, 2007-2008
- NSF ADVANCE Faculty Development Workshops: Negotiating the Ideal Faculty Position (2007), Junior Faculty Development (2010), Rice University
- Duke Professional Development Workshop: Effective teaching in large enrollment courses, 2011

## CURRICULUM VITAE

**Steven L. Bressler, Ph.D.**  
**Professor**

Center for Complex Systems and Brain Sciences  
Department of Psychology  
Charles E. Schmidt College of Science  
Florida Atlantic University

<http://www.ccs.fau.edu/~bressler/>  
bressler@fau.edu

### EDUCATION

1996 Visiting Fellowship in Functional MRI, Massachusetts General Hospital  
1982 Ph.D., Physiology/Anatomy, University of California, Berkeley  
1972 B.A. (Honors), Biopsychology, The Johns Hopkins University

### PROFESSIONAL POSITIONS

2015-2019 Interim Director, Center for Complex Systems and Brain Sciences, Florida Atlantic University  
2013-2018 Domain Curator for Large-Scale Computational Neuroscience, Neuroimaging Informatics Tools and Resources Clearinghouse (NITRC)  
1997- Professor, Department of Psychology and Center for Complex Systems & Brain Sciences, Florida Atlantic University  
1990-1997 Associate Professor, Department of Psychology and Center for Complex Systems, Florida Atlantic University  
1986-1990 Senior Scientist, EEG Systems Laboratory, San Francisco, CA  
1988-1990 Lecturer, Pacific Graduate School of Psychology, Palo Alto, CA  
1982-1986 Postdoctoral Fellow, EEG Systems Laboratory, San Francisco, CA

### PROFESSIONAL SERVICE

2017 Organizer, Symposium on Models of Memory and Anticipatory Coding, Society for Neuroscience  
2016 Organizer, Conference on Brain Sciences from a Complex Systems Perspective, Center for Complex Systems and Brain Sciences, Florida Atlantic University  
2014-2015 Executive Committee, Department of Psychology, Florida Atlantic University  
2011-2017 Editorial Board, Computational Intelligence and Neuroscience  
2009- Action Editor, Neural Networks  
2011 Organizer, NSF Special Symposium, From Brains to Machines (IJCNN11) 2011  
Special Sessions Chair, International Joint Conference on Neural Networks (IJCNN11)

- 2010 Organizer, NSF Conference on Neurocognitive Networks (Neurocognitive Networks 2010)
- 2009-2011 Board of Governors, International Neural Networks Society (INNS)
- 2009 Organizer, Symposium on Top-Down Mechanisms of Visual Attention, Computational Cognitive Neuroscience Conference
- 2008-2009 Program Co-Chair, International Joint Conference on Neural Networks (IJCNN09)
- 2008-2009 Program Committee, International Joint Conference on Neural Networks (IJCNN09)
- 2008 Scientific Committee, International Conference on Cognitive Neuroscience
- 2007 Co-Organizer, NSF Conference on Brain Network Dynamics
- 2007 Panel, NSF New Frontiers in Dynamic Systems
- 2004-2007 Program Committee, Organization for Computational Neurosciences
- 2004 Program Committee, Conference on Modeling Mental Processes and Disorders, Agora for Biosystems
- 2004 Review Committee, Computational Neuroscience Meeting (CNS'04) 2003  
Review Committee, Computational Neuroscience Meeting (CNS'03)
- 2000 Review Committee, Computational Neuroscience Meeting (CNS'00)
- 1999 Review Committee, International Joint Conference on Neural Networks (IJCNN'99)

## **EXTRAMURAL FUNDING**

- 2011- 2014 *Electrophysiological Studies of Human Attention*. NIMH (MH096482) (\$93,506 total direct costs) [Co-PI]
- 2011 *From Brains to Machines: A Special Program at the 2011 International Joint Conference on Neural Networks*. NSF (1110883) (\$19,990 total direct costs) [Co-PI]
- 2009-2014 *Distributed Cortical Processing in Visual Working Memory*. NIMH (MH081162) (\$387,000 total direct costs) [Co-PI]
- 2009 *Conference on Neurocognitive Networks*. NSF (0924414) (\$33,000 total direct costs) [PI]
- 2007 *Conference on Brain Network Dynamics*. NSF (0652375) (\$30,000 total direct costs) [Co-PI]
- 2006-2009 *Attention Related Ensemble Activity in Visual Cortex*. NIMH (MH072034) (\$485,000 total direct costs) [Co-Investigator]
- 2005-2009 *Quantitative Tools for the Analysis of Coordinated Activity in Brain Circuits*. NINDS (NS054314) (\$950,000 total direct costs) [Co-Investigator]
- 2005-2008 *Single Trial Analysis of Event Related Signals*. NIMH (MH070498) (\$475,000 total direct costs) [Co-Investigator]
- 2004-2006 *Granger Causality Spectra and Neural Oscillations*. NIMH (MH071620) (\$200,000 total direct costs) [Co-Investigator]
- 2003-2005 *Corticocortical Interactions in Visual Working Memory*. NIMH (MH069374) (\$200,000 total direct costs) [Co-Investigator]

2002-2007 *Dynamics of Large Scale Cortical Networks*. NIMH (MH64204) (\$650,000 total direct costs) [Principal Investigator]  
 2002-2005 *Network for the Study of Brain Systems and Dynamics*. NINDS (NS045171) (\$825,000 total direct costs) [Co-Investigator]  
 2001-2004 *Large-Scale Distributed Cortical Networks in Vision*. NSF (IBN0090717) (\$257,695 total direct costs) [Principal Investigator]  
 1998-2000 *Development of Advanced Techniques for Analyzing Cortical Dynamics*. NIMH (MH58190) (\$100,000 total direct costs) [Principal Investigator]  
 1997-2000 *Visuomotor Control by Large-Scale Distributed Cortical Networks*. NSF (IBN9723240) (\$186,256 total direct costs) [Principal Investigator]  
 1995-1997 *Visuomotor Control by Large-Scale Distributed Cortical Networks*. NSF (IBN9511804) (\$77,841 total direct costs) [Principal Investigator]  
 1992-2005 *Dynamic Patterns in Complex Biological Systems*, NIMH [EEG Project Director]  
 1990-1994 *Functional Topography of Primate Neocortex*. NIMH (MH44370) (\$240,403 total direct costs) [Principal Investigator]  
 1988-1990 *Mass Action of Human Neocortex*, NIMH, [Co-Principal Investigator]

## TEACHING EXPERIENCE

**Graduate** Cognitive Neuroscience in Society  
 Advanced Cognitive Neuroscience  
 Cognitive Neuroscience  
 Computational Neuroscience  
 Seminar in Attention  
 Neurobiological Signal Processing  
 Physiological Psychology

**Undergraduate** Cognitive Neuroscience  
 Cellular Neuroscience  
 General Psychology  
 Introductory Biological Bases of Behavior  
 Advanced Biological Bases of Behavior

## REVIEW SERVICE

### **NIH/NSF**

NIH/ZRG1F02B-D, June 2015 NSF/CNIC,  
 September, 2014  
 NIH/ZRG1F02B-D, May, 2014  
 NIH/CSR CP, June, 2012  
 NSF Neural Systems, DIOS, September, 2011  
 NSF SLC SVT, June, 2010  
 NSF IOSE PIRE RSV Panel, May, 2010

NSF Collaborative Research in Computational Neuroscience (CRCNS), January, 2009  
NSF Emerging Frontiers in Research and Innovation, December, 2007  
NIH/CSR IFCN-E (02) Scientific Review Group (Cognition), March, 2006  
NIH NIMH B/START Program, Jan 28, 2005  
NIH MDCN-G (55) Scientific Review Group (Human Brain Project/BIST), Sep 23-24, 2004  
NIH Risk, Prevention & Health Behavior 20 L Integrated Review Group, July 12, 2004  
NIH MDCN-G (55) Scientific Review Group (Human Brain Project/BIST), Feb 5-6, 2004  
NIH Risk, Prevention & Health Behavior 20 L Integrated Review Group, Nov 3, 2003  
NIH SSS-E (95) Scientific Review Group (Human Brain Project), May 29-30, 2003  
NIH Multidisciplinary Special Emphasis Panel, 2000  
NIH Multidisciplinary Special Emphasis Panel, 1994

### ***Other Agencies/Institutions***

Air Force Office of Scientific Research  
British Columbia Ministry of Advanced Education  
Canadian Institutes of Health Research  
Chinese University of Hong Kong Grants Committee  
DOD/USAMRMC/PRMRP Neuroprosthetics  
DOD/USAMRMC/TSCR Cell and Molecular Biology  
Vanderbilt University Central Discovery Grant Program

### ***Journals***

Annals of the New York Academy of Sciences	International Journal of Neuroscience	Neuroinformatics
Biological Cybernetics	Journal of Cognitive Neuroscience	Neuron
Brain Research	Journal of Computational Neuroscience	NeuroReport
Brain Research Bulletin	Journal of Neurophysiology	Neuroscientist
Cerebral Cortex	Journal of Neuroscience	PLoS Biology
Clinical Neurophysiology	Journal of Neuroscience	PLoS Computational Biology
Computational Intelligence and Neuroscience	Journal of Neuroscience Journal of Neuroscience Methods	Proceedings of the National Academy of Sciences
Cognitive Brain Research	Nature	Scholarpedia
Current Biology	Nature Reviews	Science
European Journal of Neuroscience	Neuroscience	Trends in Cognitive Sciences
Experimental Brain Research	Neural Networks	
IEEE Transactions on Biomedical Engineering	Neurocomputing	
	Neuroimage	

**INVITED LECTURES (124)**

*Top-Down Interareal Cortical Coupling in Cognition*. Biomedical Engineering Department, Florida International University, October 6, 2017.

*Anticipatory Top-Down Cortical Coupling*. ICCN, Seville, Spain, August 4, 2017.

*Executive Control by the Prefrontal Cortex*. IFISC, Universitat de les Illes Balears, May 9, 2017.

*Olfactory Interdependency*. IFISC, Universitat de les Illes Balears, May 17, 2017.

*Complex Dynamic Brain Networks*. IFISC, Universitat de les Illes Balears, May 17, 2017.

*Anticipatory Top-Down Coupling of V1 and Extrastriate Cortex in Visual Expectation*. Society for Neuroscience Nanosymposium, San Diego, CA, November 15, 2016.

*The Clinical Potential of EEG Functional Connectivity Analysis*. EEG Source Imaging Session. International Organization of Psychophysiology. Havana, Cuba, August 31, 2016.

*AutoRegressive Modeling of Directed Functional Connectivity in the Brain*. Havana, Cuba, August 30, 2016.

*The Wave Packet in Multi-Area Cortical Modeling*. Organization for Computational Neuroscience, Jeju, South Korea, July 7, 2016.

*The Potential of EEG Functional Connectivity Analysis in the Clinic*. Society for Brain Mapping and Therapeutics, Miami, FL, April 9, 2016.

*Functional Connectivity Analysis of Neural Data for Therapeutics*. Society for Brain Mapping and Therapeutics, Miami, FL, April 9, 2016.

*Top-Down Processing in Neurocognitive Networks*. BrainModes Conference: Oscillations and Large-Scale Networks, Georgia State University, Atlanta, GA, December 11, 2015.

*Source-Resolved Connectivity Analysis*. 14<sup>th</sup> International Workshop on Brain Connectivity, UC San Diego, La Jolla, CA, June 12, 2015.

*Spectral Methods in EEG Analysis*. Keynote Address, Brainstorm Workshop, Florida International University, October 13, 2014.

*Top-Down Processing in Neurocognitive Networks*. Quantitative Theories of Learning, Memory and Prediction: National Science Foundation Workshop, Arlington, VA, May 8, 2014.

*Beta Synchrony in Visual Expectation.* Krasnow Institute, George Mason University, May 7, 2014.

*Beta Synchrony and Top-Down Feedforward Processing in Visual Expectation.* Workshop on Connections & Communications in the Brain, Banbury Center, Cold Spring Harbor Laboratory, April 7, 2014.

*Neurocognitive Networks and Task Set.* Purdue University, February 3, 2014.

*Dynamic Function Interactions in Cerebral Cortex.* FAU Neuroscience Colloquium Series, January 14, 2014.

*Dynamic Function Interactions in Cerebral Cortex.* Laboratory of Cognitive Neuroscience, Ecole Normale Supérieure, Paris, France, December 13, 2013.

*Dynamic Function Interactions in Cerebral Cortex.* SFB Lecture Series, Medical University Hamburg-Eppendorf, Hamburg, Germany, December 9, 2013.

*Workshop on Directed Functional Connectivity Analysis using Wiener-Granger Causality.* SFB Methods Academy, Medical University Hamburg-Eppendorf, Hamburg, Germany, December 5, 2013.

*Neurocognitive Networks and Set.* NSF-Sponsored Special Workshop on Cognitive Science: The Computational Paradigm Symposium, International Joint Conference on Neural Networks, Dallas, Texas, August 6, 2013.

*Set-Related Neurocognitive Networks and Neurodynamic Processing.* 4<sup>th</sup> International Conference on Cognitive Neurodynamics, Sigtuna, Sweden, June 24, 2013.

*Large-Scale Synchronous Beta Rhythms.* Mathematical Biosciences Institute Workshop, Ohio State University, March 20, 2013.

*Directed Functional Connectivity Analysis Based on Granger Causality.* MURI Winter School on Dynamics of Multifunction Brain Networks, UC San Diego, January 11, 2013.

*Set-Related Neurocognitive Networks and Neurodynamic Processing.* MURI Winter School on Dynamics of Multifunction Brain Networks, UC San Diego, January 10, 2013.

*Top-Down Modulation of Visual Cortex in Visual Spatial Attention.* Department of Psychology, University of Amsterdam, September 20, 2012.

*Top-Down Modulation of Visual Cortex in Visual Spatial Attention.* Netherlands Institute for Neuroscience, Amsterdam, The Netherlands, September 19, 2012.



*Top-Down Modulation of Visual Cortex in Visual Spatial Attention.* Maastricht Brain Imaging Center, Maastricht, The Netherlands, September 17, 2012.

*Anticipatory Top-Down Modulation in a Large-Scale Brain Network.* Symposium on Complex Systems and Brain Networks, Hanse-Wissenschaftskolleg Institute for Advanced Study, Delmenhorst, Germany, September 14, 2012.

*Anticipatory Top-Down Modulation of Visual Cortex in Visual Spatial Attention.* Ernst Strüngmann Institute, Frankfurt, Germany, September 10, 2012.

*Top-Down Attentional Control in Posner Spatial Cueing.* Symposium in Honor of Michael I. Posner, Center for Complex Systems & Brain Sciences, Florida Atlantic University, December 8, 2011.

*The Cerebral Cortex as an Anticipatory System.* CLION 2011 Symposium, University of Memphis, October 13, 2011.

*The Expectant Cortex.* Washington University School of Medicine, August 14, 2011.

*The Expectant Cortex.* Plenary Talk. Eighth International Conference on Complex Systems, June 30, 2011.

*Dynamic Neurocognitive Network Organization from Autoregressive Modeling of Neural Signals.* Department of Psychiatry & Behavioral Neurosciences, Wayne State University School of Medicine, October 12, 2010.

*Neurocognitive Networks in Health and Disease.* Chairman's Grand Rounds Lecture, Department of Psychiatry & Behavioral Neurosciences, Wayne State University School of Medicine, October 13, 2010.

*Anticipatory Cortical Function.* FAU Neuroscience Colloquium Series, March 23, 2010.

*Anticipatory Cortical Function.* Helen Wills Neuroscience Institute, University of California, Berkeley, March 12, 2010.

*Anticipatory Cortical Function.* Department of Radiology and Biomedical Imaging, University of California, San Francisco, March 11, 2010.

*Understanding Large-Scale Cortical Coordination.* Brain Coordination Dynamics Conference, Florida and Western Caribbean, March 4, 2010.

*Top-Down Influences in Visual Attention: An Overview.* Symposium on Top-Down Mechanisms of Visual Attention, Computational Cognitive Neuroscience Conference, Boston, Mass, November 18, 2009.

*The Neurocognitive Network: A Bridge from Brain to Mind.* Institute of Cognitive Neuroscience, Centre National de la Recherche Scientifique (CNRS), Marseille, France, July 1, 2009.

*Predictive Top-Down Processing in Vision.* Department of Neurophysiology and Pathophysiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, June 29, 2009.

*Control of Visual Spatial Attention.* International Workshop on Complex Dynamics in Large-Scale Interacting Brain Systems: Towards Physical Models of Sleep and Consciousness. Max Planck Institute for the Physics of Complex Systems, Dresden Germany, June 25, 2009.

*Dynamic Neurocognitive Network Organization from Autoregressive Modeling of Neural Signals.* Institute for Psychology, University of Leipzig, Leipzig, Germany, June 17, 2009.

*Top-Down Modulation Carried by High-Frequency Oscillatory Synchronization.* International Conference on Cognitive Neuroscience (ICONX), Bodrum, Turkey, September 3, 2008.

*The Amazing Power of Attention.* Learning Brain Expo, Orlando, FL, July 26, 2008.

*The Neuroscience of Cognition.* Learning Brain Expo, Orlando, FL, July 26, 2008.

*Directed Influences in Neurocognitive Networks.* Washington University School of Medicine, June 16, 2008.

*Top-Down Influences in Neurocognitive Networks.* National Institute of Mental Health, May 22, 2008.

*Neurocognitive Networks of Synchronized Cortical Oscillations.* Stanford Cognitive and Systems Neuroscience Laboratory, Stanford University School of Medicine, January 17, 2008.

*Neurocognitive Networks of Synchronized Cortical Oscillations.* Institute for Psychology, Otto-von-Guericke University, Magdeburg, Germany, August 6, 2007.

*Functional Cortical Networks of Synchronized Beta Oscillations in Steady-State Behavior.* Neurologic University Clinic, University of Freiburg, Freiburg, Germany, July 19, 2007.

*Oscillatory Cortical Network Dynamics.* Minisymposium on Dynamical Systems Approaches in Neuroscience: Theory, Experiments, and Applications, 6<sup>th</sup> International Congress on Industrial and Applied Mathematics, Zurich, Switzerland, July 17, 2007.

*Granger Causality in Large-Scale Cortical Networks*. Workshop on Mathematical Aspects of Neuroscience, Department of Mathematics, Indian Institute of Science, Bangalore, India, July 14, 2007.

*Signal Processing in the Central Nervous System*. Meeting of the Association of Physiologists and Pharmacologists of India, National Institute of Mental Health and Neurosciences, Bangalore, India, July 13, 2007.

*Large-Scale Cortical Networks*. Workshop on Mathematical Aspects of Neuroscience, Department of Mathematics, Indian Institute of Science, Bangalore, India, July 9, 2007.

*Cortical Electrophysiology*. Workshop on Mathematical Aspects of Neuroscience, Department of Mathematics, Indian Institute of Science, Bangalore, India, July 9, 2007.

*Dynamic Brain Network Assessment of Cognitive Function*. Center for Computational Biology, University of California at Los Angeles, June 7, 2007.

*Charting the Dynamics of Neurocognitive Networks*. University of Southern California, June 6, 2007.

*Connectivity, Coordination, Coupling and Causality*. Sixth International Workshop on Brain Connectivity, Universitat Pompeu Fabra, Barcelona, Spain, May 29, 2007.

*The Role of Interdependency Analysis in the Assessment of Brain Function and Dysfunction*. Allen Institute for Brain Science, February 16, 2007.

*The Dynamic Formation of Large-Scale Cortical Networks by Coordination of Oscillatory Assemblies*. Conference on Brain Network Dynamics, UC Berkeley, January 26, 2007.

*Phase Synchronization as the Basis for Large-Scale Cortical Network Organization*. Workshop on Brain Physics and Mind Dynamics. Mar del Plata, Argentina, December 6, 2006.

*Derivation of Network Graphs by Autoregressive Spectral Analysis of Neuroelectric Data*. XV Conference on Nonequilibrium Statistical Mechanics and Nonlinear Physics. Mar del Plata, Argentina, December 6, 2006.

*Granger Causality in Neuroscience: Scope and Limits*. KFKI Research Institute Workshop, Csilleberc, Hungary, September 1, 2006.

*Large-Scale Cortical Oscillatory Network Graphs*. US-Hungarian Workshop on LargeScale Random Graph Methods for Modeling Mesoscopic Behavior in Biological and Physical Systems, Budapest, Hungary, August 29, 2006.

*Top-Down Cortical Influences in Visual Expectation.* Workshop on Neurodynamics of Higher-Level Cognitive Behavior, WCCI 2006, Vancouver, Canada, July 17, 2006.

*Granger Causality Analysis as a Tool in the Neural Modeling of Emotion.* Workshop on Neural Modeling of Emotion, WCCI 2006, Vancouver, Canada, July 17, 2006.

*Cortical Functional Network Organization from Analysis of Local Field Potential Oscillations,* Third Workshop on Statistical Analysis of Neuronal Data (SAND3), Carnegie Mellon University, Pittsburgh, May 13, 2006.

*Multivariate Autoregressive Modeling of Neural Data.* Dynamic Neuroimaging Laboratory, University of California, San Francisco, July 11, 2005.

*Dynamics of Large-Scale Cortical Networks.* Brain Dynamics and Cognition Conference, Izmir, Turkey, May 17, 2005.

*Large-Scale Neural Coordination in Cognitive Function.* Center for Computational Biology, Montana State University, May 5, 2005.

*The Evolution of Large-Scale Neural Coordination State in Cognitive Function.* Department of Psychology, Indiana University, April 22, 2005.

*Multifunctionality of Beta Oscillations in Macaque Cerebral Cortex.* Workshop on "Computational Perspectives on Neural Oscillations", Computational & Systems Neuroscience Meeting, March 22, 2005.

*Coordination and Causality Patterns of Beta-Frequency Cortical Local Field Potentials Associated with Readiness and Anticipation in a Visuomotor Discrimination Task.* University of California, Irvine. October 28, 2004.

*Synchronized Sensorimotor Beta Oscillations in Motor Maintenance Behavior.* Advances in Computational Motor Control III Symposium at the SFN Conference. San Diego, October 22, 2004.

*Beta-Oscillatory Cortical Networks and Motor Maintenance Behavior.* Agora for Biosystems Workshop on "Modeling Mental Processes and Disorders". Kusadasi, Turkey, May 28, 2004.

*Inferential Constraint Sets in the Organization of Visual Expectation.* Symposium on Intentional Dynamic Systems (IDS'04), University of Memphis, April 25, 2004.

*Evidence for Top-Down Influences in Anticipatory Large-Scale Cortical Networks.* Redwood Neuroscience Institute, July 30, 2003.

*Causal Influences Between Beta-Frequency Oscillatory Neuronal Assemblies in*

*Monkey Sensorimotor Cortex*. Dynamic Neuroimaging Laboratory, UCSF, July 29, 2003.

*Attentional Allocation in Large-Scale Cortical Networks*. Workshop on "Attention: Theory and Mechanism". CNS'03, Alicante, Spain, July 9, 2003.

*Coordination Dynamics in Neurocognitive Networks*. Workshop on "Nonlinear SpatioTemporal Neural Dynamics - Experiments and Theoretical Models". CNS'03, Alicante, Spain, July 8, 2003.

*Spatiotemporal Organization and Functional Relations of Cortical Phase-Synchronized Oscillations in Visuomotor Processing*. Functional Brain Connectivity Workshop, Cambridge University, May 3, 2003.

*Computational Investigation of Neurocognitive Network Dynamics*. Joint Science Department, The Claremont Colleges, February 27, 2003.

*The Dynamics of Large-Scale Neurocognitive Networks*. International School for Advanced Studies, Trieste, Italy, November 28, 2002.

*Multivariate Statistical Analysis of Cortical Network Dynamics*. Cornell University Medical School, New York NY, May 20, 2002.

*Cortical Coordination Dynamics and Cognition*. 57<sup>th</sup> Annual Convention, Society of Biological Psychiatry, Philadelphia, PA, May 18, 2002.

*Cortical Coordination Dynamics and Cognition*. Montana State University, Bozeman MT, May 14, 2002.

*The Role of Synchronized Beta Oscillations in Anticipatory Visuomotor Behavior*. International Conference and Workshop on Cooperative Dynamics of Neural Systems. Pucon, Chile, April 3, 2002.

*Statistical Analysis of Fast Cortical Network Dynamics*. International Conference and Workshop on Cooperative Dynamics of Neural Systems. Pucon, Chile, April 1, 2002.

*Disruption of Cortical Coordination Dynamics as a Putative Contributor to Cognitive Disorders*. Agora Workshop on Modeling Mental Disorders and Processes. Abisko, Sweden, January 18, 2002.

*Competition for Attentional Resources in Distributed Neocortical Networks Revealed by Local Field Potential Analysis*. Karolinska Institute, Stockholm Sweden, January 15, 2002.

*Competition for Attentional Resources in Distributed Neocortical Networks Revealed by Local Field Potential Analysis*. Swedish University of Agricultural Sciences, Ultuna Sweden January 14, 2002.

*Competition for Attentional Resources in Distributed Neocortical Networks Revealed by Local Field Potential Analysis.* David Bodian Seminar in Neuroscience. Zanvyl Krieger Mind/Brain Institute, Johns Hopkins University, October 22, 2001.

*The Emergence of Cognitive Function from the Operation of Large-Scale Cortical Networks.* James S. McDonnell Foundation Workshop on "What Does the Brain Think of the Mind?". Toronto, ON, March 23, 2001.

*Fast Dynamics of Large-Scale Cortical Networks in Visual Anticipation and Perception.* Fourth Annual Pan Pacific Workshop on Brain Topography, Irvine, CA, November 11, 2000.

*Neurocognitive Principles in Large-Scale Brain Modeling.* Workshop on Large-Scale Models in Computational Neuroscience. Brugge, Belgium, July 19, 2000.

*Separation of Feedforward and Feedback Causal Influences in the Primate Visual Cortex.* Computation and Neural Systems '00, Brugge, Belgium, July 17, 2000.

*Using Multivariate Autoregressive Modeling to Investigate the Dynamic Functional Organization of the Primate Visual Cortex.* Institute of Experimental Physics, Warsaw University, July 12, 2000.

*Coordination Dynamics of Large-Scale Cortical Networks as the Basis for Cognitive Function,* 12<sup>th</sup> Annual Convention, American Psychological Society, Miami, FL, June 10, 2000.

*Large-Scale Synchronization Phenomena in the Primate Visual Cortex.* Conference on Nonlinear Synchronization in Neuroscience, Krasnow Institute, George Mason University, May 19, 2000.

*Insights into Cortical Functional Dynamics from Ultra-Short-Time MVAR-Based Spectral Analysis.* Medical Neurology Branch, Division of Intramural Research, National Institute of Neurological Disorders and Stroke, May 18, 2000.

*The Organization and Reorganization of Large-Scale Cortical Networks in Visual Anticipation and Perception.* Workshop on Functional Neuroimaging and Theories of Cognitive Dynamics, Duke University, March 17, 2000.

*Interdependency Dynamics of Large-Scale Networks in the Cerebral Cortex,* The Fourth Tamagawa International Dynamic Brain Forum, Pacific Grove, CA, September 14, 1999.

*Coordination Dynamics in Large-Scale Cortical Networks,* 1999 International Joint Conference on Neural Networks (IJCNN'99), July 13, 1999.

*EEG as a Window on Brain Function: EEG Synchronization and Brain Self-Organization*, Psychology Department, Chinese University of Hong Kong, June 8, 1999.

*Dynamic Analysis of Distributed Neocortical Systems*, David Bodian Seminar in Neuroscience, Zanvyl Krieger Mind/Brain Institute, Johns Hopkins University, December 7, 1998.

*The Role of Large-Scale Cortical Coordination Dynamics in Cognitive Function*, International Conference on Complex Systems, October 29, 1998.

*Charting the Functional Interdependence of Cortical Areas*, Boston University, October 28, 1998.

*Cortical Field Potentials: Their Genesis and Functional Role*, Workshop on Analysis of Neural Data, Woods Hole, MA, August 21, 1998.

*Investigation of Cooperative Cortical Dynamics by Multivariate Autoregressive Modeling of Event-Related Local Field Potentials*, Computation and Neural Systems '98, Santa Barbara, July 27, 1998.

*The Dynamic Manifestation of Cognitive Structures in the Cerebral Cortex*, International Workshop on "New Trends in Cognitive Science", Austrian Society for Cognitive Science, Vienna, Austria, May 14, 1997.

*The Basis for Aperiodic Cortical Population Activity and its Putative Information Processing Role*, Winter Conference on Brain Research, January 30, 1996.

*The Characterization of Cognitive State by Mapping Transient Inter-Areal Cortical Synchronization*, Keynote address, Symposium on Alzheimer Disease, University of North Dakota Medical Education Center, September 8, 1995.

*Synchrony and Oscillations in Neural Circuits*, Looking Ahead in Sensorimotor Control: Big Questions for 2001, Human Frontiers Science Program, Queens University, June 23, 1995.

*Cortico-cortical Chaotic Synchronization as a Sign of Constraint Satisfaction in Cognitive Information Processing*, ONR Workshop on Dynamics of Neuronal Ensembles II, Woods Hole, MA, June 3, 1995.

*Broad-band Synchronization as the Basis for Large-Scale Cortical Integration*, NIMH Symposium on Multiscale Time and Space Coherence in Brain Function, Washington, D.C., November 12, 1993.

*Dynamic Self-Organization in the Brain as Observed by Transient Cortical Coherence*, Appalachian Conference on Behavioral Neurodynamics, Radford University, October 5, 1993.

*Inter-Areal Synchronization in Rhesus Macaque Neocortex During a Visual Pattern Discrimination Task*, Computation and Neural Systems '92, San Francisco, July 28, 1992.

*Coherent Fractal Time Activity in the Brain*, Workshop on Temporal-Spatial Nonlinear Dynamics of Brain, Florida Atlantic University, May 12, 1992.

*Cooperative Dynamics in Primate Neocortex*, Workshop on Dynamics of Complex Systems, Florida Atlantic University, April 27, 1992.

*Mechanisms of Integration in Distributed Cortical Networks*, Summer Atelier in Theoretical Neurobiology, The Neurosciences Institute, July 18, 1991.

*Mechanisms of Chaotic Dynamics in the Olfactory System Shown by Studies of Olfactory Bulb and Cortex*, Conference on Measuring Chaos in the Human Brain, Florida State University, April 4, 1991.

## **PROFESSIONAL ASSOCIATIONS**

American Psychological Society  
Behavioral and Brain Sciences, Associate  
Cognitive Neuroscience Society  
International Brain Research Organization  
International Neural Network Society  
Society for Neuroscience

## **FACULTY MENTORED**

Summer Sheremata, Florida Atlantic University, 2016-

## **POST-DOCTORAL FELLOWS AND GRADUATE STUDENTS MENTORED**

Timothy West, Wellcome Trust Centre and Centres for Maths and Physics in the Life Sciences, University College London, UK. Visiting Scholar supported by Bogue Fellowship, November 1, 2017 – May 31, 2018.

Raudel Sanchez-Campusano, Universidad Pablo de Olavide, Seville, Spain. Visiting Scholar supported by Fulbright Scholarship/Spanish Ministry of Education (MECD) Award, February 1 – July 31, 2016.

*Sreenivasan Rajamoni*, Research Fellow at NIMH MEG Core Facility, DIRP, NIMH, Bethesda MD

*Anders Ledberg*, Department of Information and Communication Technologies, Universitat Pompeu Fabra, Barcelona, Spain



*Emmanuelle Tognoli*, Center for Complex Systems and Brain Sciences, Florida Atlantic University, Boca Raton FL

*Andrea Brovelli*, Researcher at Institute for Cognitive Neuroscience, INCM, CNRS/Universite de la Mediterranee, Marseille, France

*Hualou Liang*, Associate Professor at School of Biomedical Engineering, Drexel University, Philadelphia PA

*Maciej Kaminski*, Assistant Professor at Institute of Experimental Physics, Warsaw University, Warsaw, Poland

*Gonzalo Viana Di Prisco*, Assistant Professor in Department of Neuroscience, Baylor College of Medicine, Houston TX

## **DOCTORAL DISSERTATIONS SUPERVISED**

Michael Mannino, *Measuring Causality in Simulations of Large-Scale Brain Networks using The Virtual Brain*, Florida Atlantic University, 2018

Timothy Meehan, *Large-Scale Cortical Functional Connectivity Underlying Visuospatial Attention*, Florida Atlantic University, 2016

Avisa Asemi, *The Role of Dorsal Anterior Cingulate Cortex in Motor Control*, Florida Atlantic University, 2015

Tracy Romano, *Time-Frequency Classification of Gamma Oscillatory Activity in the Frontoparietal System During Working Memory*, Florida Atlantic University, 2014

Wei Tang, *Investigation of Human Visual Spatial Attention with fMRI and Granger Causality Analysis*, Florida Atlantic University, 2011

Craig Richter, *Functional Consequences of Top-Down Anticipatory Modulation of Primary Visual Cortex*, Florida Atlantic University, 2009

Edward Modestino, *The Neural Correlates of Endogenously Cued Covert Visuospatial Attentional Shifting in the Cue-Target Interval: An Electroencephalographic Study*, Florida Atlantic University, 2009

Debra Taylor, *Behavioral and Electroencephalographic Analysis of Visuomotor Coordination*, Florida Atlantic University, 2005

Wilson A. Truccolo-Filho, *Statistical Analysis of Dynamic Interdependence Patterns in the Cortex*, Florida Atlantic University, 2001

Gene V. Wallenstein, *Spatiotemporal Dynamics of the Human EEG Associated with Transitions in Coordination Timing*, Florida Atlantic University, 1995

## **DOCTORAL DISSERTATIONS, EXTERNAL EXAMINER**

Donald L Rowe, *Neurophysiological Modelling and Analysis of Psychopathology*, Department of Psychological Medicine and the School of Physics, University of Sydney, 2004

Andrea Brovelli, *Cortical Networks for Sensorimotor and Visuomotor Processes in the Human Brain*, International School for Advanced Studies (SISSA-ISAS), 2002

## **MASTERS THESES SUPERVISED**

Stacey Nash, *Insulin-Dependent Diabetes Mellitus and Cognitive Dysfunction*, Florida Atlantic University, 2002

## HONORS AND AWARDS

- 2013 Plenary Speaker, International Conference on Cognitive Neurodynamics 2011  
Outstanding Service Award, International Joint Conference on Neural Networks
- 2006 Best Presentation Award, International Joint Conference on Neural Networks
- 2001 Teaching Incentive Program Award, Florida Atlantic University
- 1999 Best Presentation Award, International Joint Conference on Neural Networks
- 1982 Shev Award, Western EEG Society
- 1980 Shev Award, Western EEG Society
- 1972 Phi Beta Kappa, Johns Hopkins University

## FELLOWSHIPS

- 1974-78 USPHS Predoctoral Fellowship, University of California, Berkeley
- 1973 Earl C. Anthony Fellowship, University of California, Berkeley
- 1972 NSF Undergraduate Fellowship, Massachusetts Institute of Technology

## PUBLICATIONS

Meehan P, **Bressler SL**, Astafiev SA, Sylvester CM, Shulman GL, Corbetta M. Interhemispheric imbalances in intrahemispheric functional connectivity in spatial neglect. 2020, submitted.

Muzik O, Michel C, Vuilleumier P, Baajour S, **Bressler SL**, Diwadkar VA. Directional influences between constituents of the human large-scale thermoregulatory network. *Brain Topography*, 2020.

West TO, Halliday DM, **Bressler SL**, Farmer SF, Litvak V. Measuring directed functional connectivity using non-parametric directionality analysis: Validation and comparison with non-parametric Granger Causality. *NeuroImage*, 2020, 218: 116796.

Baajour S, Chowdury A, Thomas P, Rajan U, Khatib D, Zajac-Benitez C, Falco D, Haddad L, Amirsadri A, **Bressler S**, Stanley J, Diwadkar V. Disordered directional brain network interactions during learning dynamics in schizophrenia revealed by multivariate autoregressive models. *Human Brain Mapping*, 2020, dx.doi.org/10.1002/hbm.25032.

Falco D, Chowdury A, Rosenberg DR, **Bressler SL**, Diwadkar VA. ALE meta-analysis, its role in node identification and the effects on estimates of local network organization. *Brain Structure and Function*, 2020, doi 10.1007/s00429-020-02061-2.

Minnerly C, **Bressler SL**, Shokry IM, Tao R. Estimating mental health conditions of patients with opioid use disorder. *Journal of Addiction*, 2019, 8586153.

Grajski KA, **Bressler SL**. Differential default-mode network functional connectivity and morphometric changes in Alzheimer's disease. *NeuroImage: Clinical*, 2019, 23:101860.

Falco D, Chowdury A, Rosenberg DR, Diwadkar VA, **Bressler SL**. From nodes to networks: How methods for defining nodes influence inferences regarding network interactions, *Human Brain Mapping*, 2018, 8:1-12.

Mannino M, **Bressler SL**. Freeman's nonlinear brain dynamics and consciousness. *Journal of Consciousness Studies*, 2018, 25(1-2):64-88.

**Bressler S**, Kay L, Kozma R, Liljenstrom H, Vitiello G. Freeman neurodynamics: The past 25 years. *Journal of Consciousness Studies*, 2018, 25(1-2):13-32.

Richter CG, Coppola R, **Bressler SL**. Top-down signaling conveys behavioral context to primary visual cortex. *Scientific Reports*, 2018, doi:10.1038/s41598-018-25267.1.

Mannino M, Bressler SL. The wave packet in multi-area cortical modeling: History, theory and empirical evidence. *Chaos and Complexity Letters*, 2017, 11:105-116.

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**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.  
Follow this format for each person. DO NOT EXCEED FIVE PAGES.

NAME: Duboué, Erik Rolando

eRA COMMONS USER NAME (credential, e.g., agency login): EDUBOUE

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Tulane University, New Orleans, LA	B.A	05/2006	Philosophy
Tulane University, New Orleans, LA	B.S.	05/2006	Neuroscience
Tulane University, New Orleans, LA	M.S.	05/2007	Neuroscience
New York University	Ph.D.	01/2012	Biology
Carnegie Institution for Science	Postdoctoral	07/2017	

**A. Personal Statement**

A central goal of neuroscience is to understand how the brain modulates behavior, and how altered circuits, at the levels of neuronal function, anatomy, or circuitry, can result in changes in behaviors, as is in cases of psychological or neurological disorders. This has been a challenging problem, as even simple behaviors are coordinated by the dynamic interaction of many populations of neurons, in diverse regions of the brain. My lab uses small fish models to explore (1) how the brain modulates stress, (2) how these circuits are modified in models of anxiety, (3) and how stress responses can change as a consequence of evolution. My lab has also developed an unpublished model of early life stress for zebrafish, and we have developed the blind Mexican cavefish as a model for examining evolution of stress. As the lab uses small fish models, undergraduate students are a major part of the laboratory environment. Trainees have the opportunity to learn how to examine neural basis of behavior in fish using diverse techniques, such as behavioral analysis, optogenetic manipulation, and whole-brain calcium imaging. Currently, there are four undergraduate students in the lab, each working on independent of unique projects. Each student is paired with a graduate student or postdoc. All undergraduate students are required to present regularly at floor lab meeting (lab meeting with Duboué, Kowalko and Keene labs). Moreover, students are encouraged to present their work at international meetings.

1. Facchin, L\*, **Duboué, E.R.\***, Halpern, M.E. (2015) Disruption of epithalamic left-right asymmetry increases anxiety in zebrafish. *J Neurosci*, 35(48): 15847-59
2. **Duboué, E.R.**, Hong, E, Eldred, K.C., Halpern, M.E. (2017) Left Habenular Activity Attenuates Fear Responses in Larval Zebrafish. *Curr Biol*, 27(14): 2154-2162.e3.
3. Chin, J.S.R., Gassant, C., Amaral, P., Lloyd, E., Stahl B.A., Jaggard, J.B., Keene, A.C., **Duboué, E.R.** (2018) Convergence on reduced stress behavior in the Mexican blind cavefish. *Dev Biol*. 441(2): 319-327  
\* indicates authors contributed equally

**B. Positions and Honors**

## **Positions and Employment**

2007-2009	Teaching Assistant	New York University
2010-2011	Teaching Adjunct	New York University
2012 – 2017	Postdoctoral Associate	Carnegie Institution for Science
2017 – Present	Assistant Professor	Florida Atlantic University

## **Other Experience and Professional Memberships**

2015-2016	Society for Neuroscience
2017-2018	NSF Grant Peer Review Committee

## **Honors**

2006	Faculty for Undergraduate Neuroscience Travel Awards, Soc. For Neuroscience, Atlanta, GA
2007-2011	Henry M. MacCracken Fellowship, New York University,
2011	Society for Developmental Biology Travel Award, Astyanax International Mtg., Mexico,
2011	Steve Kazianis Research Award, for <i>“a senior doctoral student who presented the best research with the greatest potential to have a significant impact in his field.”</i>

## **C. Contribution to Science**

### **1. Functional imaging of the stress response in zebrafish**

Stress is essential to all life, and is critical to the avoidance of dangerous cues. In chronic states, however, stress can become debilitating, as is seen in the roughly one-quarter of Americans suffering from stress-related disorders. Despite the prevalence of stress, an understanding of brain-wide neural networks that modulate stress, or what effects on these circuits leads to stress-related disorders, is not known. We have been approaching these questions using small fish models. During my post-doctoral fellowship with Marnie Halpern at the Carnegie Institution for Science, I developed a system to study stress in larval and adult zebrafish, and pioneered functional imaging-based approaches for examining brain-wide circuits modulating stress. Like mammals, stress in zebrafish is characterized by an initial induction of changes in behavior and physiology at the presentation of a stressful cue, and, once the cue has been evaded, a return to baseline states of behavior and physiology. My work showed that a conserved area of the brain, the dorsal habenulae (dHb), are critical for recovery from a stressor when the cue is no longer present. In zebrafish, the bilaterally paired dHb show dramatic left-right asymmetry. My work showed that the left dHb, which co-utilized glutamate and substance-P, is both sufficient and necessary for modulation stress recovery, or a return to baseline once a fearful cue is removed.

In my own lab, we have continued to identify neural circuits required for either induction of or recovery from stressful stimuli. Using whole-brain calcium imaging of zebrafish larvae, I have demonstrated that a region of the forebrain, which corresponds to the sub-pallium, is immediately active upon induction of shock. These findings suggest a brain-wide mechanisms underlying stress, whereby the sub-pallium is active during the induction phase, and the dHb are activated to promote recovery.

My lab has also developed a zebrafish model of early-life-stress. Animals that are subjected to chronic stress in early life have enhanced stress responses when tested later as adults. The enhanced stress effects are observed as early as 60 dpf. Moreover, we have generated imaging-based approached whereby we can perform brain-wide calcium imaging in 60 day old individuals. Together, the establishment of a brain-wide network modulated stress, a zebrafish model of early-life-stress, and imaging approached for performing imaging of the brains of juvenile animals puts my lab in a unique position to investigate the effects of early-life-stress on brain-wide neural circuits.

This work has led to two publications, three manuscripts submitted or in preparation, and a published, invited book chapter.

1. Facchin, L\*, **Duboué, E.R.\***, Halpern, M.E. (2015) Disruption of epithalamic left-right asymmetry increases anxiety in zebrafish. *J Neurosci*, 35(48): 15847-59
2. **Duboué, E.R.**, Hong, E, Eldred, K.C., Halpern, M.E. (2017) Left Habenular Activity Attenuates Fear Responses in Larval Zebrafish. *Curr Biol*, 27(14): 2154-2162.e3.
3. **Duboué, E.R.** and Halpern M.E. (2017) Genetic and transgenic approaches to study laterality in zebrafish. In *Lateralized Brain Functions*, Eds. Lesley Rogers and Giorgio Vallortigara, pp. 553-589. New York, NY: Humna Press, Springer.  
\* indicates authors contributed equally

## 2. Examination of evolutionary mechanisms underlying variation in stress

Stress is an evolutionarily adaptive behavior, required for animals to sense and avoid dangers in their environment. However, the sensitivity and degree of exhibiting stress varies across animals, often in accordance with ecological settings; for example, animals living in predator rich environments have enhanced stress responses compared to same-species controls raised in low predator environments. However, how these environmental pressures can alter stress circuits evolutionarily is an unexplored question. We have developed the Mexican cavefish, *Astyanax mexicanus*, as a model to examine how neural circuits modulating stress evolve. We have shown that blind, cave-dwelling *A. mexicanus* have dampened stress responses compared to their river-dwelling, sighted *A. mexicanus* cousins. Using this model, we are generating transgenic technology in *A. mexicanus*, and performing whole brain imaging to understand how millions of years of evolution alter neural circuits underlying stress.

1. Chin, J.S.R., Gassant, C., Amaral, P., Lloyd, E., Stahl B.A., Jaggard, J.B., Keene, A.C., **Duboué, E.R.** (2018) Convergence on reduced stress behavior in the Mexican blind cavefish. *Dev Biol*. 441(2): 319-327
2. Chin JSR, Loomis CL, Albert LT, Medina-Trenche S, Kowalko J, Keene AC, **Duboué ER.** (2020). Analysis of stress responses in *Astyanax* larvae reveals heterogeneity among different populations. *Journal of Experimental Zoology, Part B*. 334(7-8):486-496
3. Loomis, C., Pueß, R., Jaggard, J.B., Raftopoulos, S., °, Raftopoulos, A., °, Whu, D., °, Green, M., °, McGaugh, S., Rohner, N, Keene, A.C., and **Duboué., E.R.** (2019). An adult brain atlas reveals broad neuroanatomical changes in independently evolved populations of Mexican cavefish. *Frontiers in Neuroanatomy*. 13:88

**Complete List of Published Work in this Bibliography:**  
<http://www.ncbi.nlm.nih.gov/pubmed?term=Duboue%20ER>

## D. Additional Information: Research Support and/or Scholastic Performance

### Ongoing Research Support

R15MH118625-01    PI: Duboue, E.R.    09/24/2018 - 09/23/2021  
Functional dissection of brain-wide circuits modulating recovery from stress  
The goal of the project is to examine a recently identified forebrain to midbrain circuit important for restoring baseline states of behavior and physiology following a stressful event, and to further identify anatomical areas that act upstream and downstream of this identified circuit.  
Role: PI

NSF 1923372    PI: Duboue, E.R.    09/01/2019 - 08/31/2022  
EDGE CT: NSF-BSF: Functional Genotype-Phenotype Mapping in the Mexican Blind Cavefish, *Astyanax mexicanus*.  
The goal of the project is to develop genetic and transgenic tools for the blind Mexican cavefish, *Astyanax mexicanus* and their surface dwelling conspecifics. This award is also funding an *Astyanax* stock center, as well as various outreach programs including the Research Diaries podcast. This award is a collaboration (co-PIs) with



Johanna Kowalko and Alex Keene (FAU), Suzanne McGaugh (University of Minnesota), Nicholas Rohner (Stowers) and Lior Appelbaum (Bar-Ilan, BSF Collaborator).

Role: PI

BSF 2019262                      PI: Duboue, E.R. and Gothilf, Y.                      06/15/2020 - 06/14/2024

The effect of early-life stress on the regulation of appetite in zebrafish.

The goal of the project is to understand how neuronal circuits that modulate stress can alter feeding systems. The project uses zebrafish, *Danio rerio*, and examines the role of AgRP in stress-induced hypophagia. This is a collaboration with Dr. Yoav Gothilf (Tel Aviv University).

Role: MPI

### **Completed Research Support**

R21NS105071-01A1                      PI: Keene, A.C.; co-PI: Duboue, E.R.                      03/01/2018 -  
02/28/2020

Development of genetic tools for functional analysis of sleep in cavefish

The goal of the project is to generate tools for the functional dissection of behaviors, principally sleep, in an emerging model system, the Mexican cavefish. Tools proposed include transgenic technologies, and the development of a brain-wide neuroanatomical atlas in several cavefish populations

Role: co-PI

# CURRICULUM VITAE

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**CITIZENSHIP:** Germany (US permanent resident)  
**GENDER:** female

## EDUCATION

3/1995-5/1999 **PhD (Doktor der Naturwissenschaften)**, Lehrstuhl für Genetik, Bayerische Julius-Maximilians-Universität Würzburg.  
9/1989-2/1995 **Masters (Biologie Diplom)**, Lehrstuhl für Genetik (umbenannt in Genetik und Neurobiologie), Bayerische Julius-Maximilians-Universität Würzburg.

## EMPLOYMENT HISTORY

8/2018- present **Professor**, Florida Atlantic University, Department of Biological Sciences, Boca Raton, Florida, **Affiliate Faculty Harriet L. Wilkes Honors College, Faculty of International Max Planck Research School (IMPRS) Brain and Behavior**  
08/2011-082017 **Associate Professor (tenured)**, Florida Atlantic University, Department of Biological Sciences, Boca Raton, Florida, Faculty of International Max Planck Research School (IMPRS) Brain and Behavior  
08/2006-07/2011 **Assistant Professor (tenure-track)**, Florida Atlantic University, Department of Biological Sciences, Boca Raton, Florida, **Associate Director of Integrative Biology PhD Program, Faculty of the Center of Molecular Biology and Biotechnology, Affiliate Faculty, Charles E Schmidt College of Biomedical Sciences, Member of the Florida Bioinformatics Research Consortium**  
09/2004-08/2006 **Research Assistant Professor**, Pioneer Valley Life Sciences Institute, Massachusetts  
10/1999-08/2006 **National Science Foundation & Nation Institute of Health Post-doctoral research fellow** at the University of Massachusetts Amherst. Adviser: Rodney K Murphey.  
5/1999-9/1999 **Post-doctoral research fellow & group leader** of the “Graduiertenkollegium Arthropodenverhalten” at the Bayerische Julius-Maximilians Universität Würzburg.

## **PUBLICATIONS AND RESEARCH ACTIVITY**

### **Publications in Print**

Google scholar Feb 2021. Time cited 1918, h-index 21, i10-index 28.

### **Research articles**

Wayne Robinson and Tanja Godenschwege, Live imaging of axonal transport in the adult drosophila central nervous system, *Methods in Molecular Biology*, 2021, Springer Nature, in press

Sven Bervoets , Na Wei , Maria-Luise Erfurth , Shazie Yusein-Myashkova , Biljana Ermanoska , Ligia Mateiu , Bob Asselbergh , David Blocquel , *Priyanka Kakad* , *Tyrone Penserga* , Florian Thomas , Velina Guergueltcheva , Ivailo Tournev , Tanja Godenschwege , Alben Jordanova. Transcriptional dysregulation by a nucleus-localized aminoacyl-tRNA synthetase associated with Charcot-Marie-Tooth neuropathy (2019), *Nature Communications*, Nov 6;10(1):5045. doi: 10.1038/s41467-019-12909-9.

Penserga, T, Kudumala, SR, Poulos, R and Godenschwege, TA. A role for *Drosophila* amyloid precursor protein in retrograde trafficking of L1-type cell adhesion molecule neuroglian (2019), *Front Cell Neurosci*. 2019 Jul 12;13:322. doi: 10.3389/fncel.2019.00322. eCollection 2019. PMID:PM6640005

Maria E. Yurgel, Priyanka Kakad, Meet Zandawala , and Dick Nassel, Tanja A. Godenschwege, and Alex C. Keene: A single pair of leucokinin neurons are modulated by feeding state and regulate sleep-metabolism interactions (2019), *Plos Biology*, Feb 13;17(2):e2006409. doi: 10.1371/journal.pbio.2006409.

Priyanka P. Kakad, Tyrone Penserga, Blake P. Davis, Brittany Henry, Jana Boerner, Anna Riso, Jan Pielage, and Tanja A. Godenschwege. An ankyrin-binding motif regulates nuclear levels of L1-type neuroglian and expression of the oncogene *Myc* in *Drosophila* neurons. *J Biol Chem*. 2018 Nov 9;293(45):17442-17453

Hoggard MF, Rodriguez AM, Cano H, Clark E, Tae HS, Adams DJ, Godenschwege TA, Marí F (2017). In vivo and in vitro testing of native  $\alpha$ -conotoxins from the injected venom of *Conus purpurascens*. *Neuropharmacology*. 2017 Sep 14. pii: S0028-3908(17)30437-9. doi: 10.1016/j.neuropharm.2017.09.020.

Hrvoje Augustin, Kieran McGourty, Marcus J. Allen, Sirisha Kudumala Madem, Jennifer Adcott, Fiona Kerr, Chi Tung Wong, Alec Vincent, Tanja Godenschwege, Emmanuel Boucrot, Linda Partridge. Reduced insulin signaling maintains electrical transmission in a neural circuit in aging flies. *Plos Biology* 2017, Sep 13;15(9):e2001655. doi: 10.1371/journal.pbio.2001655. , PMID:5597081

Sirisha R. Kudumala\*, Tyrone Penserga\*, Jana Boerner, Olesya Slipchuk, Priyanka Kakad, LaTasha H. Lee, Aater Qureshi, Jan Pielage and Tanja A. Godenschwege. Lissencephaly-1 dependent axonal retrograde transport of L1-type CAM Neuroglian in the adult drosophila central nervous system. *PlosOne* 2017. \*equal contribution. *PLoS ONE* 12(8): e0183605. <https://doi.org/10.1371/journal.pone.0183605>, PMID:5570280.

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### **Symposium and meeting talks by students**

#### International

Mari D. Heghinian, Monica Mejia, Tanja A. Godenschwege, and Frank Mari: "Investigating the Neuromodulatory Effects of Cone Snail Venom in *Drosophila Melanogaster*", 2011 Venoms to Drugs Conference, Heron Island, Australia 05/2011

Mari D. Heghinian, Monica Mejia, Tanja A. Godenschwege, and Frank Mari: "Exploring the Neuromodulatory Effects of Cone Snail Venom in *Drosophila Melanogaster*", 2010 International Society on Toxicology Conference, San Jose, Costa Rica 4/10

#### National

Tyrone Penserga, Sirisha Kudumala, Priyanka Kakad, Tanja A. Godenschwege (2017): A novel role for *Drosophila* amyloid precursor protein in regulating axonal retrograde trafficking of selective cargoes. *Neurobiology of Drosophila*, Cold Spring Harbor, October 307, 2017.

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#### Regional/Local

Tyrone Penserga, Sirisha Kudumala, Richelle Poulus, Tanja A. Godenschwege: A novel role for *Drosophila* Amyloid Precursor Protein in regulating axonal retrograde trafficking of selective cargoes. Flies on the Beach Symposium May 12-13, 2017.

Priyanka Kakad and Tanja A. Godenschwege, A role for Lis1 in retrograde transport of L1-type CAMS, 7<sup>th</sup> Annual South Florida Research Consortium Meeting, Florida, 2015

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LaTasha Lee, Sirisha Kudumala and Tanja A Godenschwege. Circuit Du Soleil Juggling genes and neurons: Neuroglian/L1-CAM and PTP69D in giant fiber circuit assembly (2011), 3<sup>th</sup> Annual South Florida Research Consortium Meeting, Jupiter-Scripps Florida, April, 2011

Monica Mejia, Mari D. Heghinian, Alexandra Busch, Frank Mari, Chris Armishaw, and Tanja A. Godenschwege (2010): Marine pharmacy: Hunting for Novel Neuromodulatory Drugs from the Sea. Florida Atlantic University- Max-Planck Florida Institute Neuroscience Symposium.

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Jana Boerner and Tanja A. Godenschwege (2010): Analysis of mutant neuron morphology in a standard reference space. 2<sup>nd</sup> South Florida *Drosophila* Research Consortium Meeting, University of Miami, Florida.

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#### **CONFERENCE ABSTRACTS-POSTERS** (undergraduate underlines and italics)

##### International

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- Vindhya Nawaratne, Maria Yurgel, Tyrone Penserga, Ryan Sobel, Brandon Lajeunesse, Sirisha Kudumala, Tanja Godenschwege. Characterization of the role of the *Drosophila* Attractin homolog in the nervous system. Flies on the Beach Neuroscience Symposium, April 6<sup>th</sup> 2019.
- Vindhya Nawaratne, Maria Yurgel, Tyrone Penserga, Ryan Sobel, Brandon Lajeunesse, Sirisha Kudumala, Tanja Godenschwege. Characterization of the role of the *Drosophila* Attractin homolog in the nervous system. Max Planck Sunposium, March 4-6, 2019.
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- Sophia Khan, Brandon Lajeunesse, Supriya Gudi, Tyrone Penserga, Oshadhi Vindhya Nawaratne, Tanja Godenschwege: The characterization of the neuroprotective role of Attractin and

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- Brittany Henry, Priyanka Kakad, Tanja Godenschwege, Determining potential enzymes involved in cleavage of L1-type CAM in vivo, Flies on the Beach Neuroscience Symposium, May 12-13, 2017.
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- Tyrone Penserga, Kudumala S., Kakad P., Godenschwege T. A novel role for Drosophila Amyloid Precursor Protein in regulating axonal retrograde trafficking of selective cargoes. Max Planck Sunposium, Feb 12-13, 2017.
- Priyanka Kakad, Qureshi A., Henry B., Godenschwege T. Characterization of the nuclear role of L1-type CAMs in vivo. Max Planck Sunposium, Feb 12-13, 2017.
- Sirisha Kudumala, Idani M., Qureshi A., Kakad P., Uthaman S., Godenschwege T. Distracted: an attractin model for spongiform neurodegeneration. Max Planck Sunposium, Feb 12-13, 2017.
- Tyrone Penserga, Sirisha Kudumala, Priyanka Kakad Tanja Godenschwege. Amyloid Precursor Protein-Like and its interaction with L1-type Cell Adhesion Molecule in the CNS of *Drosophila melanogaster*, GPSA Graduate student research day, FAU, 2016
- Anthony Singer, Tanja Godenschwege, Frank Mari: Characterization of Peptides from the Venom of *Conus Purpurascens*, an Eastern Pacific Fish-Hunting Cone Snail Species. Sixth Annual Undergraduate Research Symposium, 2016, Florida Atlantic University
- Eber Vazquez, Tanja Godenschwege, Frank Mari: Characterization of Unknown Peptides from the Venom of the *Conus Purpurascens*. Sixth Annual Undergraduate Research Symposium, 2016, Florida Atlantic University
- Stacy Cabral, Sirisha Kudumala, Jana Boerner and Tanja A Godenschwege. Disrupting retrograde axonal transport in Drosophila. Annual Undergraduate Summer Internship Research Poster Presentation 2015, Scripps Florida. Best poster award, 2<sup>nd</sup> place.
- Priyanka Kakad, Jana Boerner, Julie Freund, Sirisha Kudumala, Tanja Godenschwege, In vivo Characterization of L1-type CAM Neuroglian of retrograde signaling in the nervous system of *Drosophila melanogaster*, College of Science Research Day, 2014

- Sirisha Kudumala, Julie Freund, Jana Boerner and Tanja Godenschwege. Distinct roles of Neuroglian/L1CAM in guidance and synapse formation. Max Planck Sunposium, Feb 18-19, 2013.
- Monica Mejia, Mari Heghinian, Frank Mari, Tanja Godenschwege. New tools for targeted disruption of cholinergic synaptic transmission in *Drosophila melanogaster*. Max Planck Sunposium, Feb 18-19, 2013.
- LaTasha H Lee and Tanja A. Godenschwege Building a Functional Synapse: Receptor Tyrosine Phosphatase 69D involved Pre- and Post-Synaptically in Synapse formation. Max Planck Sunposium, Feb 18-19, 2013.
- Olesya Slipchuck and Tanja A Godenschwege. Synaptic and guidance role for EphR and Ephrin in the Giant Fiber circuit. College of Science Research Day, FAU 2013.
- Jana Boerner, Sirisha Kudumala and Tanja A. Godenschwege. Interaction of Lissencephaly-1 and Neuroglian in the giant fiber system. MPFI/IBRO SYMPOSIUM on Neural Circuits, From Molecules to Behavior, March 6-7 2012, Jupiter
- Sirisha Kudumala, Julie Freund and Tanja A. Godenschwege. Characterization of FIGQY Motif of Neuroglian/L1CAM in synapse formation. MPFI/IBRO SYMPOSIUM on Neural Circuits, From Molecules to Behavior, March 6-7 2012, Jupiter
- Monica Mejia, Mari D. Heghinian, Frank Mari, and Tanja A. Godenschwege. Giant Fiber System as a model for the characterization of  $\alpha 7$  nAChRs modulators. Max Planck Florida Institute/International Brain Research Organization Neural Circuits Symposium. Jupiter, Florida, March 6th-7th 2012
- LaTasha H Lee and Tanja A. Godenschwege (2012): A novel role of receptor protein tyrosine phosphatase PTP69D in synapse formation. Max Planck Florida Institute/International Brain Research Organization Neural Circuits Symposium. Jupiter, Florida, March 6th-7th 2012
- Sirisha Kudumala, Jana Boerner, Julie Freund and Tanja Godenschwege (2011): Characterization of the ankyrin binding motif of Neuroglian/L1-CAM in synapse formation. *Drosophila*. 3<sup>th</sup> Annual South Florida Research Consortium Meeting, Jupiter April 21th, 2011, Scripps Florida.
- Monica Mejia, Alexandra Busch, Tanja A Godenschwege, Giant Fiber System as a model for the characterization of  $\alpha 7$  nAChRs modulators, 3<sup>th</sup> Annual South Florida Research Consortium Meeting, Jupiter April 21th, 2011, Scripps Florida.
- LaTasha H Lee and Tanja A. Godenschwege (2010): Wiring the brain: A Novel Role for Receptor Tyrosine Phosphatase PTP69D in Synapse Formation. Research Day of the College of Science, Florida Atlantic University.
- Monica Mejia, Mari D Heghinian, *Alexandra Busch*, Chris Armishaw, Frank Marí and Tanja A Godenschwege (2010): A novel approach for *in vivo* screening of drugs for biological activity. Research Day of the College of Science, Florida Atlantic University.
- Shirisha Kudumala and Tanja A Godenschwege (2009): Structural and Functional Analysis of the cytoplasmic domain of L1-type molecules. Research Day of the College of Science, Florida Atlantic University.

## **SYMPOSIUMS, INVITED SEMINARS & LECTURES**

- 2020 University of Buffalo, Biology Department, May- postponed due to corona pandemic
- 2019 Würzburg Insect Research Colloquium, University of Würzburg. Dec
- 2017 Krasnow Institute for Advanced Study, George Mason University, USA
- 2016 FAU Neuroscience Student Organization Kick-Off Event, Lake Pavilion, West Palm Beach  
Association of Biological and Biomedical Students. "Making Choices: Career and Family",  
Florida Atlantic University
- 2015 Florida Atlantic High School, Boca Raton, FL
- 2014 University of York, U.K.  
Max Planck Institute and University of Muenster, Germany  
Friedrich Mieschner Institute, Basel, Switzerland  
Jupiter Neuroscience Faculty Forum, USA
- 2013 University of Antwerp-Belgium, VIB institute- Department of Molecular Genetics.  
5<sup>th</sup> Annual South Florida Research Consortium Meeting, University of Miami, FL
- 2012 Guest speaker of the Academic Careers Roundtable at Scripps Florida
- 2011 Neuroscience Seminar Series, Florida Atlantic University  
Physics Colloquium, Florida Atlantic University
- 2009 University of York, Department of Biology, U.K. (cancelled due to defective airplane)  
Neurogenetics of the Synapse in Drosophila Symposium, University of Würzburg, Germany  
1st South Florida Drosophila Research Consortium Meeting, Boca Raton, Florida
- 2008 Florida Atlantic University, Neuroscience Seminar Series, Florida  
University of University of Missouri-Columbia, Biological Sciences  
Howard University, Biology Department  
Theodor-Boveri-Institut für Biowissenschaften, University of Würzburg, Germany  
Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories  
"My Fly Project" Workshop of the Biology Department-Florida University of Miami at the  
Kampong National Tropical Botanical Garden
- 2007 FAU-Max Planck Symposium at Florida Atlantic University  
FAU-Tyratech Symposium at Florida Atlantic University
- 2006 Florida Atlantic University, Neuroscience Seminar Series, Florida  
Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories, NY  
University of West Virginia, Biological Sciences, Morgantown, West Virginia  
Pioneer Valley Life Sciences Institute, Baystate, Springfield, Massachusetts  
University of Maryland Baltimore County, Biology Department, Baltimore, Maryland  
University of Houston, Department of Biology and Biochemistry, Houston, Texas  
University of Miami, Biology Department, Miami, Florida  
Florida Atlantic University, Department of Biological Sciences, Boca Raton, Florida
- 2005 Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories, NY  
Kent State University, Department of Biological Sciences, Kent, Ohio  
Medical College of Georgia, Institute of Molecular Medicine and Genetics, Augusta, GA  
Drexel University, Department of Neurobiology and Anatomy, Philadelphia, PA  
SIU School of Medicine, Department of Physiology, Carbondale, Illinois  
University at Albany, Department of Biological Sciences, Albany, NY  
University of Toronto at Mississauga, Department of Biology, Toronto, Canada  
Children's Hospital Medical Center, Department of Anesthesia, Cincinnati, Ohio  
Neurobiology of Drosophila Conference, Cold Spring Harbor, New York

- 2004 Vanderbilt University, Department of Biological Sciences, Tennessee  
Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories, NY  
University of Würzburg, Department of Genetics & Neurobiology, Germany  
Medical School-University of Massachusetts, Institute of Neurobiology, Worcester, MA
- 2003 Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories, NY
- 2002 University of Puerto Rico, Institute of Neurobiology, San Juan, Puerto Rico  
Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories, NY  
Axon Guidance & Neural Plasticity Conference, Cold Spring Harbor  
East Coast Nervenet meeting, Woods Hole, MA.  
9th European Symposium on Drosophila Neurobiology, Dijon, France
- 2001 University of Würzburg, Department of Genetics & Neurobiology, Germany  
Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories, NY

### **CONTRACTS AND GRANTS**

#### **External**

- 09/15/2015 – 09/14/2019 National Institute of Health/National Institute for Neurological Disease and Stroke (R15NS090043), Nuclear function of L1-type CAMs in the drosophila nervous system, PI: Godenschwege, \$447,587.00 (re-submitted 2/2015, first submission 2/2014)
- 01/11/2015-18/12/2014 HHMI Janelia Farm Visitor program. Whole cell patch clamp recordings from the tergotrochanteral motoneuron in the giant fiber circuit of *Drosophila*, PI: Tanja, Co-PI: Gwyneth Card, \$2,816.00
- 01/03/2008-30/11/2014 National Institute of Health/National Institute of Child Health and Human Development (R01HD050725), Functional analyses of Neuroglian/L1 in synaptogenesis, PI: Godenschwege, \$1,369,459.00
- 07/01/2009 – 02/28/2014 National Institute of Health/National Institute of Child Health and Human Development (R01HD050725-S1), Research Supplements to Promote Diversity in Health-Related Research, PI: Godenschwege, \$95,308.00
- 01/07/2009-06/30/2011 National Institute of Health/ National Institute for Neurological Disease and Stroke (1R21NS066371), Efficacious Screening of Peptidic Natural Products Using Drosophila, PI: Frank Mari, Co-PI: Godenschwege, \$391,875.00

#### **External-Pending**

- Submitted 06/2020 National Institute of Health/ National Institute for Neurological Disease and Stroke (R15NS122022), The Role of Drosophila Attractin homolog in regulation of E3-ligase Mgrn1 and stress signaling, 04/01/2021 - 03/31/2024, PI Godenschwege, \$448,500.00, **Impact Score: 42, Percentile: 33.0**

**Internal**

2/15/2021-6/30/2021	Undergraduate Research Grant of Office of Undergraduate Research and Inquiry 2020. "The effects of DSD on E3-ligase Mahogunin Ring Finger 1 (Mgrn1) in the nervous system and insulin producing cells", Undergraduate: Wayne Robinson, PI: Godenschwege, \$600
1/15/2021-6/30/2021	Undergraduate Research Grant of Office of Undergraduate Research and Inquiry 2020. "Determining oxygen consumption if in wildtype and mutant Drosophila", Undergraduate: Satviki Singh, PI: Godenschwege, \$600
07/2018- 06-2019	Neuroscience Pilot Award, FAU Brain Institute. Determine interaction of Attractin homolog Dsd with the ubiquitin system. PI: Godenschwege, \$15,000.00
07/2018- 06-2019	Undergraduate Research Team Grant of Office of Undergraduate Research and Inquiry 2018. "Characterization of Dsd, Ben and Mgrn1 in the GF of Drosophila", Undergraduates: Brandon Lajeunesse, Sophia Khan, Supriya Gudi, PI: Godenschwege, \$1,200
04/13-08/02/2018	2018 Summer Undergraduate Research Fellowship (SURF) from Undergraduate Research Grant of Office of Undergraduate Research and Inquiry, Undergraduate: Brandon Lajeunesse, PI: Godenschwege, \$4000
05/08-07/02/2017	2017 Summer Undergraduate Research Fellowship (SURF) from Undergraduate Research Grant of Office of Undergraduate Research and Inquiry, Undergraduate: Richelle Poulos, PI: Godenschwege, \$4000
05/08-07/02/2017	2017 Summer Undergraduate Research Fellowship (SURF) from Undergraduate Research Grant of Office of Undergraduate Research and Inquiry, Undergraduate: Brittany Henry, PI: Godenschwege, \$4000
1/10/2017-1/8/2018	Undergraduate Research Grant of Office of Undergraduate Research and Inquiry 2016. "Detect and characterize different fragments of L1-type-CAM, Neuroglian in Drosophila nervous system", Undergraduate: Brittany Henry, PI: Godenschwege, \$600
12/22/2016- 12/21/2017	Undergraduate Research Grant of Office of Undergraduate Research and Inquiry 2016. "The role of Amyloid Precursor Protein in the development of the Drosophila Giant Fiber Circuit", Undergraduate: Richelle Poulos, PI: Godenschwege, \$600

05/2015-03/2016	Graduate Research and Inquiry Grant (Grip) 2015, Graduate College, "Illuminating Neuroglia", Graduate Student: Tyrone Penserga, PI: Godenschwege, \$1500.00
05/2014-06/2015	Seed Grant 2014, College of Science, Analyses of the role of full-length L1-type CAM neuroglia in the nucleus. PI: Godenschwege, \$5000.00
01/2013-06/2015	Seed Grant 2013, FAU Division of Research. "Investigation of common mechanisms of L1-type CAMs and Semaphorins interactions in cancer and neurological disorders", PI's: Vijaya Iragavarapu (Biomedical Sciences), Tanja A Godenschwege (Biological Sciences), \$20,000.00
01/2012-12/2012	Seed Grant Program 2012, FAU Division of Research, A Genetic Study of Natural Hybridization in African Monkeys. PI: Kate Detwiler, Co-PI: Godenschwege, \$5000.00

## INSTRUCTION

### TEACHING

#### Undergraduate Courses at Florida Atlantic University

PCB 4842 Cellular Neuroscience & Disease, Fall 2007- 2010, Summer 2015, Fall 2016-2019

PCB 4023 Molecular and Cellular Biology, Fall 2012, 2013, Summer 2014, Fall 2015

PCB 3023 Cell Biology, Fall 2020-present

#### Graduate Courses at Florida Atlantic University

BSC 6846/ENC6258 Scientific Communication, Spring 2008-present

PCB 6840 Cellular Neuroscience & Disease, Fall 2007-2010, Summer 2015

BSC 6936 Advanced Biotechnology lab II, Spring 2007

BSC 6905 Neuroscience Colloquium and Seminar, 2007-2010

BSC 6905 Neuroscience Journal Club, 2010-2011

BSC 6905 Research Seminar in Neuroscience & Development, 2007-2011

#### Guest Lectures at Florida Atlantic University

<b>Course</b>	<b>Level</b>	<b>Semester</b>
Integrative Biology	Graduate	Fall 2006-7, 2009-13
SLS 1503	Undergraduate	Fall 2008, Fall 2009-11
Biology Honors program	Undergraduate	Fall 2009, 2016, 2020
NSF URM Program	Undergraduate	Summer 2010-11
Practical Cell Neuroscience	Graduate	Spring 2010
Neuroscience 2	Graduate	Spring 2011-12



## STUDENTS AND POSTDOCS

### PhD students:

#### Completed

Amanda Rainey, GNTP, rotating student (Spring 2020)

Priyanka Kakad, IBN-PhD (Summer 2013-Summer 2018), Thesis project: Characterization of the nuclear role of L1-type CAMs.

- *2017 John Nambu Scholarship*
- *2015 Life Long Learning Fellowship*
- *2014 Dr. Vincent R. Saurino Graduate Fellowship in Biological Sciences.*

Monica Mejia, IB-PhD student (Fall 2009- Summer 2013), Thesis title: Development of a novel assay for in vivo screening of neuromodulatory drugs and targeted disruption of cholinergic synaptic transmission in *Drosophila melanogaster*.

- *2013 FAU Alumni Association Scholarship*
- *2012-2013 Delores A. Auzenne Fellowship for Graduate Students. FAU, FL*
- *2009-2013 Latin American and Caribbean Consortium of Engineering Institutions Scholarship. FAU, FL*
- *2011-2013 Student Government Scholarship. FAU, FL*
- *2011-2013 Julian Weiss Scholarship. FAU, FL*
- *2011 Andrew Todd Auster Scholarship. FAU, FL*
- *2011 Astronaut Trail Shell Club Scholarship, FL*
- *2010, 2011 Dr. Daniel and Aurel B. Newell Fellowship for Graduate Students. FAU, FL*
- *2010 Zeiss Graduate Student award at the FAU-Max Planck Florida Institute Neuroscience Symposium*
- *2010 Graduate Research Excellence award at FAU, FL (2<sup>nd</sup> place)*
- *2009 Dr. Vincent R. Saurino Graduate Fellowship in Biological Sciences. FAU, FL*

LaTasha Lee, IB-PhD student (Fall 2008-Summer 2014), Thesis title: Characterization of receptor protein tyrosine phosphatase PTP69D in the giant fiber circuit.

- *IB PhD Alumni award 2015*
- *FAU Graduate Diversity Fellowship 2009*
- *Certificate of Appreciation from Student Government for Service 2008, 2009, 2010*
- *Certificate of Appreciation from Graduate Student Advisory Board 2008, 2009, 2010*
- *Delores A. Auzenne Fellowship 2009-2011*
- *Inaugural Recipient of the Darwin Award 2010*
- *Cold Spring Harbor Laboratory Fellowship to attend "Neurobiology of Drosophila Summer Course, 2010*
- *National Institute for Child Health and Human Development Fellowship.*
- *Federation of American Societies for Experimental Biology (FASEB) Minority Access to Research Careers (MARC) Program Fellowship (2010)*

Sirisha Kudumala, IB PhD student (Fall 2008-Spring 2014), Thesis title: Functional roles of LI-CAM/Neuroglian in the nervous system of *Drosophila melanogaster*.

Mari Heghinian, Chemistry PhD student (Fall 2008-Spring 2014), Thesis title: Discovery and biological characterization of conotoxins from the venom of *Conus brunneus* in *Drosophila melanogaster*, Co-adviser with Frank Mari, Chemistry und Biochemical Department

## Masters students

### Completed

Tyrone Penserga (2014-Spring 2019), Lab project: Characterization of retrograde signals in the adult central nervous system.

- 2018 Osher Lifelong Learning Institute Scholarship
- 2017 Dr. Vincent R. Saurino Graduate Fellowship in Biological Sciences. FAU, FL
- 2017 Outstanding Student Award, Northern Campus Achievement Awards
- 2016 Diversity Fellowship
- 2015 Life Long Learning Fellowship
- 2015 GRIP grant recipient

Priyanka Kakad, (2013-2015), Master's En Passant in Biological Sciences

Monica Mejia, Masters student (2007-2008), Lab project: Characterization of tyrosyl-TRNA synthase mutants in the giant fiber circuit

Olesya Slipchuk, Masters of Science (Spring 2012-Fall 2014), Lab project: Characterization of Ephrin and Ephrin receptors in the giant fiber circuit.

Michael Lucchese, Masters of Science (Fall 2008-Spring 2009). Lab project: Cloning of Human-L1CAM constructs. Co-advisor with David Binninger, Biological Science Department

### Undergraduates (Honors thesis students highlighted in bold):

Roberto Estevez, Biology BS, DIR, Spring 2021-present

Brianne Jacquet-Cribe, Harriet L. Wilkes Honors College/NSF Lear Scholar, intern, Spring 2021- present

Satviki Singh, dual enrolled Harriet L. Wilkes Honors College/Max Planck Academy, DIR, Fall 2020-present, Ouri Grant 2020

Wayne Robinson, Biology BS, DIR and Work-study, Summer 2020-present, Ouri Grant 2020

**Andrew Wu, Harriet L. Wilkes Honors College**, Spring 2020-present

Cypress Potter, Harriet L. Wilkes Honors College, intern Summer 2020 -present

Roberto Martin, Biology BS, DIR, Fall 2020

**Matthew Eximond, Harriet L. Wilkes Honors College**, Summer, 2019-Fall 2020

Rachel Kamel, Biology BS, DIR, Spring 2020

Laura Paez, Harriet L. Wilkes Honors College, intern, Spring 2019-Summer 2019

**Ryan Sobel, Biology BS, FAU-MPFI Honors program, Summer 2018-present**, John Nambu Research Scholarship Summer 2019

**Brandon Lajeunesse, Harriet L. Wilkes Honors College, Fall 2017- present** Ouri Grant 2018, SURF Fellowship 2018

**Sophia Khan, Harriet L. Wilkes Honors College, Spring 2018-Summer 2019**, Ouri Grant 2018

**Micael Idani, Harriet L. Wilkes Honors College, Fall 2016-Fall2018**, John Nambu Summer research scholarship 2017

Supriya Gudi, Harriet L. Wilkes Honors College, Fall 2017- Summer 2018, Ouri Grant 2018

Rameen K Walters, Biology BS, Spring 2017- Summer2018, John Nambu Research Scholarship Summer 2018

Kenzie Waldkoetter, Harriet L. Wilkes Honors College, Spring 2018.

**Brittany Henry, Biology Honors Program, Summer 2016-Summer 2017**, Ouri Grant 2016, SURF Fellowship 2017, *Andrew R. and Marjorie C. Buglione Endowed Scholarship 2017 (MPH at UF)*

**Richelle Poulos, Biology Honors Program, Summer 2016-Summer 2017**, Ouri Grant 2016, SURF Fellowship 2017

Anna Riso, Harriet L. Wilkes Honors College, Spring 2017-Summer 2017, Harriet L. Wilkes Honors College Summer Research Scholarship 2017

**Aater Qureshi, Harriet L. Wilkes Honors College, Spring 2014-Spring 2016 (MPH at UF)**

Veronica Nunez, Biology BS, DIS Fall 2015-Summer 2016, John Nambu Research Scholarship Summer 2016

Stacy Cabral, Harriet L. Wilkes Honors College, John Nambu Research Scholarship Summer 2015, 2<sup>nd</sup> place poster presentation at **Scripps Research Institute's Undergraduate Summer Internship Research Poster Presentation**

Srigita Madiraju, Harriet L. Wilkes Honors College, JLSI Research Scholarship Summer 2014, Spring 2013-Summer 2014, **Biology BS, Biology Honor program students, Fall 2011-Summer 2013**

Andrew J. Seaboyer, Biology BS, DIS, Spring 2013 (FIU in Environmental Policy and Management)

Stanley Andieu, Biology BS, DIS, Spring 2013

Eva M. Gallo, Biology BS, DIS, Fall 2012-Spring 2013

Asha Patel, Biology BS, Summer & Fall 2012

Stephen Rohrnough, Biology BS, Spring 2011-Summer 2011

Oleya Slipchuk, Biology BS, Spring 2011-Fall 2011

Aline Yonezawa, Biology BS, Spring 2011

**Alexandra N. Busch, Biology BS, NSF-URM student, Summer 2009-Summer 2011**

**Christina Marie Gambino, Biology BS, DIS & Honors Program, Fall 2009-Spring 2011**

Danielle Howard, Biology BS, DIS, Fall 2010

Ryan W. Treu, Biology BS, DIS, Summer 2009

Duniel Viera, Biology BS, DIS, Fall 2008

Carlos Gonzales, Biology BS, DIS, Spring 2008, Summer 2008

Alexandra Reid, Biology BS, DIS, Spring 2007, Summer 2007

Ben Warner, Biology BS, DIS, Summer 2007

Clarissa Alexandra, Biology BS, DIS, Summer 2007

#### **Postdoctoral Research Fellow:**

Oshadhi Vindhya Nawaratne, June 2018- March 2020

Sirisha Kudumala, Sept 2015-Summer 2017

Jana Boerner, Summer 2009-Summer 2013

#### **Other trainees:**

Biljana Ermanoska, PhD student in Albena Jordonova lab, VIB Department of Molecular Genetics, University of Antwerp, June-December, 2011, Boehringer Ingelheim Fonds Travel Grant

Samantha Stille, Benjamin High School, Jupiter, Summer 2013

Julie Freund, Technician, 2009-2015

Meghana Pandit, Suncoast High School in Riviera Beach, Summer 2016

Blake Davis, BS Biology at USF, Postbac Volunteer, Fall 2017- Summer 2018

Rachel Kamel, Postbac Volunteer, Summer 2020-present

### **THESIS COMMITTEE MEMBER**

Aaron McFarlane, IBN-PhD (Fall 2019-present)  
Cecila Nicholas, IB-PhD (Spring 2019-present)  
Kazuma Murakami, IBN-PhD (Summer 2016-present)  
Lillian Onwuha-Ekpete, IB-PhD, (Spring 2014-Fall 2020)  
Ke Zhang, IBN-PhD (Fall 2016-Spring 2020)  
James Jaggard, IB-PhD (Summer 2016-Spring 2020)  
Maria Eduarda Yurgel, IBN-PhD (Spring 2016-Fall 2018)  
Mickelene Hackman, PhD student, Chemistry department (Spring 2014-Spring 2018)  
Jennifer Krill, Biological Sciences, IB-PhD student (Fall 2008- Fall 2018)  
Melissa Slocumb, IBN-PhD (Summer 2016-Summer 2017)  
Raphael Itzkowitz, Masters (Fall 2015-Fall 2016)  
Ramon Antonio Garcia Areas, Biological Sciences, IB-PhD student (Spring 2011-Summer 2016)  
Haiyin Zou, Biomedical Sciences, IB-PhD student (Fall 2009- Spring 2016)  
Mari Heghinian, Chemistry PhD student (Fall 2008-Spring 2014)  
Melissa Borgen, Biological Sciences, IB-PhD student (Spring 2009-Fall 2014)  
Brian Orr Biological Sciences, IB-PhD student (Fall 2009- Fall 2013)  
Rebecca Leon, Biomedical Sciences, IB-PhD student (Fall 2008-Summer 2012)  
Kimberly Diane Rowland, Biological Sciences, IB-PhD student (Fall 2008-Spring 2012)  
Joe Krystal, Biological Sciences, IB-PhD student (Fall 2009-Spring 2012)  
Huan Liu, Biomedical Sciences, IB-PhD student (Fall 2009-Fall 2012)  
Lauren Purpura, Biological Sciences, IB-PhD student (Fall 2008- 2011)  
Traci Pantuso, Biological Sciences, Masters student (Spring 2011)  
Jennifer Verriotto, Biological Sciences, Masters student (Spring 2009-Fall 2010)  
Michael Lucchese, Masters Student (Fall 2008-Summer 2009)  
Julie Freund, Biological Sciences, BS/Masters student (Spring-Fall 2008)

### **SERVICE AND PROFESSIONAL DEVELOPMENT**

#### **Department**

Advisory committee of Neuroscience and Behavior undergraduate program (Spring 2020-present)  
Personnel Committee (Fall 2019-present)  
Space Committee (Spring 2020-present)  
Biology Chair recruitment committee (Fall 2019-Spring 2020)  
Integrative Biology PhD Admissions Committee (Spring 2009-present)  
Integrative Biology and Neuroscience PhD Admissions Committee (Spring 2011-present)  
Integrative Biology PhD Program Committee (Spring 2009-present)  
Teaching evaluation for promotion of Dr. Rindy Anderson (Fall 2019)  
Teaching evaluation for promotion of Dr. Alex Keene (Fall 2019)  
Promotion evaluation Evelyn Frazier, Summer 2018  
Faculty recruiting committee, Biological Sciences (Spring 2007, Spring 2009, Spring 2013)  
Associate Director, Integrative Biology PhD Program (2008-2011)  
Biology Bylaws committee, Biological Sciences Department (Spring 2010)

## **College**

Master researcher of the Master research program of College of Science, Florida Atlantic University (2011- 2012)

Seed proposal reviewer for the College of Sciences (Spring 2012).

Neuroscience Steering committee (Spring 2009-2011)

Graduate Marshal of College of Science, Commencement (Fall 2011)

Neuroscience Webpage committee (Summer 2007- 2009)

Neuroscience curriculum committee for PhD program (Summer 2007- 2009)

Faculty recruiting committee, Physics Department (Spring 2007)

Neuroscience Seminar Committee representative for Biological Sciences and CMBB (Fall 2006-Spring 2009)

## **University**

Reviewer for the Office of Undergraduate Research and Inquiry of Undergraduate Research Grants (2018, 2019, 2020)

Mentor for Network of Women in Science (NWIS) at FAU, MPFI and Scripps (Spring 2020-present)

Diving and Boating Safety Board Member (Spring 2018-present)

Graduate Training Program in Neuroscience (GNTP) Steering Committee (Fall 2017- present)

Panel member, Women's Networking Event hosted by FAU ADVANCE Institutional Transformation-Catalyst (IT-Catalyst) program. (March 25<sup>th</sup>, 2019)

Integrating FAU neuroscience graduate education committee (Spring-Summer 2017)

Poster judge at Undergraduate Research Symposium (Spring 2015, 2016, 2017)

Undergraduate research grant reviewer for the Undergraduate Research & Inquiry at FAU (Fall 2015)

Poster judge at the Graduate and Professional Student Association Research Day Spring (Spring 2010-2015)

Incentive Committee, Division of Research (Fall 2015)

Faculty Advisor to the Graduate and Professional Student Association (Spring 2012-2014)

Faculty recruiting committee, Biological Sciences & Honors College (Spring 2013)

Owl Awards Selection Committee for the Graduate Student Association (Fall 2011)

NSF MRI proposal reviewer for the Division of Research at FAU (Fall 2011)

Poster judge at the College of Science Research day (Spring 2007-2008)

## **International**

International Max Planck Research School (IMPRS) Brain and Behavior admissions committee, Spring 2019-present

## **Community Public service**

Guest speaker at Association of Biological and Biomedical Students "Making Choices: Career and Family" event, Florida Atlantic University, Spring 2016

Guest lecture at FAU High School, Boca Raton, Spring 2015

Guest speaker of the Academic Careers Roundtable at Scripps Florida, Fall 2012

## **Professional development and qualifications**

Writing Across Curriculum (WAC) course certification, Spring 2015  
Florida Atlantic University Scientific Diver/Member of AAUS, since June 2011

## **Exhibitions**

Spring 2011                      Provided art work for exhibition at the Florida Atlantic University multimedia event to celebrate the 16<sup>th</sup> annual Brain Awareness Week, March 14-20, 2011, as well as the 25<sup>th</sup> Anniversary of the Center for Complex Systems and Brain Sciences and the 50<sup>th</sup> Anniversary of FAU.

## **PROFESSIONAL SERVICE & MEMBERSHIPS**

### Grant reviewer

2017                      National Institute of Health, Synapses, Cytoskeleton and Trafficking Study Section [SYN]  
2017                      National Institute of Health, Special Emphasis panel, AREA: Applications in Cell and Developmental Biology, ZRG1 CB-T(81) study section  
2016                      National Institute of Health, Special Emphasis panel, AREA: Applications in Cell and Developmental Biology, ZRG1 CB-T(81) study section  
2015                      National Institute of Health, Synapses, Cytoskeleton and Trafficking Study Section [SYN]  
2014                      National Science Foundation, IOS – Modulation, request received but declined due to conflict of interest  
2013                      Parkinson's U.K.  
2012                      National Institute of Health, Synapses, Cytoskeleton and Trafficking Study Section [SYN]  
                                    The Wellcome Trust-Career Re-Entry Fellowship, U.K.  
2011                      National Institute of Health, Synapses, Cytoskeleton and Trafficking Study Section [SYN]  
<2011                      National Science Foundation, IOS – Modulation, IOS - Animal Developmental Mechanisms, MCB – Cellular Systems and IOB – Developmental Systems cluster

### Journal/textbook reviewer

2020                      JOVE (Sept), Journal of Neurochemistry (January), Molecular Biology of the Cell (Text book of W. W. Norton & Company)-video animation library for chapters 13,14 &17 (Feb), BMC Biology (Feb and May), Guest editor-Plos Genetics (Nov-Dec)  
2019                      Micropublications, Molecular and Cellular Neuroscience, Nature-Scientific Reports  
2018                      Journal of Visual Experiments (March), ACS Chemical Neuroscience (May),  
2016                      Nature, Plos One  
2015                      Nature, Plos One  
2014                      Plos One (Spring and summer), Journal of Visual Experiments  
2013                      Nature  
2012                      Journal of Comparative Neurology, Journal of Neurogenetics, Journal of Visual Experiments

2011 <2011	Current Biology, Journal of Comparative Neurology, Journal of Neurogenetics FLY, Journal of Neurobiology, Biochimica Et Biophysica Acta (BBA), PLoS Genetics, Developmental Neurobiology, Oxford University Press, Current Biology
<u>PNT reviewer</u>	Western Kentucky University (2015)
<u>Course Instructor</u>	for the Neurobiology of Drosophila summer course at the Cold Spring Harbor Laboratories, NY, (2001-2006, 2008).
<u>Organizer</u>	of the Florida Atlantic University-Max-Planck Florida Institute Neuroscience Symposium, Grand Palm, Florida Atlantic University (2010), 1 <sup>st</sup> South Florida Drosophila Research Consortium Meeting, Senate Chamber at Florida Atlantic University (2009).
<u>Session chair</u>	of the 2 <sup>nd</sup> South Florida Drosophila Research Consortium Meeting, University of Miami, Florida (2010).
<u>Member</u>	of the Society for Neuroscience (since 2002), American Association for the Advancement of Science (since 2006) and American Academy of Underwater Sciences (since 2013).

### HONORS, AWARDS & FELLOWSHIPS

**Exceptional Faculty Award nominee, Northern Campus Achievement Awards (2017)**

**HHMI Janelia Farm Visitor Program Fellowship (2014)**

**Division of Research Faculty Mentor-Mentee Award (2011).** Mentee: Kate Detwiler, Arts & Letters.

**Researcher of the Year Award 2010-2011,** Florida Atlantic University

**Research Assistant Professor of the Year 2011,** Warren Lloyd Holtzman Seed grant, Charles E Schmidt College of Science

**Graduate Student Mentor Award** of the Graduate Student Association, FAU Owl Awards (2009)

**Postdoctoral fellowship** of the "Graduiertenkollegium Arthropodenverhalten" in Würzburg (1999)

**Graduate fellowship** of the "Graduiertenkollegium Arthropodenverhalten" in Würzburg (1995-1998)

**Neurofly Meeting Award,** 7th European Symposium on Drosophila Neurobiology, Warwick, UK (1998)

**CSHL Meeting Award,** Neurobiology of Drosophila meeting, Cold Spring Harbor, NY (1997)

**Journal/Book cover illustrations** Drosophila Neurobiology: A laboratory manual, Cold Spring Harbor Press (2010), Journal Neurogenetics, volume 24 (3), (2010) and European Journal of Cell Biology, volume 79 (7), (2000)

# William Edward Hahn

101 SE 10th Court – Deerfield Beach, FL 33441

williamedwardhahn@gmail.com

561-479-8123

## I. EDUCATION

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Florida Atlantic University Ph.D. Complex Systems and Brain Sciences	777 Glades Road Boca Raton, Florida 33431	2011-2016
University of North Carolina at Greensboro Mathematics / Computer Science	1400 Spring Garden Street Greensboro, North Carolina 27412	2009-2011
Guilford College B.S. in Mathematics / Physics	5800 West Friendly Avenue Greensboro, North Carolina 27410	2003-2008

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## II. RESEARCH

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Morris, P., St. Clair, R., Hahn, W.H. and Barenholtz, E. (2020)  
Predicting Binding from Screening Assays with Transformer Network Embeddings.  
Journal of Chemical Information and Modeling.

Barenholtz, E., Fitzgerald, N. D., Hahn, W. E. (2020).  
Machine-learning approaches to substance-abuse research:  
emerging trends and their implications.  
Current Opinion in Psychiatry, 33(4), 334-342.

Sarangi, V., Pelah, A., Hahn, W. E., Barenholtz, E. (2020).  
Gender Perception From Gait:  
A Comparison Between Biological, Biomimetic and Non-biomimetic Learning Paradigms.  
Frontiers in human neuroscience, 14.

N Sachdeva, M Klopukh, RS Clair, WE Hahn  
Using conditional generative adversarial networks to reduce the effects of latency in robotic telesurgery  
Journal of Robotic Surgery

Sarangi, V., Pelah, A., Hahn, W. E., Barenholtz, E.  
(2020). Neural and Neuromimetic Perception:  
A Comparative Study of Gender Classification from Human Gait.  
Electronic Imaging, 2020(11), 10402-1.

Morris, P., St Clair, R., Barenholtz, E. and Hahn, W.E.  
Predicting Binding from Screening Assays with Transformer Network Embeddings.  
(Submitted, Journal of Chemical Information and Modeling 2019)

Michael Teti, Shawn Martin, Christopher Teti, Elan Barenholtz and William Hahn.



A Controlled Investigation of Behaviorally-Cloned Deep Neural Network Behaviors in an Autonomous Steering Task.

(Submitted, Robotics and Autonomous Systems 2019)

Michael Teti, Elan Barenholtz and William Hahn.

Half the Measurements, Twice the Speed:

Accelerating Deep Reinforcement Learning Using Compressed Sensing.

NICE 2019. Accepted With Talk.

Evan Clark, Rachael St Clair, Mike Teti, Elan Barenholtz and William Hahn.

Advances in deep learning and their applied utility toward chemical informatics and Drug Discovery.

ACS Conference 2019 Accepted with Talk.

Paul Morris, Rachael St Clair, Mike Teti, Elan Barenholtz and William Hahn.

Virtual High-throughput screening; A combined deep-learning approach.

ACS Conference 2019 Accepted with Talk.

Sarangi, Pelah, Hahn, Barenholtz, Stone, Kazakov

Clinical evaluation of machine learning approaches for the classification of 3D gait using static and dynamic models in comparison to human perception.

British Machine Vision Conference (BMVC) 2019

Michael Teti, Elan Barenholtz and William Hahn.

Half the Measurements, Twice the Speed:

Accelerating Deep Reinforcement Learning Using Compressed Sensing.

NICE 2019 (Submitted)

Michael Teti, William Edward Hahn, Shawn Martin, Christopher Teti, Elan Barenholtz

A Systematic Comparison of Deep Learning Architectures in an Autonomous Vehicle. (Submitted)

Rachael St Clair, Mike Teti, Elan Barenholtz and William Hahn.

Target Binding and Sequence Prediction With LSTMs. RECOMB 2019

Hahn, William Edward, Mike Teti, and Elan Barenholtz.

Double-Blind Inpainting with Conditional Generative Adversarial Networks.(CVPR In-prep)

Kleiman, Michael, William Hahn, and Elan Barenholtz.

"Saliency Map Classification Using Capsule-based CNNs."

Journal of Vision 18.10 (2018): 1209-1209.

Morris, Paul, DaSilva, Yahchayil, Clark, Evan, Hahn, William, Barenholtz, Elan.

Convolutional Neural Networks for Predicting Molecular Binding Affinity to HIV-1 Proteins.

2018 ACM International Conference.

Kelsey Wilson, Evan Clark, Regy Augustin, Paul Morris, Elan Barenholtz and William Edward Hahn.

Deep Learning Guided Transcriptome: Sequence Analysis of Primary Tumors

for Differentiation and Diagnosis of Multiple Cancers

GTC 2018 Accepted with Talk

Hahn, William Edward, Mark Lenson, and Elan Barenholtz.

Human Saliency Prediction using Conditional Generative Adversarial Neural Networks

VSS 2018

Hahn, William Edward, Teti, Michael and Elan Barenholtz

$X^3$ : A biologically inspired, high-speed algorithm for feature learning.

NICE 2018 Accepted with Talk

Teti, Michael, Elan Barenholtz and William Hahn.

A Systematic Comparison of Deep Learning Architectures in an Autonomous Vehicle  
GTC 2018 Accepted with Talk

Teti, Michael, William Edward Hahn, and Elan Barenholtz  
Compressed Sensing Using Locally-Competitive Algorithms  
EUSIPCO 2017 In Review

William Hahn, Mike Teti, Stephanie I. Lewkowicz, Bing Ouyang and Elan Barenholtz  
Sparse Dictionaries for RGB Image Classification using Locally Competitive Neural Networks  
IJCNN Submitted 2017

Teti, Michael, Rachel St Clair, Abrian Miller and William Edward Hahn.  
Deep Learning Sequence Prediction for Synthetic Biology and Genetic Engineering  
iGem 2017 Accepted with Talk

Howard Hock, Elan Barenholtz, William Hahn and Adar Pella.  
Human and machine perception of gender from gait  
IEEE FG 2017 In Review

Martin, Shawn, William Hahn, and Elan Barenholtz  
An Open-Source Research Platform for Autonomous Vehicle Research and Development  
NCUR 2017

Augustin, Regynald, William Hahn, and Elan Barenholtz  
DeepFeature: A Recurrent Memory Network for Autonomous Vehicle Control  
NCUR 2017

Teti, Michael, William Hahn, and Elan Barenholtz  
Detecting Wading Bird Presence in Time-Lapse Images with a Convolutional Neural Network  
NCUR 2017

Hahn, William Edward, Stephanie Lewkowicz, and Elan Barenholtz  
Deep Learning Human Actions from Video via Sparse Filtering and Locally Competitive Algorithms.  
Multimedia Tools and Applications (2015): 1-14.

Hahn, William, and Elan Barenholtz.  
Alpha-Stable Distributions and Saccadic Foraging.  
Journal of Vision 14.10 (2014): 752-752.

Hahn, William Edward and Shapiro, Steven  
Swarm Driven Neural Networks Identification of El Nino Southern Oscillations  
NCUR 2008

### III. PRESENTATIONS AND TALKS

$X^3$ : A Biologically Inspired, High-Speed Algorithm for Feature Learning - Intel Corp, NICE - 2018

Self-Driving Cars and the Future of Medicine - FAU Frontiers - 2018

Neurocomputing - Guilford College - 2018

Intermediate Machine Learning - Itplaoza - 2016

Big Data, IoT, and Machine Learning - - Itplaoza - 2016

Locally Competitive Algorithms and Random Projections - Florida Atlantic University - 2016

Information Processing Models of the Visual Cortex - Florida Atlantic University - 2015  
 Machine Cognition - Florida Atlantic University - 2015  
 Summer Programming Workshop: Reservoir Computing - Florida Atlantic University - 2015  
 Sparse Coding and Compressed Sensing - Florida Atlantic University - 2013  
 Computer Vision and Structure from Motion - Ft. Lauderdale Rotary Club - 2014  
 Sparse Modeling for Saliency Prediction - Florida Atlantic University - 2014  
 Intro to Computational Complexity - Guilford College - 2014  
 Differential Equations in Neuroscience - Guilford College - 2014  
 Intro to Computational Geometry - Guilford College - 2014  
 Computer Vision and Medical Imaging - Guilford College - 2014  
 Deep Machine Learning - Florida Atlantic University - 2013  
 State of the Art: Brain Mapping - Ft. Lauderdale Rotary Club - 2013  
 Saccadic Foraging and Alpha Stable Distributions - Florida Atlantic University - 2013  
 Traumatic Brain Injury and Diffusion Tensor Imaging - Florida Atlantic University - 2012  
 Alzheimer's Disease Bio-markers Using Diffusion Tensor Imaging - Florida Atlantic University - 2011  
 Brain Mapping: Diffusion Tensor Tractography Whole Brain Connectome - Guilford College - 2011  
 Bio-Inspired Algorithms - University of North Carolina Greensboro - 2010  
 Crayon Spectroscopy - Greensboro, NC Elementary School - 2009  
 Antibiotic Resistance Agent Based Simulation - University of North Carolina Greensboro - 2009  
 Quorum Sensing and Artificial Immune Systems - Guilford College - 2009  
 Human-Computer Interaction Virtual Worlds: Second Life - University of North Carolina Greensboro - 2009  
 Fibonacci, the Golden Ratio, and Netlogo - Winterville, NC Middle School - 2008  
 Swarm Driven Neural Networks for El Niño - National Conference for Undergraduate Research - 2008  
 Thermohaline Circulation - Guilford College - 2007  
 Genetic Algorithms and Experimental Paper Aircraft - Guilford College - 2007  
 Measuring the Wavelength of a Helium-Neon Laser - Guilford College - 2005  
 Wasting Nuclear Power - Guilford College - 2005  
 Populations Dynamics and Differential Equations - Guilford College - 2004  
 Parametric Equations in Maple - Guilford College - 2004  
 Ant Simulations and Genetic Algorithms - Guilford College - 2003

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#### IV. EDUCATIONAL ACHIEVEMENTS

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1<sup>st</sup> Broward County Regional Science and Engineering Fair Geela Ramos 2019  
 2<sup>nd</sup> Florida State County Science Fair Geela Ramos 2019  
 1<sup>st</sup> Broward County Regional Science and Engineering Fair Rodrigo Castellon 2018  
 3<sup>rd</sup> Florida State Science and Engineering Fair Rodrigo Castellon 2018  
 NASA Special Recognition Award Rodrigo Castellon 2019  
 5 MPCR Lab Spin Off Companies in FAU Techrunway Incubator 2018  
 1<sup>st</sup> Place FAU Wave Research Award - Mike Kleiman 2018  
 3<sup>rd</sup> Place FAU Wave Research Award - Stephen Hoover 2018  
 1<sup>st</sup> 3 Minute Thesis Heat - Emily Stark 2017  
 1<sup>st</sup> GPSA Graduate Research Day - Michael Teti 2016

1<sup>st</sup> Undergraduate Research Symposium - Andrew Silverstein 2016  
 1<sup>st</sup> Undergraduate Research Poster Day - Marcus McGuire 2016  
 3<sup>rd</sup> place FAU business plan competition - Reggie Augustine 2016  
 PhD Fellowship Everglades Foundation - Michael Teti 2016  
 Student Wave Undergraduate Summer Research Grant - Shawn Martin 2016  
 MPCR Lab Summer Programming Workshop 2016  
 MPCR Lab Article in University Press 2015  
 MPCR Lab Summer Programming Workshop 2015  
 Founded Machine Perception and Cognitive Robotics Laboratory (MPCR) 2014  
 First Florida Statewide Graduate Student Research Symposium: Diffusion MRI Tractography 2013  
 Honorable Mention Art of Academia - Digital Neuroanatomy 2013  
 1<sup>st</sup> Place GPSA Research - White Matter Networks Indicative of Alzheimer's Disease 2013  
 2<sup>nd</sup> Place Art of Academia - Diffusion Tractography Visualization 2011  
 Science Writer - Houghton Mifflin Harcourt 2011  
 National Science Foundation - Mathematical Biology Fellowship 2009  
 Davidson College Summer Institute - Calculus Teachers Workshop 2009  
 National Conference for Undergraduate Research - Swarm Driven Neural Networks ENSO 2008  
 Guilford College - Physics for Non-Scientists - Lab Instructor - Deutsches Museum - Munich, Germany 2006  
 E. Garness Purdom Physics Scholarship 2006  
 AAPT - Outstanding Teaching Award 2006  
 American Association of Physics Teachers 2006  
 Physics Teaching Appreciation Award 2005  
 National Physics Honors Society - Sigma Pi Sigma 2004  
 Guilford College First-year Student Orientation Leader 2004  
 Graduation Honors - World Religion - St. Augustine College Preparatory 2003  
 DigiPen Institute of Technology - Computer Graphics Workshop 2002

## V. TEACHING

### A. Assistant Professor - Florida Atlantic University

Course	Semester
Methods in Complex Systems	Spring 2020
Time Series Analysis	Spring 2020
Nonlinear Dynamics	Fall 2019
Regression Analysis	Fall 2019
Probability and Statistics	Spring 2019
MPFI Data Science	Spring 2019
MPFI Data Science	Fall 2019
Linear Algebra	Fall 2019
Introduction to Deep Learning	Spring 2018
Machine Perception and Cognitive Robotics	Spring 2018
Machine Perception and Cognitive Robotics HS	Fall 2018
Machine Perception and Cognitive Robotics	Spring 2017
6908 Machine Perception and Cognitive Robotics	Spring 2016

### B. Instructor - Florida Atlantic University

Course	Semester
2049 General Physics Laboratory II Electronics	Spring 2015
2049 General Physics Laboratory II Electronics	Fall 2014

### C. Teaching Assistant - Florida Atlantic University

Course	Semester
2002 Introduction to Astronomy / Digital Data Laboratory	Summer 2013
2002 Introduction to Astronomy / Digital Data Laboratory	Spring 2013
2002 Introduction to Astronomy / Digital Data Laboratory	Fall 2012
2002 Introduction to Astronomy / Digital Data Laboratory	Summer 2012
2002 Introduction to Astronomy	Spring 2012
2002 Introduction to Astronomy	Fall 2011

### D. Teaching Assistant - Guilford College

Course	Semester
122 Classical and Modern Physics II	Spring 2008
101 Science through Science Fiction	Fall 2007
320 Mathematical Methods for the Physical Sciences	Spring 2007
250 Physics for Non-Scientists (Munich, Germany)	Fall 2006
320 Mathematical Methods for the Physical Sciences**	Spring 2006
223 Classical and Modern Physics III	Fall 2005
122 Classical and Modern Physics II*	Spring 2005
101 Systems Thinking and Computer Modeling	Fall 2004

\* Guilford College Physics Department – Teaching Assistant Appreciation Award

\*\* American Association of Physics Teachers – Outstanding Teaching Assistant Award

## VI. SPECIAL MENTION

### Former Student Placements

MIT Media Lab - Oceane Boulais

MIT Media Lab - Danny Marquez

Twitter - Regy Augustine

Mount Sinai - Evan Clask

UF - Washington Garcia

Stanford - Rodrigo Castellon

Georgia Tech - Marcus McGuire

Georgia Tech - Nick Tutaniu

Georgia Tech - Andrew Silverstein

Mike Teti - Summer Researcher Los Alamos National Laboratory 2019

Emily Stark - Japan Conference Deep Learning Talk 2019

Nicole Fitzpatrick - NIDA 2019

Rachael St Clair - Department of Homeland Security 2019

Mike Teti - Summer Researcher Los Alamos National Laboratory 2020

Emily Stark - Summer Researcher Los Alamos National Laboratory 2020

## VII. TECHNOLOGIES

Computer Languages: Pytorch, Tensorflow, Python,  
Matlab, C++, Java, Netlogo, Maple, Sage, Stella, Breve, Prolog, R, HTML

Operating Systems: Docker, Ubuntu, OS X, Windows

HPC/Cloud: Slurm, Globus, GridNexus, Condor, Dagman, FTP and SSH

Applications: L<sup>A</sup>T<sub>E</sub>X, Microsoft Office Suite, Google Documents, Digital Audio/Video/Imaging Editing

Medical Imaging: CMTK, TrackVis, DTK, OsiriX, MRICroGL, Slicer, FSL, AFNI, Freesurfer

Mixed Reality: Magic Leap, HTC Vive, Oculus Rift, Leap Motion, Kinect v2, Eye-Tracking, Open CV

## VIII. WEBSITES

MPCR Homepage: <http://www.mpcrlab.com>

Video History Vlog: <http://www.dividingengine.com/>

Youtube Channel: <http://www.youtube.com/user/williamedwardhahn>

Visualization Portfolio: <https://williamhahn.imgur.com/>

MPCR Slides: <http://www.tinyurl.com/pa9ussn>

MPCR Subreddit: <http://www.reddit.com/r/mpcr/>

MPCR Facebook: <http://www.facebook.com/mpcrlab>

MPCR Github: <http://www.github.com/mpcrlab>

## IX. REFERENCES

Dr. Elan Barenholtz	<a href="mailto:elan.barenholtz@fau.edu">elan.barenholtz@fau.edu</a>	561-297-3433
Dr. Ken Dawson-Scully	<a href="mailto:ken.dawson-scully@fau.edu">ken.dawson-scully@fau.edu</a>	561-297-0337
Dr. Rubin Gruber	<a href="mailto:rgruber9999@yahoo.com">rgruber9999@yahoo.com</a>	978-761-3979

## **Sang Wook (Sammy) Hong: Curriculum Vitae**

Department of Psychology, Florida Atlantic University

209 Behavioral Science

777 Glades Road

Boca Raton, FL 33431, U.S.A.

Tel : 1-561-297-2905

E-mail : [shong6@fau.edu](mailto:shong6@fau.edu)

Last update: January, 2021

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### **Education**

- 2000 – 2005 Department of Psychology, University of Chicago  
Ph. D. in Psychology  
Thesis: Neural representation of color and form during binocular rivalry  
Advisor: Steven, K. Shevell, Ph. D.  
Advisory Committee: Joel Pokorny, Ph. D., David Bradley, Ph. D.,  
Naoum Issa, M.D., Ph. D., Stephen Engel, Ph. D.
- 1997 – 1999 Department of Psychology, Yonsei University  
M. A. in Psychology  
Thesis: Effects of facial expression on face recognition  
Advisor: Chan-Sup Chung
- 1992 – 1997 Department of Psychology, Yonsei University  
B. A. in Psychology

### **Employment**

- Aug. 2017 – current Department of Psychology, Florida Atlantic University  
Associate Professor
- Aug. 2011 – Aug. 2017 Department of Psychology, Florida Atlantic University  
Assistant Professor
- Sep. 2009 – Jul. 2011 Department of Psychology, Vanderbilt University  
Post-doctoral Research Associate  
Advisor: Frank Tong, Ph. D. & Randolph Blake, Ph. D.
- Aug. 2006 – Aug. 2009 Department of Psychology, Vanderbilt University  
Post-doctoral Research Associate  
Advisor: Randolph Blake, Ph. D.

### **Scholarship/Research/Creative Activity: Publications in Print**

*Peer Reviewed Journal Publications (\* corresponding author, # students under supervision)*

32. Yoon, K. L., & Hong, S. W. (2020). Behavioral inhibition system sensitivity moderates audio-visual neutral information processing. *Journal of Behavior Therapy and Experimental Psychiatry*, 69, 1-7.

31. Kim, I., **Hong, S. W.**, Shevell, S. K., & Shim, W. M. (2020). Neural representations of perceptual color experience in the human ventral visual pathway. *Proceedings of the National Academy of Sciences*, *117*, 13145-13150.
30. **Hong, S. W.\***, & Kang, M. -S. (2019). Slow temporal dynamics of motion-induced brightness shift reveals impact of adaptation. *Perception*, *48*, 402-411.
29. **Hong, S. W.\***, & Tong, F. (2017). Neural representation of form-contingent color filling-in in the early visual cortex. *Journal of Vision*, *17*(3), 1-10, doi:10.1167/17/13/10.
28. **Hong, S. W.\***, & Yoon, K. L. (2017). Intensity dependence of facial expression adaptation aftereffect. *Psychonomic Bulletin and Reviews*. *25*, 1035-1042.
27. Park, Y. E., Sy, J. L., **Hong, S. W.**, & Tong, F. (2017). Reprioritization of features of multi-dimensional objects stored in visual working memory. *Psychological Science*, *28*, 1773-1785.
26. **Hong, S. W.\***, & Kang, M. -S. (2016). Motion alters color appearance. *Scientific Report*, *6*, 1-11. doi: 10.1038/srep36272.
25. Cao, D., Zhuang, X., Kang, P., **Hong, S. W.\***, & King, A. (2016). Acute alcohol drinking promotes piecemeal percepts during binocular rivalry. *Frontiers in Psychology*, *7*:489, 1-10. doi: 10.3389/fpsyg.2016.00489.
24. **Hong, S. W.\***, & Shim, W. M. (2016). When audiovisual correspondence disturbs visual processing. *Experimental Brain Research*, *234*, 1325-1332. doi: 10.1007/s00221-016-4591-y.
23. Cox, D.<sup>#</sup>, & **Hong, S. W.\*** (2015). Semantic-based crossmodal processing during visual suppression. *Frontiers in Psychology*, *6*:722, 1-9, doi: 10.3389/fpsyg.2015.00722.
22. **Hong, S. W.\***, Yoon, L., & Peaco, S.<sup>#</sup> (2015). Sex differences in perception of invisible facial expressions. *Frontiers in Psychology*, *6*:392, 1-8, doi: 10.3389/fpsyg.2015.00392.
21. **Hong, S. W.\*** (2015). Radial bias for orientation and direction of motion modulates access to visual awareness during continuous flash suppression. *Journal of Vision*, *15*(1):3, 1-11, <http://www.journalofvision.org/content/15/1/3>, doi:10.1167/15.1.3.
20. Chong, E.<sup>#</sup>, **Hong, S. W.**, & Shim, W. M. (2014). Color updating on the apparent motion path. *Journal of Vision*, *14*(14):8, 1-12, <http://www.journalofvision.org/content/14/14/8>, doi:10.1167/14.14.8.
19. Yang, E., Tadin, D., Glasser, D. M., **Hong, S. W.**, Blake, R., & Park, S. (2013). Visual context processing in bipolar disorder: a comparison with schizophrenia. *Frontiers in Psychology*, *4*, 1-12, doi: 10.3389/fpsyg.2013.00569
18. **Hong, S. W.\***, & Kang, M. -S. (2013). Perceptual consequence of normalization revealed by a novel brightness induction. *Vision Research*, *91*, 78-83.
17. Williams, M., **Hong, S. W.**, Kang, M. -S., Carlisle, N. B. & Woodman, G. (2013). The benefit of forgetting. *Psychonomic Bulletin and Review*, *20*, 348-355.



16. Yang, E., Tadin, D., Glasser, D. M., **Hong, S. W.**, Blake, R., & Park, S. (2013). Visual context processing in schizophrenia. *Clinical Psychological Science, 1*(1), 5-15.
15. **Hong, S. W.\***, Xu, L. #, Kang, M. -S. & Tong, F. (2012). The hand-reversal illusion revisited. *Frontiers in Integrative Neuroscience, 6*, 1-6, doi: 10.3389/fnint.2012.00083
14. **Hong, S. W.**, Tong, F., & Seiffert, A. E. (2012). Direction-selective patterns of activity in human visual cortex suggest common neural substrates for different types of motion. *Neuropsychologia, 50*, 514-521.
13. Kang, M. -S., **Hong, S. W.**, Blake, R., & Woodman, G. (2011). Visual working memory contaminates perception. *Psychonomic Bulletin and Review, 18*, 860-869.
12. Yang, E., **Hong, S. W.**, & Blake, R. (2010). Adaptation aftereffects to facial expressions suppressed from visual awareness. *Journal of Vision, 10*(12):24, 1-13.
11. **Hong, S. W.\***, & Shevell, S. K. (2009). Color-binding errors during rivalrous suppression of form. *Psychological Science, 20*, 1084-1091.
10. **Hong, S. W.\***, & Blake, R. (2009). Interocular suppression differentially affects achromatic and chromatic mechanisms. *Attention, Perception, and Psychophysics, 71*, 403-411.
9. Yoon, L., **Hong, S. W.**, Joormann, J., & Kang, P. (2009). Perception of facial expression of emotion during binocular rivalry. *Emotion, 9*, 172-182.
8. **Hong, S. W.\***, & Blake, R. (2008). Early visual mechanisms do not contribute to synesthetic color experience. *Vision Research, 48*, 1018-1026.
7. **Hong, S. W.\***, & Shevell, S. K. (2008b). Binocular rivalry between identical retinal stimuli with an induced color difference. *Visual Neuroscience, 25*, 361-364.
6. **Hong, S. W.\***, & Shevell, S. K. (2008a) The influence of chromatic context on binocular color rivalry: Perception and neural representation. *Vision Research, 48*, 1074-1083.
5. Shevell, S. K., St. Clair, R., & **Hong, S. W.** (2008). Misbinding of color to form in afterimages. *Visual Neuroscience, 25*, 355-360.
4. **Hong, S. W.\***, & Shevell, S. K. (2006). Resolution of binocular rivalry: Perceptual misbinding of color. *Visual Neuroscience, 23*, 561-566.
3. **Hong, S. W.**, & Shevell, S. K. (2004b). Brightness induction: unequal spatial integration with increments and decrements. *Visual Neuroscience, 21*, 353-357.
2. **Hong, S. W.**, & Shevell, S. K. (2004a). Brightness contrast and assimilation from patterned inducing backgrounds. *Vision Research, 44*, 35-43.
1. **Hong, S. W.**, & Chung, C. -S. (1999). Effects of facial expression on face recognition. *Journal of Korean Psychology: Experiment and Cognition, 11*, 221-247. (In Korean)

### Book Chapter

1. **Hong, S. W.** (2015). Large shift in brightness induced by motion in context. *The Oxford Compendium of Visual Illusions*

Manuscripts Under Revision and Submitted

1. Cox, D. #, & **Hong, S. W.\*** (*under revision*). Traveling waves in motion induced blindness. *Journal of Vision*.
3. Lee, J., **Hong, S. W.**, & Chong, S. C. (*submitted*). Multivariate summary of a complex scene. *Scientific Report*.

Manuscripts Under Preparation

- Hong, S. W.\***, & Tong, F. (Manuscript in preparation). Form-independent direction-selective responses in human visual cortex.
- Ha, J., Park, S. Y., **Hong, S. W.\***, & Shim, W. M. Asymmetrical effect of spatial attention on color representation between lateral geniculate nucleus and primary visual cortex.

Refereed Presentations and Proceedings (Last 3 years)

- Yoon, Y., & **Hong, S. W.** (2020). What determine individual differences in grouping during binocular rivalry. (Annual meeting of the Vision Sciences Society, Online meeting).
- Lee, J., **Hong, S. W.**, & Chong, S. C. (2020). Conjunction ensembles are based on conjoint representation of two features. (Annual meeting of the Vision Sciences Society, Online meeting).
- Ha, J., Park, S. Y., **Hong, S. W.**, & Shim, W. M. (2019) Spatial attention modulates color selectivity in human LGN. (Annual meeting of the Korean Society for Cognitive & Biological Psychology, Pyeongchang, South Korea).
- Song, J., **Hong, S. W.**, & Kim, C. -Y. (2019). Chromatic sensitivity affected by depressive symptoms. (Annual meeting of the Society for Neuroscience, Chicago, Illinois).
- Cox, D., & **Hong, S. W.** (2019). Using pattern classification and EEG to reveal the temporal characteristics of categorical processing during interocular suppression. (Annual meeting of the Vision Sciences Society, St. Petersburg Beach, Florida).
- Romulus, D., **Hong, S. W.**, Hock, H. (2019). Top-down Influence of Global Motion Patterns on Local Motion Patterns. (Annual meeting of the Vision Sciences Society, St. Petersburg Beach, Florida).
- Park, S., **Hong, S. W.**, Lee, Y., & Shim, W. M. (2018). Location-specific attentional modulation of neural representation of color in the human LGN. (Annual meeting of the Society for Neuroscience, San Diego, California).
- Hong, S. W.**, & Kang, M. -S. (2018). Contrast dependent brightness shift induced by contextual motion. (Annual meeting of the Vision Sciences Society, St. Petersburg Beach, Florida).
- Kim, I., Shim, W. M., **Hong, S. W.**, & Shevell, S. K. (2018). Reconstructing subjective color experiences across the human visual hierarchy. (Annual meeting of the Vision Sciences Society, St. Petersburg Beach, Florida).
- Hong, S. W.**, & Kang, M. -S. (2017). Motion-induced appearance shift depending on orientation. (Annual meeting of the Vision Sciences Society, St. Petersburg Beach, Florida).

Cox, D., & Hong, S. W. (2017). The spatiotemporal dynamics of perceptual grouping in motion-induced blindness. (Annual meeting of the Vision Sciences Society, St. Petersburg Beach, Florida).

### **Courses Taught at FAU**

#### *Undergraduate Courses taught:*

Cognition (Lecture): Fall 2011, Spring 2012, Fall 2012, Fall 2014, Spring 2016, Spring 2017, Spring 2018, Spring 2019, Spring 2020

Human Perception (Lecture): Spring 2014, Spring 2015, Fall 2015, Summer 2016, Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2020

#### *Graduate Courses developed and taught:*

Attention and Consciousness (Lecture and Seminar): Spring 2013, Spring 2015

Seminar in Cognition (Lecture and Seminar): Fall 2013, Fall 2015, Fall 2018, Fall 2020

Seminar in Human Perception (Lecture and Seminar): Fall 2017, Fall 2019

### **Service and Professional Development**

#### *Department Service*

FAU Psychology Department Library Representative (2013-present)

FAU Psychology Department Undergraduate Committee (2014-present)

FAU Psychology Department Faculty Search Committee (2013-2018)

FAU Center for Complex Systems and Brain Sciences Faculty Search Committee (2013-2016)

FAU Psychology Honors Seminar, Guest Lecturer (2012, 2013, 2020)

FAU Psychology Department Vision Seminar, Organizing Chair (2012-2019)

FAU Psychology Instructor Search Committee Chair (2018, 2019)

FAU Psychology Strategic Plan Committee (2018-2020)

#### *College Service*

FAU Graduate Research Fair, Judge (2012, 2013)

#### *University Service*

FAU Neuroscience Seminar Series, Organizer (2016)

FAU Diversity Committee, Member (2015-present)

FAU QEP Topic Selection Committee (2020-present)

#### *Service to Discipline*

*Ad hoc* Reviewer: Journal of Vision

*Ad hoc* Reviewer: Visual Neuroscience

*Ad hoc* Reviewer: Vision Research

*Ad hoc* Reviewer: iPerception

*Ad hoc* Reviewer: Psychology Research and Behavior Management

*Ad hoc* Reviewer: Cognitive, Affective, & Behavioral Neuroscience

*Ad hoc* Reviewer: Neuroscience and Biomedical Engineering

Invited Reviewer: NSF Perception, Action and Cognition

## Biographical Sketch

Name: Kailiang Jia, Associate Professor

Address: Department of Biological Sciences, Florida Atlantic University, 777 Glades Road,  
Boca Raton, FL 33431

Email: [kjia@fau.edu](mailto:kjia@fau.edu)

### Education and Training

1996-2001 Ph.D., University of Missouri, Columbia, MO

1993-1996 M.S., Chinese Academy of Medical Sciences, Beijing, China

1988-1993 B.S., Qingdao University Medical College, Qingdao, Shandong, China

### Positions and Employment

2015 – present Associate Professor, tenured, Department of Biological Sciences, Florida Atlantic University, Boca Raton, Florida

2009 – 2015 Assistant Professor, tenure track, Department of Biological Sciences, Florida Atlantic University, Boca Raton, Florida

2007 – 2009 Instructor, Department of Internal Medicine, UT Southwestern Medical Center, Dallas, Texas

2004 – 2007 Research Scientist, Department of Internal Medicine, UT Southwestern Medical Center, Dallas, Texas

2001 – 2004 Postdoctoral Associate, Genetics Area Program and Molecular Biology Program, Division of Biological Sciences, University of Missouri, Columbia, Missouri

### Honors

2014 - 2015 Researcher of Year Award, Florida Atlantic University

2007 - 2011 Ellison Medical Foundation New Scholar in Aging Program

1999 Glenn Foundation /American Federation of Aging Research Scholar

### Research Interest

Autophagy is an evolutionarily conserved lysosomal degradation pathway that is present in all eukaryotic cells and conserved from yeast to humans. Autophagy has been linked to many human disease conditions including aging, cancer and neurodegeneration. In *C. elegans*, autophagy is required for various longevity signals in the regulation of *C. elegans* life span. We recently found that autophagy regulates *C. elegans* larval development, fat metabolism and adult longevity via a neuroendocrine mechanism. My long-term research goal is to understand the role of autophagy in pathogenesis of age-related human diseases including neurodegeneration, immunosenescence and obesity.

### Selected Publications

1. Ray Jia, Jiuli Zhang and Kailiang Jia (2019). Neuroendocrine regulation of fat metabolism by autophagy gene *atg-18* in *C. elegans* dauer larvae. *FEBS Open Bio* 9(9): 1623–1631.

2. Justin Minerly, Jiuli Zhang, Thomas Parker, Tiffany Kaul and Kailiang Jia (2017). The cell non-autonomous function of ATG-18 is essential for neuroendocrine regulation of

*Caenorhabditis elegans* lifespan. PLoS Genet. 13(5):e1006764. doi: 10.1371/journal.pgen.1006764.

3. Thomas Parker and Kailiang Jia (2017). Intestinal Autophagy Defends Against *Salmonella* Infection. p.291-302 in Autophagy: Cancer, Other Pathologies, Inflammation, Immunity, Infection, and Aging. Hayat E, editor. United Kingdom: Academic Press. ISBN-13: 978-0128054208, ISBN-10: 0128054204

4. Di Chen, Jiuli Zhang, Justin Minnerly, Tiffany Kaul, Donald Riddle and Kailiang Jia (2014). *daf-31* Encodes the Catalytic Subunit of N Alpha-Acetyltransferase that Regulates *Caenorhabditis elegans* Development, Metabolism and Adult Lifespan. PLoS Genet 10(10): e1004699. doi:10.1371/journal.pgen.1004699.

5. Alexander Curt, Jiuli Zhang, Justin Minnerly and Kailiang Jia (2014). Intestinal autophagy activity is essential for host defense against *Salmonella typhimurium* infection in *Caenorhabditis elegans*. Developmental and Comparative Immunology. 45:214-218.

*CURRICULUM VITAE*  
**NANCY AARON JONES, Ph.D.**

Associate Professor  
Charles E. Schmidt College of Science  
Department of Psychology and Behavioral Neuroscience  
(Affiliate Faculty: FAU Brain Institute and Center for Complex Systems)  
Florida Atlantic University, John D. MacArthur Campus  
5353 Parkside Drive, Jupiter, FL 33458  
(561) 799-8632; E-Mail: njones@fau.edu

***Education***

- Ph.D. University of Maryland-College Park, December 1994.  
Developmental Psychophysiology  
Dissertation: The stability of EEG power and asymmetry and its relation to personality in 4- and 7-year-old children.  
(Major Professor: Nathan A. Fox, Ph.D.)
- M.A. University of Maryland-College Park, May 1990.  
Developmental Psychophysiology  
Thesis: Electroencephalogram asymmetry during emotionally evocative films and its relation to positive and negative affectivity.  
(Major Professor: Nathan A. Fox, Ph.D.)
- B.A. University of Wisconsin-Madison, May 1986, General Psychology  
Thesis Paper: The recognizability of infant and monkey facial expressions by naive and experienced observers.  
(Major Professor: Steve Suomi, Ph.D.)

***Professional Work Experience/Employment***

Associate Professor, 1997-present, Florida Atlantic University, Jupiter Campus. (Assistant Professor from 1997 and then tenured and promoted to Associate in 2003). Appointed to: FAU Brain Institute, 2016; Appointed to: Center for Complex Systems, 2018. (Ad hoc adjunct faculty at Davie campus 1996 and 1997).

Research Assistant Professor & Postdoctoral Research Assistant, 1994-1997 University of Miami, School of Medicine, Miami, Florida. Director of the Psychophysiological Development Laboratory at the Touch Research Institute.

Research Project Coordinator, 1993-1994, Sheppard and Enoch Pratt Hospital, Towson, Maryland.

Graduate Research Assistant, 1986-1994, Institute for Child Study, Department of Human Development, University of Maryland, College Park, Maryland.

Undergraduate Research Assistant, 1984-1986, University of Wisconsin-Madison, Harry Harlow Primate Laboratory, Madison, Wisconsin.

***Refereed Works / Journal Publications***

Underlined names: Current and former graduate students for whom I have mentored

\*\*Starred names: Undergraduate students for whom I have mentored

**2021**

\*Argueta, A., Sloan, A., **Jones, N.A.** & Kelso, S. (2020/2021). Emergence of agency in

infants. *FAU Undergraduate Research Journal*.

Hardin, J., Jones, N.A., Mize, K.D., & Platt, M. (2021). Affectionate touch in the context of breastfeeding and maternal depression influences infant neuro-developmental and temperamental substrates. *Neuropsychobiology*.  
<http://dx.doi.org/10.1159/000511604>

Jones, N.A. & Mize, K.D. (invited article). Infant temperament and its association with neurophysiological markers in the context of maternal depression and anxiety. *Current Opinion in Behavioral Sciences*. Special issue on: Neurobiology of temperament, personality and psychopathology: What's next?

## 2020

Hardin, J., Jones, N.A., Mize, K.D., & Platt, M. (2020). Parent-training with Kangaroo Care impacts mother-infant neuroendocrine activity & infant neurophysiological development. *Infant Behavior and Development*, 58, 101416, <https://doi.org/10.1016/j.infbeh.2019.101416>

Pratt, B., Longo, J., Gordon, S., & Jones, N.A. (2020). Perceptions of breastfeeding for women with perinatal depression: A descriptive phenomenological study. *Issues in Mental Health Nursing*. <http://dx.doi.org/10.1080/01612840.2019.1691690>

## 2019

Shanok, N., Jones, N.A., & Lucas, N. (2019). Assessing children's performance on the facial emotion recognition task with familiar and unfamiliar faces: An autism study. Advanced Online Publication. *Child Psychiatry and Human Development*.  
<https://doi.org/10.1007/s10578-019-00870-z>

Shanok, N., & Jones, N.A. (2019). Mindfulness meditation intervention (MMI) alters neurophysiological symptoms of anxiety/depression in preadolescents. *Journal of Psychophysiology*. (Advance online publication). <http://dx.doi.org/10.1027/0269-8803/a000244>

## 2018

Aults, C.D., Machluf, K., Sellers, P.D. & Jones, N.A., (2018). Adolescent girls' biological sensitivity to context: heart rate reactivity moderates the relationship between peer victimization and internalizing problems. *Evolutionary Psychological Science* (advance online publication). <https://doi.org/10.1007/s40806-018-0176-2>

Jones, N.A., & Sloan, A. (2018). Neuro-hormones and temperament interact during infant development. *Philosophical Transactions of Royal Society, B*, 18(54), <http://dx.doi.org/10.1098/rstb.2017.0159>.

## 2017

Gartstein, M.A., Prokasky, A., Bell, M.A., Calkins, S.D., Bridgett, D., Braungart-Rieker, J., Leerkes, E., Cheatham, C., Das Eiden, R., Mize, K.D., **Jones, N.A.**, Mireault, G., & Seamon, E. (2017). Latent profile and cluster analysis of infant temperament: comparisons across person-centered approaches. *Developmental Psychology*, 53(10), 1811–1825. <http://dx.doi.org/10.1037/dev0000382>

## 2016

**Jones, N.A.** & Mize, K.D. (2016). Introduction for the special issue: psychophysiology and psychobiology in emotion development. *Journal of Experimental Child*



*Psychology* 142, 239–244. <https://doi.org/10.1016/j.jecp.2015.10.013>

**2015**

Aults, C., Cooper, P., Pauletti, R., **Jones, N.A.** & Perry, D.G. (2015). Child sex and respiratory sinus arrhythmia reactivity as moderators of the relation between internalizing symptoms and aggression. *Applied Psychophysiology and Biofeedback*, 40(4), 269-276. <https://doi.org/10.1007/s10484-015-9294-9>

**2014**

Mize, K.D., Pineda, M., Blau, A.K., Marsh, K., & **Jones, N.A.** (2014). Infant physiological and behavioral responses to a jealousy provoking condition. *Infancy*, 1-11. <https://doi.org/10.1111/infa.12046>.

\*Barrera, C., **Jones, N.A.**, & Mize, K.D. (2014). Feeding patterns influence brain development in infancy. *FAU Undergraduate Research Journal*, 3(1), 1-12.

**2012**

Mize, K.D., & **Jones, N.A.** (2012). Infant physiological and behavioral responses to the loss of maternal attention to a social rival. *International Journal of Psychophysiology*, 83, 16-23. <https://doi.org/10.1016/j.ijpsycho.2011.09.018>

**Jones, N.A.** (2012). Delayed reactive cries demonstrate emotional and physiological dysregulation in newborns of depressed mothers. *Biological Psychology*, 89, 374-381. <https://doi.org/10.1016/j.biopsycho.2011.11.011>

\*Pineda, M., & **Jones, N.A.** (2012). The longitudinal stability of jealousy in infancy. *FAU Undergraduate Research Journal*, 1(1), 55-63.

**2010**

Diego, M., **Jones, N.A.**, & Field, T. (2010). EEG in 1-week, 1-month and 3-month-old infants of depressed and non-depressed mothers. *Biological Psychology*, 83 (1), 7-14. <https://doi.org/10.1016/j.biopsycho.2009.09.007>

**2009**

**Jones, N.A.**, Field, T., & Almeida, A. (2009). Right frontal EEG asymmetry and behavioral inhibition in infants of depressed mothers. *Infant Behavior and Development*. 32(3), 298-304. <https://doi.org/10.1016/j.infbeh.2009.04.004>

**2006**

Diego, M.A., Field, T., **Jones, N.A.**, & Hernandez-Reif, M. (2006). Withdrawn and intrusive maternal interaction style and infant frontal EEG asymmetry shifts in infants of depressed and non-depressed mothers. *Infant Behavior and Development*, 29, 220-229. <https://doi.org/10.1016/j.infbeh.2005.12.002>

Diego, M.A., **Jones, N.A.**, Field, T., Hernandez-Reif, M., Schanberg, S., Kuhn, C., Gonzalez-Gracia, A. (2006). Maternal psychological distress, prenatal cortisol and fetal weight. *Psychosomatic Medicine*, 68, 747-753. <https://doi.org/10.1097/01.psy.0000238212.21598.7b>

**2005**

**Jones, N.A.** (2005). The protective effects of breastfeeding for infants of depressed mothers. *Breastfeeding Abstracts*, 24, 19-20.

**2004**

Diego, M.A., Field, T., **Jones, N.A.**, Hernandez-Reif, M., Cullen, C., Schanberg, S., &

Kuhn C. (2004). EEG responses to mocked facial expressions by infants of depressed mothers. *Infant Behavior and Development*, 27, 150-162.  
<https://doi.org/10.1016/j.infbeh.2003.10.001>

**Jones, N.A.**, Field, T., Davalos, M., & Hart, S. (2004). Greater right frontal eeg asymmetry and non-empathetic behavior are observed in children prenatally exposed to cocaine. *International Journal of Neuroscience*, 114, 459-480.  
<https://doi.org/10.1080/00207450490422786>

**Jones, N.A.**, McFall, B.A., & Diego, M.A. (2004). Patterns of brain electrical activity in infants of depressed mothers who breastfeed and bottle feed: the mediating role of infant temperament. *Biological Psychology*, 67, 103-124.  
<https://doi.org/10.1016/j.biopsycho.2004.03.010>

Vestal, A., & **Jones, N.A.** (2004). Peace building and conflict resolution in preschool children. *Journal of Research in Childhood Education*, 19, 131-142.  
<https://doi.org/10.1080/02568540409595060>

### 2003

Hart, S., **Jones, N.A.**, & Field, T. (2003). Atypical expressions of jealousy in infants of intrusive- and withdrawn-depressed mothers. *Child Psychiatry and Human Development*, 33 (3), 193-207. <https://doi.org/10.1023/A:1021452529762>,

Tornek, A., Field, T., Hernandez-Reif, M., \*Diego, M.A. & **Jones, N.A.** (2003). Music effects on eeg in intrusive and withdrawn mothers with depressive symptoms. *Psychiatry*, 66 (3), 234-243. PMID: 14587360

### 2002

\*Diego, M., Field, T., Hart, S., Hernandez-Reif, M., **Jones, N.A.**, Cullen, C., Schanberg, S., & Kuhn, C. (2002). Facial expressions and eeg in infants of intrusive and withdrawn mothers with depressive symptoms. *Depression and Anxiety*, 15, 10-17.  
<https://doi.org/10.1002/da.1079>

### 2001

Dieter, J., Field, T., Hernandez-Reif, M., **Jones, N.A.**, Lecanuet, J.P., Salman, F.A., & Redzepi, M. (2001). Maternal depression and increased fetal activity. *Journal of Obstetrics and Gynecology*, 21, 468-473, <https://doi.org/10.1080/01443610120072009>

**Jones, N.A.**, Field, T., Hart, S., Lundy, B., & Davalos, M. (2001). Maternal self-perceptions and reactions to infant crying among intrusive and withdrawn depressed mothers. *Infant Mental Health Journal*, 22, 576-586.

**Jones, N.A.**, Field, T., Fox, N.A., Davalos, M., & \*Gomez, C. (2001). EEG during different emotions in 10-month-old infants of depressed mothers. *Journal of Reproductive and Infant Psychology*, 19(4), 295-312. <https://doi.org/10.1080/02646830120103374>

### 2000

**Jones, N.A.**, Field, T., & Davalos, M. (2000). Right frontal EEG asymmetry and lack of empathy in preschool children of depressed mothers. *Child Psychiatry and Human Development*, 30, 189-204. <https://doi.org/10.1023/A:1021399605526>

**1999**

- Hart, S., Field, T., **Jones, N.A.**, & Yando, R. (1999). Intrusive and withdrawn behaviors of mothers interacting with their infants and boyfriends. *Journal of Child Psychology & Psychiatry & Allied Disciplines*, *40*, 239-245. <https://doi.org/10.1017/S0021963098003382>
- Hart, S., **Jones, N.A.**, Field, T., & Lundy, B. (1999). One-year-old infants of intrusive and withdrawn depressed mothers. *Child Psychiatry and Human Development*, *30*, 111-120. <https://doi.org/10.1023/A:1021902418770>
- Jones, N.A.**, & Field, T. (1999). Massage and music therapies attenuate frontal EEG asymmetry in depressed adolescents. *Adolescence*, *34*, 529-534.
- Lundy, B., **Jones, N.A.**, Field, T., Nearing, G., Davalos, M., Pietro, P., Schanberg, S., & Kuhn, C. (1999). Prenatal depression effects on neonates. *Infant Behavior and Development*, *22*, 119-129. [https://doi.org/10.1016/S0163-6383\(99\)80009-5](https://doi.org/10.1016/S0163-6383(99)80009-5)

**1998**

- \*Diego, M., **Jones, N.A.**, Field, T., Hernandez-Reif, M., Schanberg, S., Kuhn, C., McAdam, V., Galamaga, B., Galamaga, M. (1998). Aromatherapy positively affects mood, eeg patterns of alertness and math computations. *International Journal of Neuroscience*, *96*, 217-224. <https://doi.org/10.3109/00207459808986469>
- Jones, N.A.**, Field, T., & Davalos, M. (1998). Massage therapy attenuates right frontal eeg asymmetry in one-month-old infants of depressed mothers. *Infant Behavior and Development*, *21*, 527-530. [https://doi.org/10.1016/S0163-6383\(98\)90025-X](https://doi.org/10.1016/S0163-6383(98)90025-X)
- Jones, N.A.**, Field, T., Fox, N.A., Davalos, M., Lundy, B., & Hart, S. (1998). Newborns of mothers with depressive symptoms are physiologically less developed. *Infant Behavior and Development*, *21*, 537-541. [https://doi.org/10.1016/S0163-6383\(98\)90027-3](https://doi.org/10.1016/S0163-6383(98)90027-3)

**1997**

- Hart, S., Field, T., Stern, M., & **Jones, N.A.** (1997). Depressed fathers' stereotyping of infants labeled "depressed". *Infant Mental Health Journal*, *18*, 436-445. [https://doi.org/10.1002/\(SICI\)1097-0355\(199724\)18:4<436::AID-IMHJ9>3.0.CO;2-I](https://doi.org/10.1002/(SICI)1097-0355(199724)18:4<436::AID-IMHJ9>3.0.CO;2-I)
- Jones, N.A.**, Field, T., Davalos, M., & Pickens, J. (1997). EEG stability in infants/children of depressed mothers. *Child Psychiatry and Human Development*, *28*, 59-70. <https://doi.org/10.1023/A:1025197101496>
- Jones, N.A.**, Field, T., Fox, N.A., Davalos, M., Malphurs, J., Carraway, K., Schanberg, S., & Kuhn, C. (1997). Infants of intrusive and withdrawn mothers. *Infant Behavior and Development*, *20*, 175-186. [https://doi.org/10.1016/S0163-6383\(97\)90020-5](https://doi.org/10.1016/S0163-6383(97)90020-5)
- Jones, N.A.**, Field, T., Fox, N.A., Lundy, B., & Davalos, M. (1997). EEG activation in 1-month-old infants of depressed mothers. *Development and Psychopathology*, *9*, 491-505. PMID: 9327235

**1993**

- Halberstadt, A., Fox, N.A., & **Jones, N.A.** (1993). Do expressive mothers have expressive children? The role of socialization in children's affect expression. *Social Development*, *2*, 48-65. <https://doi.org/10.1111/1467-9507.ep11637681>

### 1992

Fox, N.A., Bell, M.A., & Jones, N.A. (1992). Individual differences in response to stress and cerebral asymmetry. *Developmental Neuropsychology*, 8, 161-184, <https://doi.org/10.1080/87565649209540523>

Jones, N.A., & Fox, N.A. (1992). Electroencephalogram asymmetry during emotionally evocative films and its relation to positive and negative affectivity. *Brain and Cognition*, 20, 280-299. [https://doi.org/10.1016/0278-2626\(92\)90021-D](https://doi.org/10.1016/0278-2626(92)90021-D)

### Books

Jones, N.A., Platt, M., Mize, K.D., & Hardin, J. (2019). *Developmental Research: A Guide for Conducting Research Across the Life Span*. Routledge: Taylor & Francis Publishing Group.

Hart, S. & Jones, N.A. (2018). *The Psychology of Rivalry*. NOVA Online Science Publishers.

### Book Chapters

Jones, N.A., & Mize, K.D., (2019). Physiological and behavioral research methods across the prenatal and infant periods. In N.A. Jones, M. Platt., K.D. Mize, & J. Hardin (Eds). *Developmental Research: A Guide for Conducting Research Across the Life Span*. Routledge: Taylor & Francis Publishing Group.

Platt, M., & Jones, N.A. (2018). The physiology of rivalry in infancy. In S. Hart & N. A. Jones (Eds). *The Psychology of Rivalry*: NOVA Online Publishers.

Jones, N.A., Platt, M., & Mize, K.D. (2016). Breastfeeding impacts brain activation and interaction patterns in infants of depressed mothers. In J. Worobey (Ed.) *Infant Feeding: Parental Perceptions, Behaviors and Health Effects*. NOVA publishers.

Diego, M.A., & Jones, N.A. (2007). Neonatal antecedents of empathy. In T. Farrow & P. Woodruff (Eds.) *Empathy and Mental Health*. Cambridge University Press.

Jones, N.A., & Gagnon C. (2007). Neurophysiology of empathy. In T. Farrow & P. Woodruff (Eds.) *Empathy and Mental Health*. Cambridge University Press.

Jones, N.A., & Mize, K. (2007). Touch interventions positively affects development. In L. L' Abate, D. D. Embry, & M. S. Baggett (Eds.), *Handbook of Low-cost Interventions to Promote Physical and Mental Health: Theory, Research and Practice*. Springer-Verlag Publishers.

### Works Currently Under Review

#### Books:

Shaffer, D., Jones, N.A, & Mize, K.D., & *Personality and Social Development*. Cengage.

#### Professional Journal Articles:

Shanok, N., \*Saldias-Manieu, C., Chassin, V., Mize, K.D., & Jones, N.A. Mindfulness-training in preadolescents in school: The role of emotionality, EEG in theta/beta bands, creativity and attention.

Shanok, N., \*Lugo, V., \*Narine, B., Mize, K.D. & **Jones, N.A.** The relationship between maternal depression and infant neurophysiology: A dimensional approach.

Shanok, N., Lucas, N.N., \*Cobty, K., Brooks, K., & **Jones, N.A.** Resting-state neurophysiological traits in high-functioning Autism Spectrum Disorder: Evidence for heterogeneity.

Shanok, N.A., \*Meltzer, K., Frank, C., \*Lugo, V., & **Jones, N.A.** Computerized inhibitory control training reduces anxiety in preadolescent students.

### **Conference Presentations and Invited Papers**

*(recent graduate (underlined) and undergraduate (starred) students are noted for presentations)*

#### **International and National Professional Presentations**

2021 (Accepted for Presentation in Virtual Format).

- Bernardo, A., & **Jones, N.A.** Behavioral and Physiological Manifestations of Jealousy Across the First Year of Life. Society for Research in Child Development, April, 2021.
- Jones, N.A. & Longo, J. Childbirth and Newborn Care During the Coronavirus (COVID-19) Pandemic: Stories from Parents and Healthcare Workers. Society for Research in Child Development, April, 2021.
- Mize, K.D, Brooks, K., & **Jones, N.A.** Facial Emotion Recognition of Dynamical Morphing Facial Expressions in Children with Autism Spectrum Disorder. Society for Research in Child Development, April, 2021.
- \*Martin, J., Sloan, A., & **Jones, N.A.** Neurohormonal Influences within the Mother- Infant Relationship: Oxytocin, Cortisol, and Maternal Attachment. National Council of Undergraduate Research conference, April, 2021.

2020 All conferences changed to Virtual Presentation due to COVID-19.

- **Symposium Paper Presentation:** M. Gartstein, (Symposium Chair). Novel approaches to electroencephalogram (EEG) lateralization: Beyond traditional asymmetry.
  - Gartstein, M. EEG Frontal Asymmetry changes during Emotion-Eliciting Tasks and Parent-Child Interaction Dynamics.
  - Bell, M.A. Predictors of Level of Negative Affect after Arm Restraint at 5 Months.
  - **Jones, N.A.**, Shanok, N., & Bernardo, A. Infant Neurophysiological Patterns and Temperament Are Linked to Maternal Depressive Symptoms During Development.
  - Discussant: Dr. Ross Vanderwert, International Conference on Infant Studies, July 2020.
- Bernardo, A., **Jones, N.A.**, Mize, K.D., & Platt, M. Regaining Maternal Attention: Jealousy Responses Across the First Year of Life. International Congress on Infant Studies, July, 2020.
- Bernardo, A., **Jones, N.A.**, Mize, K.D., Platt, M., \*Willson, E., & \*Lyster A. Association between Infant EEG Asymmetry and Maternal Approach-Withdrawal Tendencies. International Congress on Infant Studies, July, 2020.

- Bernardo, A., **Jones, N.A.**, Mize K.D., Platt M., & \*Thompson. H. The Relationship Between Temperament and Jealousy in Infants. Occasional Temperament Conference. November 2020.
- Bernardo, A., & **Jones, N.A.** Parental Socialization and Temperament Influences Empathy Development in Preschoolers. Occasional Temperament Conference. November 2020.
- \*Martin, J., Sloan, A., & **Jones, N.A.** Neurohormonal Influence on the Mother-Infant Relationship: A Study of Oxytocin, Cortisol, and Maternal Attachment. International Congress on Infant Studies, July, 2020.
- Shanok, N., \*Lugo, V., \*Narine, B., \*Pollack, A., & **Jones, N.A.** Examining Maternal Depression and Infant Resting-State Neurophysiology: A Dimensional Perspective. International Congress on Infant Studies, July, 2020. Declined presentation at virtual conference.
- Shanok, N., \*Meltzer, K., Frank, C., \*Lugo, V., & **Jones, N.A.** The Efficacy of Executive Function Training for Reducing Childhood Anxiety. American Psychological Society Conference, Summer, 2020.  
*\*\*Awarded "Building Bridges" APS Poster Award\*\**
- Sloan, A., **Jones, N.A.** & Kelso, J.A.S. Coordinative Processes Underlying the Emergence of Infant Agency. International Congress on Infant Studies, July, 2020.
- \*Willson, E., Bernardo, A., & **Jones, N.A.**, Infant Physiological Responses to a Social Rival. Southeastern Psychological Association. Conference. October, 2020.

2019

- Symposium Organizer: **Jones, N.A.** (Chair). The Unfolding of Brain and Behavior Within Affective and Social Development, 3 Papers and 1 Discussant. Society for Research in Child Development Biennial Meeting, March 2019.
  - **Jones, N.A.**, Mize, K.D., Sloan, A., Potts, J., \*Martin, J., Hardin, J., & Platt, M. Concomitant brain and affective development in infancy.
  - Bell, M.A., Deater-Deckard, K., Ashley, R., & Zhou, Y. Brain development in early self-regulation
  - Chow, C., Poole, K., & Schmidt, L. Brain development in shy children: Temperament, context, and anxiety
  - Discussant: Tobias Grossmann
- Bernardo, A., **Jones, N.A.**, & Mize, K.D. & Platt, M. Behavioral and Physiological Displays of Jealousy in 12-Month-Old Infants. The 4th Lancaster International Conference on Infant and Early Child Development Lancaster University, UK, August, 2019.
- Shanok, N. & **Jones, N.A.** The Nature of Facial Emotion Recognition Impairments in Children on the Autism Spectrum. Society for Research in Child Development Biennial Meeting, March 2019.
- Shanok, N., Reive, C., Mize, K., \*Cobty, K., \*Bakir, I., & **Jones, N.A.** Mindfulness Meditation Alters Neurophysiological Symptoms of Anxiety in

Preadolescents, Society for Research in Child Development Society for Research in Child Development Biennial Meeting, March 2019.

- Sloan, A. & **Jones, N.A.** Maternal and Infant Oxytocin Interact with Infant Temperament. Society for Research in Child Development Society for Research in Child Development Biennial Meeting, March 2019.

2018

- Bernardo, A., **Jones, N.A.**, & Mize, K.D. Interaction of Siblings and Maternal Sensitivity on Displays of Jealousy in 9-Month-Old Infants. Occasional Temperament Conference, Murcia, Spain. May 2018.
- **Jones, N.A.**, Mize K.D., & Hardin, J. Prenatal Depressive Symptoms and Attachment Quality Inform Breastfeeding and Postnatal Bonding During Development. Occasional Temperament Conference, Murcia, Spain. May, 2018.
- **Jones, N.A.**, Mize, K.D, Hardin, J., & Platt, M. EEG Power of Infants as a Function of Maternal Depression and Feeding Status. International Congress of Infant Studies Conference, Philadelphia, Pennsylvania, July, 2018.
- Mize, K.D, Platt, M., **Jones, N.A.**, Bjorklund, D.F., & Bernardo, A., Does Concordance between Jealousy Behaviors and Physiology Reveal Continuity or Discontinuity Across the First Two Years of Life? International Congress of Infant Studies Conference, Philadelphia, Pennsylvania, July, 2018.
- Sloan, A., \*Clayton, Y., \*Joissaint, N. \*Lozano, Y., \*Martinez, V., Hardin, J. & **Jones, N.A.** Maternal Influence on Early Infant Emotional Regulation: A Study of 3-month Infant Behavior, Cortisol and Frontal EEG? International Congress of Infant Studies Conference, Philadelphia, Pennsylvania, July, 2018.
- \*Tessier K., & **Jones, N.A.** Do Interventions at Birth Interfere With Intended Breastfeeding Duration? International Congress of Infant Studies Conference, Philadelphia, Pennsylvania, July, 2018.

2017

- Aults, C., & **Jones, N.A.** BAS Reward Responsiveness Moderates the Relation Between Peer Victimization and Aggression in Adolescent Girls. Society for Research in Child Development Biennial Meeting, April, 2017, Austin, Texas.
- Platt, M., **Jones, N.A.**, & \*Palomino, M.V., Behavioral Expressions of Jealousy and Attachment Security in Infancy Society for Research in Child Development Biennial Meeting, April, 2017, Austin, Texas.

2016

- **Jones, N.A.**, Sloan, A., Platt, M., & Mize, K.D. Neurodevelopmental and Emotional Interactive Patterns in Breastfeeding Dyads. International Congress of Infant Studies Conference. May 2016, New Orleans, Louisiana.
- Platt, M., **Jones, N.A.**, & Mize, K.D. Behavioral and Physiological Expressions of Jealousy Across the First Year of Life. International Congress of Infant Studies Conference. May 2016, New Orleans, Louisiana.

2015

- Aults, C., Pauletti, R., **Jones, N.A.** Perry, D. & Cooper, P. The Role of Respiratory Sinus Arrhythmia in the Association Between Internalizing

Difficulties and Aggression in Preadolescence. Society for Research in Child Development Biennial Meeting, March 2015, Philadelphia, Pennsylvania.

- Hardin, J., **Jones, N.A.**, Pineda, M., Mize, K.D., & \*Vassilopoulos, A. The Impact of Kangaroo Care on Mother-Infant Neuroendocrine Functioning and Dyadic Bonding. Society for Research in Child Development Biennial Meeting, March, 2015, Philadelphia, Pennsylvania.
- **Jones, N.A.**, Mize, K., Pineda, M., & Hardin, J. Breastfeeding and Maternal Depression: Effects on Infant Physiology and Behavior. Society for Research in Child Development Biennial Meeting, March 2015, Philadelphia, Pennsylvania.
- Pineda, M., **Jones, N.A.**, Mize, K.D., & Hardin, J. The Impact of Kangaroo Care on Mother-Infant Interactive Relationships. Society for Research in Child Development Biennial Meeting, March, 2015, Philadelphia, Pennsylvania.
- Worch, S., **Jones, N.A.**, & Mize, K.D. Brain Activity and Mood Are Influenced by Mindfulness Meditation in Children. Society for Research in Child Development Biennial Meeting, March, 2015, Philadelphia, Pennsylvania.

2014

- Hardin, J., Pineda, M., Mize, K., & **Jones, N.A.** Oxytocin and Patterns of EEG Asymmetry in Infants in Relation to Maternal Dysphoric Mood. 19th Biennial International Conference on Infant Studies, Berlin, Germany, July, 2014.
- Pineda, M., Mize, K., & **Jones, N.A.**, Maternal Emotional State and Infant Behaviors Predict Jealousy Expressions in Infants. 19th Biennial International Conference on Infant Studies, Berlin, Germany, July, 2014.
- **Jones, N.A.**, \*Barrera, C., & Mize, K., EEG Coherence in Infants is Impacted by Early Experiences: Breastfeeding and Kangaroo Mother Care Exposure. 19th Biennial International Conference on Infant Studies, Berlin, Germany, July, 2014.

2013

- Aults, C., **Jones, N.A.**, & Cotler, J. Psychophysiological Measures of Aggression and Victimization in a Non-Clinical Sample of Middle-School Youth. Society for Research in Child Development, Seattle, Washington, April, 2013.
- **Jones, N.A.**, \*Barrera, C., Mize, K.D., & Hardin, J. Neural Activity from Birth to 3-Months as a Function of Feeding Patterns. Society for Research in Child Development, Seattle, Washington, April, 2013.
- Lucas, N.N., **Jones, N.A.**, Pineda, M., & Marsh, K.L. Processing of Emotional Expressions and Neural Activity in Preschool-age Children. Society for Research in Child Development, Seattle, Washington, April, 2013.
- Lucas, N.N., Pineda, M., & **Jones, N.A.** Atypical EEG Activity and Functional Connectivity in Children with Autism. Society for Neuroscience Conference, San Diego, California. November 2013.
- Marsh, K.L., **Jones, N.A.**, & Mize, K.D. Physiological Regulation and the Development of Empathy During Early Childhood. Human Behavior and Evolution Society Conference, Miami, Florida July, 2013.



- Marsh, K.L., Mize, K.D., & **Jones, N.A.**. Physiological Regulation and Socio-Emotional Regulation in Preschoolers during Emotionally-Evocative Stories. Society for Research in Child Development, Seattle, Washington, April, 2013.
- Mize, K.D., Pineda, M., Marsh, K.L. & **Jones, N.A.** (2013). Early Jealousy Development. Human Behavior and Evolution Society Conference, Miami, Florida, July, 2013.
- Worch, S., **Jones, N.A.**, Mize, K.D., \*McGruder, T., & \*McDole, B. Enhancing Positive Affect in Youth: The Physiological Effects of Mindfulness Meditation. Society for Research in Child Development, Seattle, Washington, April, 2013.

2012

- Cotler, J., **Jones, N.A.**, & Mize, K.D., Do you feel what I feel: Cardiac patterns during another infant's cry sound for neonates of depressed mothers. International Conference on Infant Studies, Minneapolis, Minnesota, June 2012.
- Hardin, J., \*Barrera, C., **Jones, N.A.**, & Mize, K.D., Feeding method and quality of mother-infant communication influence patterns of infant brain development. Poster submitted for presentation at the International Conference on Infant Studies, Minneapolis, Minnesota, June 2012.
- \*Kelly, M., **Jones, N.A.**, & Mize, K.D., Breastfeeding optimizes the regulation of emotions for infants of depressed mothers. Poster submitted for presentation at the International Conference on Infant Studies, Minneapolis, Minnesota, June 2012.
- Marsh, K., Pineda, M., Mize, K.D., **Jones, N.A.**, & \*Kelly, M. Longitudinal Stability of jealousy in infancy International Conference on Infant Studies, Minneapolis, Minnesota, June 2012.

2011

- Corbett, M., & **Jones, N.A.**, Attenuating the Cortisol Stress Response and Test Anxiety: A Pilot Study of a Mindfulness Meditation Intervention. Society for Research in Child Development Biennial Meeting in Montreal, Quebec, Canada, 2011.
- Kadin-Pessoa, A., & **Jones, N.A.**, Parental Responsiveness and Child Participation in the Development of Emotion Regulation. Society for Research in Child Development Biennial Meeting in Montreal, Quebec, Canada, 2011.
- Klco, S., **Jones, N.A.**, & Mize, K. Mindfulness Meditation and Brain Activation Patterns in Children. Society for Research in Child Development Biennial Meeting in Montreal, Quebec, Canada, 2011.
- Mize, K.D, **Jones, N.A.**, & \*Craft, D. Patterns of Physiology and Temperament during Emotion-Eliciting Events. Society for Research in Child Development Biennial Meeting in Montreal, Quebec, Canada, 2011.
- \*Salvatore, J., Kadin-Pessoa, A., & **Jones, N.A.** Maternal and Paternal Effects on Children's Cardiac Reactivity to Emotional Stories. Conference for the Society for Personality and Social Psychology, San Antonio, TX, January, 2011.

2010

- **Jones N.A.**, Mize, K.D., & Sader, J. (2010). Infant Brain Maturation as a Function

of Maternal Mood and Infant Feeding Method. International Society of Infant Studies Biennial Conference, Baltimore, Maryland, March, 2010.

- Mize, K.D., **Jones, N.A.**, & Blau, A. (2010). Infants Exhibit Left Frontal Brain Activity During the Loss of Maternal Attention to a Social Object. International Society of Infant Studies Biennial Conference, Baltimore, Maryland, March, 2010.
- Kadin, A. & **Jones, N.A.** (2010). A Multi-Index Approach to Early Childhood Emotional Development. The Conference of Human Development, New York, New York, April 2010.

#### 2009

- Symposium Presenter: **Jones, N.A.**, & Mize K.D. (2009). Infants with Left Anterior EEG Asymmetry Demonstrate More Jealousy Behaviors During Loss of Exclusive Maternal Attention. Society for Research in Child Development Conference, Denver, Colorado, April 2009.
- Almeida, A., Pessoa, A., \*Epstein, M., Mize, K.D., & **Jones N.A** (2009). Temperamental Factors and Empathy Development in Children. Society for Research in Child Development Conference, Denver, Colorado, April 2009.
- Mize, K.D., **Jones, N.A.**, & Blau, A. (2009). Temperament and Jealousy Responses. Society for Research in Child Development conference, Denver, Colorado, April 2009.
- \*Sanchez, D., Mize, K.D., & **Jones, N.A.** (2009). The Effect of Mindfulness Meditation on Children's Brain Electrical Activity and Creativity. Society for Research in Child Development Conference, Denver, Colorado, April 2009.

#### 2008

- **Jones, N.A.** Breastfed Infants Demonstrate Enhanced Socio-Emotional Interactive Responses. International Conference on Infant Studies, Vancouver, Canada, March 2008.
- **Jones, N.A.**, & Gagnon, C. Tonic Cardiac Rhythms and Regulation in Newborns of Depressed and Non-Depressed Mothers. International Conference on Infant Studies, Vancouver, Canada, March 2008.
- \*Epstein, M., Mize, K.D., **Jones, N.A.**, & \*Mackleer, L. (2008). Student-Faculty Mentoring: Personality & Relationship Satisfaction Poster presented at American Psychological Society Convention in Chicago, IL in July 2008.

#### 2007

- **Jones, N.A.**, Gagnon, C.M., \*Batignani, C.L., \*Urbina, V., & Rideaux T., Physiological and Emotional Regulation in Infants of Depressed Mothers who Breastfeed. Boston, Massachusetts, Society for Research in Child Development Conference. March, 2007.
- Gagnon, C.M., **Jones, N.A.**, \*Rideaux, T., & \*Contreras, A. Breastfeeding as a Therapeutic Intervention for Maternal Post-Partum Depression. American Psychology Association Conference. 2007.
- \*Periss, V.A., **Jones N.A.**, Mize, K.D., & Gagnon, C.M., Empathy Development and Peer Relationships in Preschoolers of Depressed Parents. Boston,

Massachusetts, Society for Research in Child Development Conference. March, 2007.

2006

- **Jones, N.A., Gagnon, C. & Mize, K.D.** Nurturing Touch is Beneficial for Depressed Mothers and their Infants. Presented at the International Conference of Infant Studies, Kyoto, Japan, June, 2006.
- **Jones, N.A. & Schmidt, L.** EEG, Behavioral Inhibition and Disinhibition in Children of Depressed Mothers. Presented at the International Conference of Infant Studies, Kyoto, Japan, June, 2006.
- **Gagnon, C., Mize, K., Jones, N.A., & \*Dubecky, A.** Nurturing Touch Leads to more Optimal Patterns of Brain Organization. Presented to the American Psychological Society, New York, NY, May, 2006.

2005

- **Jones, N.A.** Symposium Participant: Interaction Patterns, EEG and Cognitive Performance Across the First Year in Infants of Intrusive and Withdrawn Mothers. Society for Research in Child Development. Atlanta Georgia. April 2005.
- **Jones, N.A.** Heart Rate Patterns During Distress Sounds in Newborns of Depressed. Society for Research in Child Development. Atlanta Georgia. April 2005.
- **Kane, S., \*Johnson, L. & Jones, N.A.** Mothers Parental Influences on the Development of Empathy in Preschoolers. Society for Research in Child Development. Atlanta Georgia. April 2005.
- **Diego, M.A., Jones, N.A. & Field, T.** Maternal Neuro-endocrine Function Mediates the Relationship Between Maternal Emotional Distress and Fetal Development. In M.A. Diego (Chair). Symposium presented at the Society for Research in Child Development, Atlanta, Georgia.
- **Jones, N.A.** Predicting Depression from Infants: Physiological and Bio-Behavioral Concomitants. Presented at Child Depression Consortium Meeting Hosted by the Academic Division of Child Psychiatry, Department of Psychiatry, University of Pittsburgh Medical Center.  
[www.wpic.pitt.edu/child\\_depression\\_consortium](http://www.wpic.pitt.edu/child_depression_consortium)

2004

- **Jones, N.A.** Symposium Chair: Is My Mommy Sad, Nervous, or Interested in Another Baby? What Maternal Mood and Direction of Attention Mean to Infants. Organized a 3 member panel and 1 discussant.
- **Jones, N.A.** presentation: Are Depressed Mothers-Infants Dyads Benefited by Breastfeeding? International Society for Infant Studies Conference, May 2004.
- **Jones, N.A., Diego, M.A. & McFall, B.,** Are Depressed Mothers-Infants Dyads Benefited by Breastfeeding? International Society for Infant Studies Conference, May 2004.
- **Jones, N.A.** Rates of Exclusive Breastfeeding Patterns Prior to Hospital Discharge. International Society for Infant Studies Conference, May 2004.

2003

- **Jones, N.A.**, Breastfeeding enhances maternal perception of infant temperament and dyadic interaction patterns. Society for Research in Child Development Conference, April 2003.
- **Jones, N.A.**, & **McFall, B.** Depressed mothers demonstrate an inability to attend and to imitate 3-month infant behaviors. Society for Research in Child Development Conference, April 2003.

2003

- Breastfeeding enhances maternal perception of infant temperament and dyadic interaction patterns. Society for Research in Child Development Conference, April 2003.
- Depressed mothers demonstrate an inability to attend and to imitate 3-month infant behaviors. Society for Research in Child Development Conference, April 2003.

2002

- Social-emotional learning: Teaching conflict resolution to preschoolers. Head Start 6<sup>th</sup> National Research Conference. Washington D.C. June, 2002.
- Symposium Chair. The evolution and impact of depression across development. Organized a 5 member panel and discussant. Paper Title: Delayed reactive cries and emotional differentiation signifies uncertain empathic development for newborns of depressed mothers. International Society for Infant Studies Conference, April 2002.
- Breastfeeding stability promotes positive infant temperament and optimal EEG patterns in infants of depressed mothers. International Society for Infant Studies Conference, April 2002.
- Maternal perception of her infant as mediated by depression, maternal childhood, and social support. International Society for Infant Studies Conference, April 2002.
- Invited Paper: Physiological and psychological factors affecting breastfeeding in depressed dyads. Palm Beach County Health Department Residency Program. August, 2002.

2001

- Symposium Chair: Mothers' Milk, It does a Baby Good. Psychosocial Factors that effect breastfeeding during the first year. Organized 4 member panel and discussant. Paper Title: Factors that influence exclusive breastfeeding and infant health. Society for Research in Child Development, Minneapolis, MN, April, 2001.
- Newborns of depressed mothers and their response to cry and coo sounds. Society for Research in Child Development, Minneapolis, MN, April, 2001.
- Invited Paper: Psychosocial factors affecting breastfeeding. Invited Address. La Leche League of Florida Conference. Orlando, FL, October, 2001.

2000

- Invited Paper: Maternal depression and later childhood affective problems. Kawanis Club. March, 2000.
- Infant jealousy and attachment patterns in infants of depressed mothers. Twelfth

- Biannual Conference on Infant Studies, Brighton, England, July, 2000.
- Newborns of depressed mothers exhibit physiological dysregulation. Twelfth Biannual Conference on Infant Studies, Brighton, England, July, 2000.
- 1999
  - Depressed mothers' ratings of mother-infant interactions. Society for Research in Child Development, Albuquerque, New Mexico, April, 1999.
  - Depressed mothers report less empathic responses to infant cries. Society for Research in Child Development, Albuquerque, New Mexico, April, 1999.
- 1998
  - EEG patterns during different emotions. Eleventh Biannual Conference on Infant Studies, Atlanta, Georgia, April 1998.
  - EEG patterns and inhibition in infants of depressed mothers. Eleventh Biannual Conference on Infant Studies, Atlanta, Georgia, April 1998.
  - Brain electrical activity and biochemical levels in infants of depressed mothers. Society of Psychophysiological Research, Denver, Colorado, September 1998.
- 1997
  - Behavior and physiology in infants of intrusive and withdrawn mothers. Society for Research in Child Development, Washington, D.C., April 1997.
  - Physiology of one-week-old infants of depressed mothers. Society for Research in Child Development, Washington, D.C., April, 1997.
- 1996
  - One-month-old infants of depressed mothers and right frontal asymmetry. Tenth Biannual International Conference on Infant Studies, Providence, Rhode Island, April, 1996.
  - The stability of right frontal asymmetry in children of depressed mothers. Tenth Biannual International Conference on Infant Studies, Providence, Rhode Island, April, 1996.
- 1995
  - Brain electrical activity and personality in 4- and 7-year-old children. Society of Research in Child Development, Indianapolis, Indiana, March, 1995.
- 1993
  - The role of temperament and emotionality in the development of attachment. Society for Research in Child Development, New Orleans. Louisiana, March 1993.
- 1992
  - Relations between infant reactivity at 4 months and emotional responsivity at 9 months. Eighth Biannual International Conference on Infant Studies, Miami, Florida, May, 1992.
  - Hemispheric asymmetry in infants of depressed and non-depressed mothers. Eighth Biannual International Conference on Infant Studies, Miami, Florida, May, 1992.
- 1991

- Behavioral and physiological reactivity predict fear and frustration in infancy. Society for Research in Child Development, Seattle, WA, April, 1991.

1990

- Infant temperament and attachment predict behavioral inhibition at 24 months. Seventh Biannual International Conference on Infant Studies, Montreal, Canada, April 1990.
- Hemispheric lateralization during emotional experience and its relation to personality style. Society of Psychophysiological Research, Boston, MA, October, 1990.

1989

- Infant temperament and attachment: A new look at an old issue. Society for Research in Child Development, Kansas City, MO, April 1989.

1988

- Laboratory and maternal report measures of temperament and their relationship to heart period variability. Sixth Biannual International Conference on Infant Studies, Washington D.C., April 1988.
- The relationship between heart period variability and reactivity at 5-and 14-months of age. Sixth Biannual International Conference on Infant Studies, Washington D.C., April 1988.
- EEG asymmetry and negative emotionality in 14-month-old infants. Society for Psychophysiological Research, San Francisco, CA, October 1988

1985

- Recognizability of infant and rhesus monkey facial expressions by naive and experienced observers. Seventh Annual Meeting of the American Society of Primatologists, Niagara Falls, New York, June 1985.

### Local Professional Presentations

- **Jones, N.A.**, (submitted but cancelled due to COVID). Invited Address to the Children's Healing Institute's 17<sup>th</sup> Annual Turn on the Light Conference. Presentation on COVID's impact on mothers and Infants. October 2020.
- \*Martin, J., & **Jones, N.A.** Neurohormonal Influence on the Mother- Infant Relationship: A Study of Oxytocin, Cortisol, Maternal Attachment, Postpartum Depression, and Breastfeeding Efficacy. Presented at the Tin<sup>th</sup> Annual OURI Conference, FAU, April 2020.
- \*Lyster, A., Bernardo, A., & **Jones, N.A.** The Effects of Maternal Depression and the Implications on Attachment Styles of Mother-Infant Dyads. Presented at the Tin<sup>th</sup> Annual OURI Conference, FAU, April 2020.
- \*Argueta, A., Sloan, A., **Jones, N.A.**, Kelso, J.A.S. & Fuchs. Understanding the Origins of Human Agency. Summer OURI presentation for SURF recipients, FAU, April 2019.
- Jorda, M., Barry, C., Edwards, K., & **Jones, N.A.** The Meaning of School BMI Screening and Referral to the Parents/Guardians of 1st, 3rd and 6th Grade Students. Poster presented at Expanding Nursing Roles to Enhance the Quality

- and Excellence of Care Delivery, Conference of the Nursing Consortium of South Florida, September, 2015, Davie, Florida.
- \*Olivova, J. & **Jones, N.A.** The Effects of Oxytocin and Cortisol Pre and Postpartum Levels in Mother–Infant Bonding. FAU OURI symposium, April, 2015
  - **Jones, N.A.** WAVES Infant Emotions Lab. Presentation at Synapse. Society for Neuroscience, Jupiter campus. February, 2014.
  - Corbett, M., **Jones, N.A.**, \*McGruder, T., \*McDole, B., & \*Gilkes C. Patterns of Stress Reactivity to a Stressor Paradigm in School-Aged Children: HPA Response and Individual Characteristics. Max Planck Sunposium, Feb, 2013, West Palm Beach, FL.
  - Hardin, J., Pessoa-Kadin, A., Pineda, M., **Jones, N.A.**, Mize, K.D., \*O'Gnad, A., & \*Barrera, C. The Oxytocinergic Bonding System Relates to Prenatal and Postnatal Bonding: A Pilot Study. Max Planck Sunposium, February, 2013, West Palm Beach, FL.
  - Corbett, M., \*McGruder, T., \*Gilkes C. & **Jones, N.A.** Patterns of Stress Reactivity to a Stressor Paradigm in School-Aged Children: Do differences in Temperament, Anxiety and Affect Drive HPA Habituation? FAU's Graduate Research Day, April 2013.
  - Cotler, J., & **Jones, N.A.** Cardiac Patterns during Another Infant's Cry Sound for Neonates of Depressed Mothers. FAU's Graduate Research Day, April 2013.
  - \*O'Gnad & **Jones, N.A.**, Kangaroo Care Effects on Brain Maturation and Levels of Oxytocin. Undergraduate Research Conference, March, 2013.
  - \*McDole, B., Hardin, J., **Jones, N.A.**, & Mize, K.D. The Bidirectional Interaction of Oxytocin and Cortisol Levels in Mother-Infant Dyads: a Pilot Study. FAU's Undergraduate research conference, April, 2013.
  - \*Barrera, C. & **Jones, N.A.** Feeding Patterns Effect Brain Development in Infancy. FAU's OURI research symposium, April, 2012.
  - \*Pineda, M., **Jones, N.A.**, & Mize, K.D., Longitudinal Stability of Jealousy in Infancy. FAU's OURI research symposium, April, 2012.
  - **Jones, N.A.**, Invited Presentation in 2012. Socio-Emotional and Neurophysiological Regulation in Infants of Depressed Mothers: Implications for Infant Feeding Patterns and Dyadic Attunement. Presented at the Turn on the Light Conference. Palm Beach County Convention Center, October, 2012.
  - **Jones, N.A.** Invited Symposium Speaker for: *Turn on the Light: Seventh Annual South Florida Conference on Child Abuse and Neglect*. Presented to the *Children's Healing Institute. Symposium title: Socio-Emotional and Neurophysiological Regulation in Infants of Depressed Mothers: Implications for Infant Feeding Patterns and Dyadic Attunement*. October, 2010.
  - **Jones, N.A.** Infants of Depressed Mothers and Breastfeeding. Florida Infant Mental Health Conference. Presentation accepted and withdrawn by PI due to funding issues, 2006.
  - **Jones, N.A.** Invited Presentations: 1) Maternal Depression: Effects on Infants Who are Breastfed vs. Bottle Fed. 2) Infant Temperament and How it Influences

Breastfeeding Stability between Mothers and Infants. Florida Lactation  
Consultant Conference. April 2004.

### **Grants Awarded**

(over \$400,000 in grants and awards)

#### *Federal Grants*

- R03-HD081333-02 (Cuevas-PI) 4/2016-3/2017  
NICHD: EEG Mu Rhythm Analysis of Infant Social Information Processing.  
Role: Consultant for Infant EEG measures.
- R03-MH61888-01- Jones, N. (PI) 10/2000-09/2001  
NIMH: EEG and feeding patterns in infants of depressed mothers  
Role: PI
- T34: NIH-National Institute of General Medical Sciences 04/2020-03/2025  
(Keene, Murphey & Fraizer-PIs)  
U-RISE at Florida Atlantic University  
The central goal of this proposed program is to expand the pool of students from  
Florida Atlantic University (FAU) who enter PhD, MD/PhD, or related programs in  
biomedical science.  
Role: Targeted Faculty

#### *Internal Grants/Awards*

- 2020-2021 Three OURI undergraduate grant awards, 2 for students teams and 1 for an  
individual student.
- 2020 Professional Development Scholarship from Psychology Department, awarded to  
Aliza Sloan for funding Movement analysis system for collaborative project with  
Dr. Kelso's lab.
- 2019 Scholar of the Year at Florida Atlantic University. Associate Professor Level.
- 2019-20 CESCOS funding to simulate research funding. Project Title:  
Neurodevelopment and Mother-Infant Attachment Patterns. My role: PI. Extended to  
2021 due to COVID delays.
- 2019 SURF funding for Amy Argueta, Project Title: Understanding the Origins of Infant  
Agency, My role: Mentor
- 2018-19. Junior Faculty Research Mentoring Award (Mentee: Cooley, Morgan) My Role:  
Mentor. Paid in 2020.
- 2013-18. DOR University Seed grant Award. Cortisol and Oxytocin Interactions and the  
Maternal-Infant Socio-Emotional Relationship. My role: PI.
- 2013-14 Technology Grant: Developmental Psychophysiology and Neurohormone Lab  
for updating EEG equipment, lab computers, lab freezer and lab assistant set-up.  
My role: PI.
- 2012-13 Internal Charles E. Schmidt, College of Science Seed Grant Award. My role:  
PI.
- 2011-21 Undergraduate Research Awards, Role: Sponsor (twelve awards). My Role:  
Mentor.
- 2011-17, 2020 Graduate Research Award Role: Primary Sponsor (four awards). My



Role: Mentor.

2005-13. FAU Internal IRB contract (co-chair and chair service) from Sponsored Research.

2001-2002 New Research Development Award, FAU grant program. Title: Familial influences on the development of empathy in preschoolers of depressed mothers. My role: PI.

1999-2000: Research Initiation Award, FAU grant program, Title: EEG and feeding during mother-infant interaction. My role: PI.

*Grants Currently Under Review: External*

MPI-R01: NICHD Gartstein, M., Bell, MA., & Jones, N.A.

Title: Precursors of Anxiety: The Role of Lateralized Brain Activation and Maternal Sensitivity

Role: PI for Florida Site

*Internal funding application:*

Bernardo, A., (2020). Salivary Cortisol Training Request. My Role: Mentor. Science Graduate Research Support Scholarship.

*Previous Grant Submissions: External*

Jones, N.A. Mize, K.D., Li, Z., & Maniaci, M., (2020). R15 to NICHD: HD105178-01

Title: Attachment and social threat system formation during 12 and 24 months: Associated behavioral and neurodevelopmental substrates.

My role: PI. Not funded

Jones, N., Mize, K.D., Li, Z., & Maniaci, M., (2019). R15 HD099646-01 & A1

NICHD: Developing Social attachment and social threat systems across the first two years. Role: PI, Revision submitted, Impact Score 33, sent to funding council but ultimately not funded.

Gartstein, M., Bell, M.A., & Jones, N.A. (2019). MPI R01MH121444-01 & A1

NICHD: Precursors of Anxiety: The Role of Lateralized Brain Activation and Maternal Sensitivity, Role: PI for Florida Site, Revision submitted, scored but not funded

Shanok, N. (2019). F31 fellowship. NICHD: The Efficacy of Emotional Working Memory Training in Reducing Anxiety in Preadolescents. Role: Primary Sponsor. Not funded.

Shanok, N. (2019). SRCD SECC Dissertation Funding Award. Efficacy of Emotional Working Memory Training in Reducing Anxiety in Preadolescents, My Role: Faculty Sponsor. Not Funded.

Jones, N. A. (2013). R15 Affective Neurophysiology During Breast Feeding for Infants of Depressed Mothers. Submitted to NICHD in February and Resubmission in November, 2013. Not Funded.

Jones, N.A. & Mize, K.D. (2011). Oxytocin and Breastfeeding in Infant and their Depressed Mothers. Submitted to Gates Foundation's Grand Challenges Explorations Grants (Round 7) for research in Nutrition for Healthy Growth of Infants and Children. April 2011. Not funded.

Mize, K.D., & Jones, N.A. (2011). Mindfulness and EEG in Depressed Mothers. Gates

- Foundation's Grand Challenges Explorations Grants (Round 7) for research in Nutrition for Healthy Growth of Infants and Children. April, 2011. Not funded.
- Jones, N.A. (2010). Neurophysiology and socio-emotional regulation in infants of depressed mothers. Submitted to NIMH the Integrative Studies of Biology and Behavior Program. Proposal # R15 MH093840-01. Not funded.
- Jones, N.A. & Mize, K.D. (2009). Investigating the protective effects of early and extended contact in infants of depressed mothers. Submitted to NIMH the Integrative Studies of Biology and Behavior Program. Proposal #R01 MH091390-01. Not funded.
- Jones, N.A. & Mize, K.D. (2006). Investigating the effects of contact on infants of depressed mothers. Letter of intent and accepted for full proposal submission. March of Dimes. Proposal number FY2007-1017. Not funded.
- Jones, N.A., (2005). Feeding program for depressed mothers and infant outcome. Submitted to NIMH, 6, Exploratory Development Grant for Mental Health Research, R01. Not funded.
- Jones, N.A., (2005). NICHD: R03 Small Grants Program. Empathy in preschoolers of depressed mothers. Not funded.
- Jones, N.A., (2005). Development of empathy in depressed and aggressive families. Submitted to NSF. Career Awards Program. Not funded.
- Jones, N.A., (2005). Breastfeeding and infant health and development. Submitted to Palm Health Care Foundation. Not funded.
- Jones, N.A., (2005). NIMH, R03 Small Grants program: Familial influences on empathy development in preschoolers of depressed mothers. Submitted to Revision submitted. Not Funded.

*Internal:*

- Jones, N.A., Mize, K.D., Bernardo, A., & Hart, S. (2018). Infant neurophysiological and socio-emotional responses to physical and psychological separation from their mother. Neuroscience Pilot Award (NPA) Program. Not Funded

**External Grant Collaborations**

- A Novel Intervention for Promoting Breastfeeding in High-Risk Women. Gates Foundation's Grand Challenges Explorations Grants (Round 7) for research in Nutrition for Healthy Growth of Infants and Children. April 2011. Co-PI on Dr. Sybil Hart's submission. Not funded.
- The ontogenesis of jealousy: The role of attachment. Submitted to NICHD by Dr. Sybil Hart, R21 Exploratory/Developmental Research Program: Revision Dates: June 2006-2008. Consultant. Not funded.
- The ontogenesis of jealousy. Submitted to NIMH by Dr. Sybil Hart, Texas Tech University, Nancy Aaron Jones, Ph.D. Consultant. Not funded.
- Prenatal and neonatal responses of children of depressed mothers. Submitted by Tiffany Field, University of Miami School of Medicine, Nancy Aaron Jones, Collaborator. Not funded.
- Pain relief for fibromyalgia patients. Submitted by Tiffany Field, University of Miami School of Medicine, Nancy Aaron Jones, Collaborator. Not funded.

Massage therapy in autistic children. Submitted by Tiffany Field, University of Miami School of Medicine, Nancy Aaron Jones, Collaborator. Not funded.

### **Media Coverage of My Research Lab**

- FAU Science Connect Press release. Depressed Moms Who Breastfeed Boost Babies' Mood and Mutual Touch.  
<https://www.fau.edu/newsdesk/articles/breastfeeding-study.php>
- OWL Magazine: The Effect of COVID-19 on Research at FAU (2020).
- Kangaroo Care Article press release.  
<http://www.fau.edu/newsdesk/articles/kangaroo-care-study.php>
- MedicalResearch.com article. <https://medicalresearch.com/mental-health-research/kangaroo-care-linked-to-better-infant-brain-development/53646/>
- WebMD article on Kangaroo Care publication.  
<https://www.webmd.com/parenting/baby/features/skin-to-skin-baby-brain#1>
- Science Daily Article: Children with autism are in 'in tune' with mom's feelings like other children <https://www.sciencedaily.com/releases/2019/03/190320101949.htm>
- US News and World Report: Kids With Autism 'In Tune' With Mom's Feelings: Study. <https://www.usnews.com/news/health-news/articles/2019-03-28/kids-with-autism-in-tune-with-moms-feelings-study>
- Palm Beach Post: FAU study looks at post-partum depression  
<http://palmbeachhealthbeat.blog.palmbeachpost.com/2016/03/23/fau-study-looks-at-post-partum-depression/>
- Sun Sentinel: Studying the mom-baby bond <http://www.sun-sentinel.com/features/south-florida-parenting/sfp-all-you-need-is-love-20160815-story.html>
- FAU press release: FAU Study on Depression Examines Levels of 'Love' Hormone and its Impacts on Mother-Baby Emotional Bonding. Boca Raton, FL. (March 23, 2016).
- Parenting Magazine, The Love Hormone and the Mother-Infant Bond. August 2016.
- Ivanhoe Medical Breakthroughs production: <https://www.ivanhoe.com/medical-breakthroughs/baby-bonding-love-hormone/>, picked up in Michigan, Pennsylvania, and Alabama.
- NBC-6 Interview Parent to Parent, WPLG Interview on maternal depression and infant development.

### **Teaching and Academic Instruction**

- 1997-present Assistant and Associate Professor: Florida Atlantic University, Charles E. Schmidt College of Science. North Palm Beach Campus (Jupiter Campus).
- 1996-1997 Adjunct Professor; Florida Atlantic University, College of Liberal Arts. Davie Campus, Davie, Florida.
- 1987-1993 Instructor: Institute for Child Study, Department of Human Development, University of Maryland, College Park, Maryland.

### **Courses Taught**

In am the instructor for primarily upper division undergraduate courses at the Jupiter campus. Below is a list of the most representative courses I've taught since 2003.

CLP 4144 Abnormal Psychology  
DEP 3053 Psychology of Human Development  
DEP 4095 Personality and Social Development  
DEP 4115 Infant Development  
DEP 4797C Human Development Laboratory  
PPE 4003 Personality Theories  
PPE 4700 Experimental Studies in Personality  
PSB 4323 Human Psychophysiology  
PSY 3213 Research Methods in Psychology  
PSY 3234 Experimental Design and Statistical Inference  
SOP4320C Social Behavior Laboratory  
SYP 4002 Current Issues in Social Psychology

### **Supervision of Graduate Students**

*Dissertation Chair (in alphabetical order).*

Maria Corbett, Degree conferred, May, 2017.

Title: Are Temperament, Personality, & Affectivity Influential factors in HPA Axis Reactivity in School-Aged Children?

Miguel Diego, Degree conferred: August 2004.

Title: Maternal neuroendocrine function and fetal development

Chantal Gagnon, Degree conferred: May 2012.

Title: Empathy and bullying behaviors in middle and high school children.

Jillian Hardin (changed from Sader). Conferred: May 2014.

Title: Breastfeeding and Kangaroo Care: Bio-behavioral measures of dyadic bonding, infant cortical maturation and infant HPA reactivity.

Nikola Lucas, Degree conferred: December 2013

Title: EEG coherence and emotions in autistic children.

Krystal D. Mize, Degree conferred: August 2008

Title: Infant Jealousy Responses: Temperament and EEG.

Melannie Platt, Degree conferred: August, 2017.

Title: Behavioral Expressions of Jealousy across the First Two Years of Life: Associations with EEG Asymmetry, Cortisol Reactivity and Attachment Security.

Nathaniel A. Shanok, Conferred: May 2020.

Title: Inhibitory Control Performance as a Function of Preadolescent Anxiety and Resting-State Neurophysiology.

*Dissertation Committee Member*

Christopher Aults, 2016.

Maria Beatriz-Jurado, 2013.

Brooke Corby, 2006.  
Charles Dukes, 2019.  
Roger McIntosh, 2012.  
Andrez Paz, 2016.  
Krystal St. Peter, in progress.  
Gerry Starrat, 1998.  
Bernadette Stevenson, 2001.  
Janna Taft, 2003.  
Idaly Velez Uribe, 2017

*Multidisciplinary Department Dissertation Committee Member*

Susan Boklaga, changed advisors, College of Education  
Mary Jorda, 2015, College of Nursing  
Amanda Justice, student withdrew, Exercise Science, College of Education  
Jennifer Malhoyt-Lee, 2018, College of Education  
Beth Pratt, 2017, College of Nursing  
Carol Reive, 2019, College of Nursing  
Anita Vestal, student at NOVA Southeastern University, graduated 2000.

*Master's Student Thesis Chair*

Amanda Almeida, Completed August 2009.  
Thesis title: EEG in preschool children and the development of empathy.  
Christopher Aults, Completed December, 2012.  
Thesis title: Psychophysiological Measures of Aggression and  
Victimization in Early Adolescence  
Seanceray A. Bellinger, Completed December, 2017.  
Title: An exploration of testosterone mediated effects on auditory learning  
in Northern Bobwhite Quails  
Angela Bernardo, Completed Summer 2020.  
Title: Behavioral and Physiological Manifestations of Jealousy During the  
First Year of Life: Implications for Cortisol Reactivity, EEG Asymmetry,  
and Mother-Infant Attachment.  
Alexis Blau, Completed August, 2010.  
Thesis title: The development of jealousy.  
Katy Brooks, Completed, May, 2020.  
Thesis title: Facial Emotion Recognition Ability in Children with Autism  
Spectrum Disorders.  
Kira Chankersingh, student moved to College of Education Mental Health,  
Victoria Chassin, in progress.  
Joseph Cotler, Completed May 2013.  
Thesis title: Cardiac Patterns during another Infant's Cry Sounds in  
Neonates of Depressed Mothers  
Maria Corbett, Completed December, 2011.  
Thesis title: The effects of a mindfulness meditation intervention on  
attention, affect, anxiety, mindfulness, and salivary cortisol in

- school-aged children.
- Miguel Diego, Completed December, 2002  
Thesis title: EEG in 1-week, 1-month and 3-month-old infants of depressed and non-depressed mothers.
- Jessica Dolan, student withdrew.
- Chantal Gagnon, Completed August, 2007. Non-thesis.
- Aviva Kadin-Pessoa, Completed August, 2010.  
Thesis title: Developing mechanisms of self-regulation: An integrative perspective.
- Sara Klco, Completed, May, 2010.  
Thesis title: A neuropsychological examination of the effects of mindfulness mediation in elementary school children.
- Alexandra Lyster, in progress.
- Kathryn Marsh, Completed August, 2013.  
Thesis title: Emotional and physiological regulation during parent-child interaction in preschoolers.
- Alexandra L. Montena, Completed August, 2017.  
Thesis title: Emotional and behavioral effects within the triadic Family System: Actor-partner interdependence between parents and preschoolers.
- Jamayne Potts, Completed May 2019.  
Thesis title: The Physiological and Psychological effects of Breastfeeding on subsequent Mother-Infant Bonding.
- Jillian Sader, Completed May 2011.  
Thesis title: The development of mother-infant communication through touch and gaze patterns in depressed and non-depressed dyads.
- Jenna Salley, in progress.
- Nathaniel Shanok, Completed August, 2017.  
Thesis title: Assessing Children's Performance on the Facial Emotion Recognition Task with Familiar and Unfamiliar Faces : An Autism Study.
- Aliza Sloan, Completed December, 2017.  
Thesis title: Maternal influence on early infant emotional regulation: A study of 3-month infant behavior, cortisol and frontal EEG.
- Kristina Smatrakaleva, in progress.
- Sarah Worch, Completed August 2014.  
Thesis title: Neuroplasticity and the Developing Brain: The Psychophysiological Effects of Mindfulness Meditation on School-Aged Children
- Master's Student Thesis Committee Member*
- Eli Fennell, in progress. Advisor: Gizelle Anzures, Fall, 2019
- Amanda K. Justice, Advisor: Monica Rosselli, Summer, 2003
- Merike Lang, Advisor: Monica Rosselli, Spring 2018

Michelle Lubomski, Davie, Advisor: Lauri Jensen-Campbell, 1999  
Towhid Nishat, Advisor: Monica Rosselli, Spring 2015  
Roger McIntosh, Advisor Monica Rosselli, Fall, 2010  
Colleen M. Sheehan, Advisor: Allan Nash, 1998  
Jamie Simpkins, Advisor: Allan Nash, Fall, 2000  
Krystal St. Peter, Advisor Alan Kersten, Summer, 2019  
Valerie Starratt, Advisor Monica Rosselli, transferred advisors.  
Allison Weinstein, Advisor Marissa Greif, Summer 2012

*Undergraduate Students Honors Thesis Chair:*

Christina Adams: Completed May, 2015

Title: The Effects of Mindfulness Meditation on Affect and Brain Activity in Elementary-Aged Children.

Moran Amrani, Psychology Department, Completed May 2001.

Title: Breast-Feeding: Its effects on mother and child.

Chloe Barrera, Completed May, 2012

Title: Feeding Patterns Effect Brain Development in Infancy

Darcel Craft: Psychology Department, Completed May 2011.

Title: The effects of empathy development in preschoolers of depressed parents.

Aquelina Dubecky, Psychology Department. Completed December, 2005.

Title: Touch behaviors.

Jamie Eggenberger: Psychology Department, Completed, December 2010.

Title: An EEG coherence analysis of the effects of mindfulness meditation in school-aged children.

Traci Ingersoll. Completed Summer, 2013

Title: Literary Review on Emotional Well-Being and Positive Interventions

Samantha Kane, Harriet Wilkes Honors College, FAU, Completed May 2004.

Title: Familial patterns of empathy in preschoolers.

Alexandra Lyster, Completed Spring 2020

Title: The Impact of Maternal Depression on Attachment Behavior and Cortisol Levels of Infants

Jessica Martin, December, 2019 (Student in Neuroscience with Kenneth Dawson-Scully)

Title: Neurohormonal Influence on the Mother- Infant Relationship: A Study of Oxytocin, Cortisol, Maternal Attachment, Postpartum Depression, and Breastfeeding Efficacy

Aurora O'Gnad. Completed Spring, 2013.

Title: Kangaroo Care and the Effects on Brain Maturation.

Jana Oliveria. Honors Biology Program, completed 2015.

Title: The Effect of Oxytocin & Cortisol Levels in Mother-Infant Bonding

Melannie Pineda, Completed Spring, 2012.

Title: The Longitudinal Stability of Jealousy in Infancy.

Tatiana Poole. Summer 2019.

Title: Maternal Depression and Infant EEG Patterns  
Joseph Salvatore. Psychology Department, Completed, August, 2010.  
Title: Behavioral and physiological indices of emotion in preschoolers.  
Dayana Sanchez, Psychology Department. Completed, August 2008.  
Title: The effects of mindfulness meditation on children's brain electrical  
activity and creativity.  
Hannah Thompson. Infant Emotionality and EEG, Completed, May 2019  
Title: Infant Jealousy Interacts with Temperament and EEG.  
Jessica Wassung, Harriet Wilkes Honors College (Co-advisor Julie Earles).  
Completed August 2006.  
Title: Effects of parental depression on empathy development in  
preschoolers.  
Emily Willson, Harriet Wilkes Honors College (Co-advisor Julie Earles).  
Completed December 2019.  
Title: Infant Behavioral and Physiological Displays of Jealousy and  
Responses to a Social Rival  
Plus 8 Honor's College internships, 2013 2014, 2015, 2016, 2019.

### ***Service Activities***

#### ***Department Service***

Psychology Department, Graduate Committee, 2007-2011. 2018-2021.  
Psychology Department, Executive Committee Member, 2016-2021.  
Psychology Department, Undergraduate Committee 1997 -2005 & 2011-2014.  
Appointed as Chair, 2014-2016.

#### ***Search Committees:***

IBrain Co-Hire Search committee 2019-2020.  
Psychology Department search committee member in Social Psychology, 2017-2018.  
Chair Search, Psychology Departmental in developmental/developmental neuroscience,  
2015-2016.  
Psychology Department search committee member in cognitive neuroscience 2014-  
2015.  
Psychology Department search committee member in open/quantitative 2013-2014.  
Psychology Department search committee member experimental psychology 2011-  
2012.  
Psychology Department visiting search committee member for statistics Summer 2009-  
2010.  
Psychology Department search committee member in developmental 2006-2007.

#### ***Campus Service***

*Grievance Committee Chair, Jupiter Campus Psychology Department. 2010-2017.*  
*Faculty Advisor for MacArthur Campus Psychology Club. 1997-2006*  
*Search Committees: Honor's College Search for Psychology Faculty 1998-1999.*  
*Academic Advisor for Jupiter Campus, 2000.*



Co-Chair: Jupiter Campus Search, 2002-2003.  
*MacAwards Committee*, Jupiter Campus, 2004-2005.  
*University Faculty Council*. Elected to North Campus Senate Branch, Representative-at-Large. 2000-2001.

### **University Service**

*Delores A. Auzenne Graduate Fellowship Committee Reviewer*, 2020.  
*SURF reviewer. Office of Undergraduate Research and Inquiry Reviewer*, 2020.  
*Lecturer on Human Subject Protections for Responsible Conduct of Research*, 2012-2016.

*Institutional Review Board: Alternate Member: University of Miami*, 1996-1997.  
*Institutional Review Board: Member: Florida Atlantic University*, 1998-2013, ad hoc reviewer 2014, 2016, 2017-2020

Vice Co-Chair 1999-2005.

Chair, 2005-2013.

Meeting with Vice President for Research and Research committee to establish Health Sciences IRB committee, 2013.

Chair IRB subcommittee to revise the on-line application forms, 2006.

Chair IRB subcommittee to revise the IRB rules and regulations of the committee, 2006.

Subcommittee to review new FDA form, August, 2009.

Subcommittee to audit FAU's studies pertaining to FDA regulations, September, 2009-2010.

Subcommittee Member to review IRB forms for FDA regulations and clinically-based research compliance, 2009-2010.

*IRB Subcommittee to revise By-Laws*, 2000.

*Search Committee: Dean for the College of Science*, 2005-2006.

*President's Commission on the Status of Women*, Served 1997- 2000, Appointed member 1998-2000. Mentoring Subcommittee.

*Grant Reviewer, Presidential Research Awards*, 2000, 2001.

*Grant Reviewer, FAU Division of Sponsored Research, New Project Development Awards*, December, 2005, 2006.

### **Professional Development**

2020 FAUs Center for Online and Continuing Education Training

2012-13 Faculty Learning Community for OURI

### **Professional Service**

Editorial Board Member: *Early Education and Development*, 2019-present

Austrian Science Fund (FWF) Grant Reviewer. Reviewer on 1 application. Summer, 2020.

Review of U.S.-Israel Binational Science Foundation - application 2019161 [MIR]. Note: This review, I had to decline as there was a conflict of interest with the investigators (as I knew one of the investigators well). I did provide the granting agency suggestions for other reviewers, January, 2020

MRC Grant Peer Review, UK grant. Title: PretermMotherNewbornNetwork: East-West African programme on mechanisms, economic & developmental impact of kangaroo care to improve preterm outcomes. Funders Reference: MR/V035118/1. December, 2020.

National Institutes of Health – Center for Scientific Review. Special emphasis panel/Scientific review group. 2013/ZRG1 RPHB-P (02). Feb, 2013.

National Institutes of Health – Center for Scientific Review. 2013-2014: ZRG1 F16-L (20) L - Fellowships: Risk, Prevention and Health Behavior. Meeting in March & November, 2014, July & November 2015. March, July and November 2016, March, 2017. March, July, November, 2018, November 2019.

Special Emphasis Panel/Scientific Review Group 2017/01 ZRG1 BBBP-B (03) M, Reviewer on 3 applications.

Discovery Grant Reviewer, Natural Sciences and Engineering Research Council of Canada (NSERC). Biological Systems and Functions (EG 1502) subcommittee, 3 reviewed, two in 2017 and one in 2016.

Review of Promotion and Tenure for faculty member in Clinical Psychology at Idaho State University, 2018.

Conference Reviewer for International Congress of Infant Studies 2017-2018: Panel Reviewer for Emotional Development. Reviewed 2 symposium presentations, 4 poster presentations and 1 flash presentation.

Reviewer, The Israel Science Foundation, on the Individual Research Grants. Proposal number 879/18-34, invited again in 2019 but had a conflict.

Conference Reviewer for Society for Research in Child Development, 2018-2019. Panel Reviewer for Psychophysiology. Reviewed 2 symposium presentations and 6 poster presentations

Ad Hoc reviewer for:

*Analyses of Social Issues and Public Policy, Archives of Pediatrics and Adolescent Medicine, Biological Psychology, Biological Psychiatry, BMC Pregnancy and Childbirth, Child Development, Development and Psychopathology, Developmental Psychology, Developmental Psychobiology, Developmental Science, Early Human Development, Emotion Review, Infant and Child Development, Infancy, Infant Behavior and Development, Infant Mental Health Journal, International Journal of Behavioral Development, Health Psychology, Journal of Affective Disorders, Journal of Autism and Developmental Disorders, Journal of Development Origins of Health and Disease, Journal of Early Childhood Research, Journal of Experimental Child Psychology, Journal of Media and Communication Studies, Journal of Mental Health & Clinical Psychology, Journal of Pediatric Psychology, Journal of Personality, Journal of Reproductive and Infant Psychology, Journal of Women's Health, Issues & Care, Maternal and Child Health Journal, Neurotoxicology and Teratology, Plos ONE, Psychological Science, Psychoneuroendocrinology, Psychophysiology, Social Development, The American Journal of Clinical Nutrition*

### **Community Group Service**

Boca Raton Community Hospital, Breastfeeding rates research project, 2000-2001.  
Palm Beach County Breastfeeding Coalition, Chair-Elect, 2000-2003, Chair 2003-2004.  
Member 2005-2006, 2010-present. Elected to Executive Committee as a  
Professional Advisor/Consultant for 2014-2015. Chair summer, 2017-2018.  
Executive committee 2019-2020.  
Palm Beach County Head Start, PEACE Project, 1999-2001.  
Palm Beach County School District, School Readiness Outcome Coalition, 1999-2000.  
The Children's Healing Institute. Turn on the Light Conference Presenter on Child  
Abuse and Neglect, 2010, 2012. Volunteer in 2014-2019, 2020.  
Department of Children and Families, Training Series for Employees, 2019.  
Guardian Ad Litem, Palm Beach County, 15<sup>th</sup> District Court. 2017-2019, on leave in  
2020 due to COVID.

### **Honors and Awards**

#### *Teaching Awards and Nominations*

2015-2016 Northern Campus Exceptional Faculty Nomination. Charles E. Schmidt,  
College of Science, Florida Atlantic University MacArthur Campus.  
2013-2014 Northern Campus Exceptional Faculty Award Nomination, Charles E.  
Schmidt, College of Science, Florida Atlantic University MacArthur Campus.  
2012-2013 Northern Campus Exceptional Faculty Award Nomination, Charles E.  
Schmidt, College of Science, Florida Atlantic University MacArthur Campus.  
2010-2011 Northern Campus Exceptional Faculty Award, Charles E. Schmidt, College  
of Science, Florida Atlantic University MacArthur Campus.  
2009-2010 Northern Campus Exceptional Faculty Award Nomination, Charles E.  
Schmidt, College of Science, Florida Atlantic University MacArthur Campus.  
2006-2007 MacAward Nomination, Exceptional Faculty Award, Charles E. Schmidt,  
College of Science, Florida Atlantic University MacArthur Student  
Government.  
2002-2003 MacAward Exceptional Faculty Award, Charles E. Schmidt, College of  
Science, Florida Atlantic University MacArthur Student Government.  
2001-2002 MacAward Exceptional Faculty, Charles E. Schmidt, College of Science,  
Florida Atlantic University MacArthur Student Government.  
1999-2000 Teacher of the Year & Advisor of the Year Award, Charles E. Schmidt  
College of Science, Florida Atlantic University MacArthur Student  
Government.  
1998-1999 Outstanding Faculty Advisor Award, Florida Atlantic University, North Palm  
Beach Student Government.

#### *Honors and Awards from Community*

2020 Invited Address: Children's Healing Institute. *Turn on the Light: Annual  
South Florida Conference on Child Abuse and Neglect*. October, 2020  
(conference canceled due to COVID-19).  
2019 Certificate of Appreciation for Service as Chair. Palm Beach County

- Breastfeeding Coalition
- 2019 Certificate of Appreciation. Division of Child and Families. Palm Beach County.
- 2016 Elected to PBC Breastfeeding Coalition as Chair-Elect. Changed to Chair in May, 2017- Dec. 2018
- 2014 Elected to PBC Breastfeeding Coalition Executive Committee as professional advisor/consultant.
- 2012 Invited Address: Children's Healing Institute. *Turn on the Light: Annual South Florida Conference on Child Abuse and Neglect*. October, 2012.
- 2010 Invited Address: Children's Healing Institute. *Turn on the Light: Annual South Florida Conference on Child Abuse and Neglect*. October, 2010.
- 2000 Palm Beach County Breastfeeding Task Force Certificate of Appreciation.  
1999 Invited Guest: To Honor Members of the Community who Have Contributed to Head Start Programs of Palm Beach County. Invited by Dr. Carmen Nicholas, Director of Palm Beach County Head Start.

### **List of References**

Dr. David Bjorklund  
Florida Atlantic University  
Department of Psychology  
777 Glades Road  
Boca Raton, FL 33431-0991  
[dfbjorklund@gmail.com](mailto:dfbjorklund@gmail.com)

Dr. Tiffany Field, Professor  
Director of the Touch Research Institute  
University of Miami School of Medicine  
P.O. Box 016820 (D-820)  
Miami, Florida 33101  
305-243-6781  
E-mail: [TField@med.miami.edu](mailto:TField@med.miami.edu)

Dr. Martha Ann Bell  
Department of Psychology  
Virginia Tech, VA 24061  
540-231-3652  
E-mail: [mabell@vt.edu](mailto:mabell@vt.edu)

Dr. Sybil Hart, Ph.D.  
Texas Tech University  
Department of Human Development & Family Studies  
Box 41162  
Lubbock, TX 79409-1162  
E-mail: [Sybil.Hart@ttu.edu](mailto:Sybil.Hart@ttu.edu)

*Additional references available upon request*

**CURRICULUM VITAE**  
**Marc Kantorow, Ph.D. FARVO**

**Professor of Biomedical Science**  
**Associate Dean for Graduate Programs**  
**Charles E. Schmidt College of Medicine**  
**Florida Atlantic University**  
**777 Glades Rd.**  
**BC71 RM 207**  
**Boca Raton, FL 33431-0991**  
**Office: 561-297-2910**  
**Lab: 561-297-3754**  
**mkantoro@health.fau.edu**

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**EDUCATION**

**1991 PhD GENETICS: The George Washington, University Washington DC**

Dissertation: "Genetic and biochemical characterization of the molecular interactions required for activation of the *E. coli* cAMP receptor protein by 3'-5' cyclic adenosine monophosphate." Qualifying: Molecular Biology (*with Distinction*), Protein Biochemistry (*with Distinction*) and Molecular Genetics (*with Distinction*).

**1985 BS BIOLOGY (*Cum Laude*) Towson State University, Towson Maryland**

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**PROFESSIONAL EXPERIENCE**

**Present**

**2007- present** Professor (tenured) Department of Biomedical Sciences,  
Charles E. Schmidt College of Medicine, Florida Atlantic University

**2021-present** Associate Dean for Graduate Programs. Charles E. Schmidt  
College of Medicine, Florida Atlantic University

## Past

- 2016-2021** Assistant Dean for Graduate Programs. Charles E. Schmidt College of Medicine, Florida Atlantic University
- 2013-2016** Director of Graduate Programs Charles E. Schmidt College of Medicine
- 2004-2006** Associate Chair. Department of Biomedical Science Charles E. Schmidt College of Medicine
- 2004-2007** Associate Professor (tenured). Department of Biomedical Sciences Charles E. Schmidt College of Medicine Florida Atlantic University
- 1999-2003** Assistant Professor Department of Biology Eberly College of Arts and Science West Virginia University
- 1997-1999** Assistant Research Professor The Jules Stein Eye Institute UCLA Medical School Los Angeles CA
- 1996-1997** Senior Staff Fellow Laboratory of Molecular and Developmental Biology National Eye Institute, National Institutes of Health Bethesda MD (Chief Dr. Joram Piatigorsky)
- 1991-1996** Post-Doctoral Research Fellow Laboratory of Molecular and Developmental Biology, National Eye Institute National Institutes of Health Bethesda MD (Chief: Dr. Joram Piatigorsky)
- 1987-1991:** Graduate Student Center for Advanced Research in Biotechnology National Institute of Standards and Technology and George Washington University Department of Genetics Rockville MD and Washington DC (Advisor: Dr. Keith McKenney)
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## GRANTS

### Current:

**NIH R01 EY029708**  
**2019-2024 (2 percentile)** \$1,738,565.00 EY (as PI) "Hypoxia Regulation of the Eye Lens" Florida Atlantic University

**NIH R01 EY026478**  
**2020-2025 (18 percentile)** \$2,926,200.00 (as MPI) with Sue Menko (MPI) "Regulatory role of P13K signaling pathways in lens differentiation" Florida Atlantic University and Jefferson University MPI Grant

### COMPLETED:

**NIH R01 EY 026478**  
**2015-2019 (4 percentile)** \$2,278,493 (as PI) with Dr. A. Sue Menko (MPI) National Eye Institute, NIH "Repurposing classical death pathways for signalling roles in lens differentiation" Florida Atlantic University

**Rand Eye Institute**  
**2015-2016** \$50,000.00 (as PI) "Engineering of Ocular Tissues" Florida Atlantic University

**NIH R01 EY 13022**  
**2009-2014 (13 percentile)** \$1,752,000.00 (as PI) National Eye Institute NIH "Molecular Analysis of Microdissected Human Lenses" Florida Atlantic University

**NIH NOT 2009-2010** \$258,000 NOT OD 056 Recovery Act (as PI) National Eye Institute NIH "Repair of alpha-crystallin" Florida Atlantic University

**NIH R01 EY 13022**  
**2004-2009 (7 percentile)** \$1,561,590.00 (as PI) National Eye Institute NIH "Molecular Analysis of Microdissected Human Lenses" Florida Atlantic University

**AHAF 2005-2007** \$100,000 American Health Assistance Foundation for Macular Degeneration (as PI) "The role of methionine sulfoxide reductase in retinal function and age-related macular degeneration" Florida Atlantic University



**PHS 2006-2007**

Palm Healthcare Foundation BJ Harris Fund for Macular Degeneration (as PI) \$15,000 Florida Atlantic University

**NIH R01 13022**

**1999-2004 (12 percentile)**

\$966,220.00 (as PI) National Eye Institute NIH "Molecular Analysis of Microdissected Human Lenses" West Virginia University

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### **FELLOWSHIPS, AWARDS and NOMINATIONS**

- 2018**      Researcher of the Year (Professor), Florida Atlantic University
- 2016**      Distinguished Teacher of the Year, Charles E. Schmitt College of Medicine, FAU
- 2015**      Certificate of Appreciation for Service on the Association for Research and Visual Science Members in Training Committee (2011-2014)
- 2014**      Gold Fellow of the Association for Research in Vision and Ophthalmology
- 2012**      Silver Fellow of the Association for Research in Vision and Ophthalmology
- 2012**      Certificate Appreciation for Service on the Association for Research in Vision and Ophthalmology Program Committee as Lens Section Chair (2009-2010) and lens section member (2007-2009)
- 2008**      Top Reviewer *J. Experimental Eye Research*
- 2005**      Researcher of the Year (Associate Professor), Florida Atlantic University
- 2005**      Associate Professor Researcher of the Year, Charles E. Schmidt College of Science
- 2008**      Certificate of Appreciation for Organizing the Young Investigator Program Platform for the International Conference on Eye Conference of Eye Research International Society for Eye Research
- 2003**      Outstanding Researcher Award, Eberly College of Arts and Sciences, West Virginia University
- 2002**      Cataract Research Award, National Foundation for Eye Research, Association for Research in Vision and Ophthalmology
- 2002**      Nominated for the Eberly College Outstanding Researcher Award, Eberly

College of Arts and Science, West Virginia University

- 2001** Nominated for the Benedum Distinguished Scholar Award, West Virginia University
- 2000** Nominated for the Cataract Research Award, National Foundation for Eye Research, Association for Research in Vision and Ophthalmology
- 1999** Cooperative Cataract Research Conference Travel Award, National Foundation for Eye Research
- 1994** International Conference on Eye Research Travel Award International Society for Eye Research
- 1991-1996** Intramural Research Training Award, National Eye Institute, NIH, Bethesda, MD
- 1987-1990** Pre-Doctoral Fellowship, Center for Advanced Research in Biotechnology, Rockville, MD
- 1985-1987** Research Fellowship, George Washington University
- 1984-1985** John J. Leidy Scholarship, Towson State University
- 

## PUBLICATIONS

1. Novel mitochondrial derived Nuclear Excisosome degrades nuclei during differentiation of prosimian Galago (bush baby) monkey lenses. Costello MJ, Gilliland KO, Mohamed A, Schey KL, Johnsen S, Brennan LA, **Kantorow M**. PLoS One. 2020 Nov 12;15(11):e0241631. doi: 10.1371/journal.pone.0241631. eCollection 2020. PMID: 33180800
2. Brennan L, Disatham J, **Kantorow M**. Hypoxia regulates the degradation of non-nuclear organelles during lens differentiation through activation of HIF1a. Exp Eye Res. 2020 Sep;198:108129. doi: 10.1016/j.exer.2020.108129. Epub 2020 Jul 3. PMID: 32628953; PMCID:
3. Lens differentiation is characterized by stage-specific changes in chromatin accessibility correlating with differentiation state-specific gene expression. Disatham J, Chauss D, Gheyas R, Brennan L, Blanco D, Daley L, Menko AS,

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## REVIEWS AND BOOK CHAPTERS

1. Oxidative stress defense and repair systems of the ocular lens. Lisa Brennan, Rebecca McGreal, and **Marc Kantorow**. Frontiers of Bioscience. [Frontiers in Bioscience, Elite Edition, 4, 141-155, January 1, 2012
  2. Focus on Molecules: Methionine sulfoxide reductase A. **Marc Kantorow**, Wanda Lee, and Daniel Chauss. Exp. Eye Res., 2012. 100:110-1.
  3. Mitochondrial Function and redox control in the aging eye: Role of MsrA and other repair systems in cataract and macular degenerations. Lisa Brennan and **Marc Kantorow**. Exp. Eye Res., 2009. 88:195-203.
  4. Handbook of Models for the study of human aging: Age-related visual diseases. J. Fielding Hejtmancik, **Marc Kantorow**, Tekeshi Iwata. Cambridge University Press. 2006
  5. Lens Crystallins: Development of the Ocular Lens Ales Cvekl, Melinda K. Duncan, **Marc Kantorow** and Joram Piatigorsky (M.L. Robinson and F.J. Loveau Eds.) Cambridge University Press. 2004.
  6. Molecular Genetics of age-related cataract. J. Fielding Hejtmancik and **Marc Kantorow**. Experimental Eye Research 2004, 79, 3-9.
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## INVITED PRESENTATIONS

- 2020** XXIV International Congress for Eye Research: Title - **Bioinformatics approaches to optical development of the lens. Marc Kantorow, Joshua Disatham and Lisa Brennan.** Buenos Aires, Argentina. Oct 2020.  
*Meeting Canceled*
- 2018** **International Conference on Lens Research.** “Hypoxia Regulation of lens remodeling” **Marc Kantorow, Joshua Disatham and Lisa Brennan,** Kona Hawaii, December 2018.
- 2018** **XXII International Conference on Eye Research,** Tokyo, Japan, Oxidative Stress Regulation of Organelle Function by  $\alpha$ -Crystallin
- 2017** **International Conference on Lens Research,** Kona Hawaii, Hypoxia controls lens fiber cell remodeling by regulating the elimination of mitochondria, endoplasmic reticulum and Golgi apparatus through HIF1 $\alpha$ -directed transcriptional regulation of BNIP3L expression.
- 2016** **Oakland Eye Institute, Oakland University, Rochester MI**  
Redox control of lens protection and remodeling.
- 2016** **XXII International Conference on Eye Research,** Tokyo, Japan, Oxidative Stress Regulation of Organelle Function by  $\alpha$ -Crystallin
- 2016** **International Conference on Lens Research,** Kona Hawaii, alpha-crystallin prevents mitochondrial ROS release and apoptosis by protecting cytochrome c.
- 2015** **UCLA Medical School, Jules Stein Eye Institute,** Los Angeles, CA, Mitochondrial Biology of the Eye Lens
- 2015** **Thomas Jefferson University Annual Research Symposium.**  
Mitochondrial Regulation and Protection in the Eye.
- 2015** **Association for Research in Vision and Ophthalmology,** Denver, CO, BNIP3L mediates mitochondrial clearance in the developing eye lens
- 2014** **XXI International Conference on Eye Research,** San Francisco, USA  
Integrin  $\alpha$ V $\beta$ 5-mediated phagocytosis by lens epithelial cells increases cell survival under apoptotic conditions
- 2014** **Association of Anatomy, Cell Biology and Neurobiology Chairpersons Meeting, San Juan Puerto Rico** Mitochondrial Dynamics in the eye lens.

- 2014**      **Association for Research in Vision and Ophthalmology**, Special Symposium on Autophagy in the Eye: Mitophagy in lens protection and development, Orlando, FL
- 2013**      **Association for Research in Vision and Ophthalmology**, alpha crystallin regulation of mitochondrial function, Seattle, WA
- 2013**      **Association of Anatomy and Cell Biology National Conference AACBNC** Mitochondrial biology through the ocular eye lens, San Juan Puerto Rico
- 2013**      **Mitochondria in Ocular Health and Disease Symposium**, Mitochondria in Ocular Health and Disease Jefferson University, Philadelphia, PA
- 2012**      **XX International Conference on Eye Research**, The role of autophagy in lens maintenance, protection and differentiation. Berlin, Germany
- 2012**      **Association for Research in Vision and Ophthalmology**, Alpha crystallin protects cytochrome c against oxidative stress inactivation, Ft. Lauderdale, FL
- 2011**      **University of Nebraska (Lincoln)**, Anti-oxidant systems of the eye lens, Lincoln, Nebraska
- 2011**      **Association for Research in Vision and Ophthalmology**, TXNL6 is a novel reducing system for repair of alpha-crystallin by methionine sulfoxide reductase, Ft. Lauderdale, FL
- 2011**      **Laboratory of Molecular and Developmental Biology Symposium, National Eye Institute, NIH**. Role of repair and antioxidant enzymes in lens biology and cataract formation
- 2010**      **European Association for Vision and Eye Research**, MsrA and prevention of oxidative-stress induced lens cell death, Crete Greece
- 2010**      **XIX International Conference on Eye Research**, MsRA repairs methionine oxidized  $\alpha$ -crystallin and cytochrome c maintain and regulating chaperone activity and apoptosis in lens cells. Montreal, Canada
- 2010**      **Association for Research in Vision and Ophthalmology**, Special symposium on lens crystallins: Regulation and repair of alpha-crystallin/sHSP by methionine sulfoxide reductase. Ft. Lauderdale, FL
- 2008**      **XVIII International Conference on Eye Research**, MsRA repairs lens cytochrome c and  $\alpha$ -crystallin. Beijing, China

- 2008**      **Oregon Health and Science University**, MsRA repairs lens cytochrome c and  $\alpha$ -crystallin. Portland, Oregon
- 2008**      **Association for Research in Vision and Ophthalmology**, Global Analysis of lens cataract-associated gene expression differences in human donors, Ft. Lauderdale, FL
- 2006**      **XVII International Conference on Eye Research**, Global analysis of cataract-associated gene expression changes, Buenos Aires, Argentina
- 2005**      **Association for Research in Vision and Ophthalmology**, Special symposium: Global gene expression and bioinformatics methods in ocular research Global gene expression analysis in the ocular lens, Ft. Lauderdale, FL
- 2005**      **University of Miami, Bascolm Palmer Eye Institute**, Methionine Sulfoxide Reductases (Msrs) are Key Repair Enzymes. Miami, Florida
- 2004**      **Columbia University**, Gene-expression and age-related human cataract. New York
- 2004**      **XVI International Conference on Eye Research**. Identification and localization of lens methionine sulfoxide reductases and their role in oxidative stress protection, Sydney, Australia
- 2004**      **Mayo Clinic**, The Genetics of age-related human cataract. Rochester, MI
- 2003**      **Oakland University, Oakland Eye Institute**, Global gene expression in age-related human cataract. Oakland, Michigan
- 2003**      **The Abe Spector Honorary Symposium on Lens Research**, Differential display age-related gene expression changes in the eye lens. Long Island, NY
- 2003**      **European Association for Vision and Eye Research Conference**, Increased expression of osteonectin in age-related human cataract, Alicante, Spain
- 2002**      **XV International Conference on Eye Research**, The role of metallothioneins in the maintenance of lens transparency. Geneva, Switzerland
- 2002**      **Kansas State University**, Department of Biology. Lens transparency and gene expression. Manhattan, KS

- 2002 **Ashland College, Department of Biology.** Global analysis of gene expression. Ashland, Ohio
- 2001 **National Eye Institute, NIH,-Gene Expression and age-related cataract**
- 2001 **UCLA Medical School, Jules Stein Eye Institute,** Differential Induction of Human Lens Metallothioneins. Los Angeles, CA
- 2001 **Johns Hopkins University School of Medicine, Department of Ophthalmology,** Gene Expression and Human Cataract, Baltimore MD
- 2000 **West Virginia University, Department of Ophthalmology,** Differential Expression of Cataract responsive Genes. Morgantown, WV
- 1999 **West Virginia University, College of Arts and Sciences Homecoming Lecture,** Journey Into the New Mellenium: Understanding Genes and Genomes Morgantown, WV
- 1999 **Einstein College of Medicine, Department of Ophthalmology,** Differential Display and Gene Expression in Cataractogenesis. Bronx, NY
- 1999 **West Virginia University, Department of Biochemistry,** Techniques in Gene Expression Analysis. Morgantown, WV
- 1999 **National Eye Institute, NIH,** Differential Display analysis of cataract responsive genes.
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### ABSTRACTS (\* platform)

1. "Hypoxia regulates lens fiber cell differentiation to form the mature transparent eye lens" Lisa A. Brennan, Joshua Disatham and **Marc Kantorow**. Accepted for paper presentation at the Association for Research in Vision and Ophthalmology (ARVO) meeting Baltimore, MD, May 2020. *Meeting cancelled*.
2. "Hypoxia regulation of lens structure and function" Lisa Brennan, Joshua Disatham, **Marc Kantorow**. Paper " XXIV International Congress for Eye Research, Buenos Aires, Argentina. Oct 2020 *Meeting Canceled*
3. "Genome-wide chromatin mapping and transcriptome analysis reveals chromatin regulation as a novel mechanism for controlling gene expression during lens differentiation". *Joshua Disatham<sup>1</sup>, D. Chauss<sup>2</sup>, R. Gheyas<sup>3</sup>, L. A. Brennan<sup>1</sup>, D. Blanco<sup>1</sup>, L. Daley<sup>1</sup>, A. Menko<sup>3</sup>, M. Kantorow<sup>1</sup>*. <sup>1</sup>Charles E. Schmidt College of

Medicine, Florida Atlantic University; <sup>2</sup>National Institute of Health NIDDK; <sup>3</sup>Thomas Jefferson University. Poster presentation by Joshua Disatham at the Association for Research in Vision and Ophthalmology (ARVO) meeting Vancouver, May 2019.

4. \*Chromatin Regulation of lens gene expression and differentiation". Joshua Disatham, Lisa Brennan, A. Sue Menko, **Marc Kantorow**, Association for Research in Vision and Ophthalmology "Vancouver CA, May 2019
5. \*"Hypoxia regulation of lens structure and function". Lisa Brennan, Joshua Disatham, **Marc Kantorow**. Sept 2018. XXIII International Congress for Eye Research. Belfast, UK.
6. \*"Hypoxia Regulation of lens remodeling" **Marc Kantorow**, Joshua Disatham and Lisa Brennan, International Conference on Lens Research. Kona Hawaii, December 2018.
7. \*Hypoxia controls lens fiber cell remodeling by regulating the elimination of mitochondria, endoplasmic reticulum and Golgi apparatus through HIF1-directed transcriptional regulation of BNIP3L expression. **Marc Kantorow**, Joshua Disatham, Rebecca McGreal, Caitlin Logan, Sue Menko, Ales Cvekl and Lisa Brennan, Conference on Lens Research 2017, Kona Hawaii
8. \*Elimination of Mitochondria, Endoplasmic Reticulum and Golgi during lens cell differentiation to form the lens organelle-free zone requires the mitophagy protein BNIP3L and is regulated by the transcription factor HIF1 $\alpha$ . Lisa Brennan, Rebecca McGreal, Caitlin Logan, Ales Cvekl, A. Sue Menko, and **Marc Kantorow**. Association for Research in Vision and Ophthalmology 2017, Baltimore, MD.
9. A role for the PI3K regulator PIK3IP1 in signaling the autophagy-dependent removal of organelles during lens development. Rifah Gheyas, Lisa A. Brennan, **Marc Kantorow**, A Sue Menko. Association for Research in Vision and Ophthalmology 2017, Baltimore, MD.
10. \* $\alpha$ -crystallin prevents mitochondrial ROS release and apoptosis by protecting cytochrome c. **Marc Kantorow** and Lisa Brennan International Conference on Lens Research 2016, Kona Hawaii
11. \*Oxidative Stress Regulation of Organelle Function by  $\alpha$ -Crystallin. Marc Kantorow, Lisa Brennan, Kyran Bharath, Josef Khoury. XXII International Conference on Eye Research, 2016, Tokyo, Japan
12. \*Mitochondrial and Nuclear Translocation by  $\alpha$ -Crystallin and Protection of Lens Cells Against UV-light and Oxidative Exposures. Lisa Brennan, Rebecca McGreal, Dan Chauss, Josef Khoury, Larry David, Sue Menko and **Marc**

**Kantorow.** Association for Research in Vision and Ophthalmology 2016, Seattle, WA.

13. \*BNIP3L/Nix is required for mitochondrial elimination through mitophagy and the subsequent elimination of endoplasmic reticulum during the lens fiber cell differentiation program. Lisa Brennan, Karem Aktan, Suren Rajakaruna, Rebecca McGreal, Daniel Chauss, Ales Cvekl, A. Sue Menko, **Marc Kantorow.** Association for Research in Vision and Ophthalmology 2015, Denver, CO.
14. Parkin-directed mitophagy is required for lens cell survival upon exposure to cataract-associated environmental insults. **Marc Kantorow**, Karem Aktan , Daniel Chauss , Lisa A. Brennan. Association for Research in Vision and Ophthalmology 2015, Denver, CO.
15. \*Integrin  $\alpha\beta 5$ -mediated phagocytosis by lens epithelial cells increases cell survival under apoptotic condition. **Marc Kantorow**, Daniel Chauss, Lisa Brennan. XXI International Congress for Eye research, San Francisco, July 21st 2014.
16. \*Parkin-directed mitophagy governs lens epithelial cell mitochondrial degradation under oxidative stress conditions. Lisa Brennan, Daniel Chauss, **Marc Kantorow.** XXI International Congress for Eye research, San Francisco, July 21st 2014.
17. \*Mitochondrial dynamics in the eye lens from development through cataract formation. **Marc Kantorow** in Minisymposium: Autophagy and Proteolysis in Ocular Health and Disease. Wed 7th May 2014. Association for Research in Vision and Ophthalmology 2014, Orlando, FL
18. \*Parkin regulates mitochondrial quality control in oxidative stress-treated lens epithelial cells through mitophagy. Lisa A. Brennan, Daniel Chauss, Subhasree Basu, A S. Menko and **Marc Kantorow.** Association for Research in Vision and Ophthalmology 2014, Orlando, FL
19. \*Lens epithelial cells use phagocytosis as a mechanism to remove apoptotic cellular debris. Daniel Chauss, Lisa A. Brennan, Bettina Teng and **Marc Kantorow.** Association for Research in Vision and Ophthalmology 2014, Orlando, FL
20. Chaperone-independent mitochondrial translocation, oxidative stress protection and prevention of apoptosis by  $\alpha$ B-crystallin. Bettina Teng, Rebecca S. McGreal, Daniel Chauss, Lisa A. Brennan and Marc Kantorow. Association for Research in Vision and Ophthalmology 2014, Orlando, FL

21. Autophagy pathways of the eye lens and their potential functions in lens protection and differentiation. **Marc Kantorow**, Dan Chauss, J. Fielding Hejtmancik and Lisa Brennan.
22. \*The role of autophagy in lens maintenance, protection and differentiation. **M. Kantorow**, L.A. Brennan, W. Lee Kantorow, D. Chauss, R.S. McGreal, A. Riazuddin, A. Cvekl, J.F. Hejtmancik. XX International Congress for Eye research, Berlin, July 2012.
23. \*Repair of  $\alpha$ -crystallin chaperone activity by MsrA and protection of lens mitochondria. L. Brennan, R.S. McGreal, W. Lee Kantorow, D. Chauss, **M. Kantorow**. XX International Congress for Eye research, Berlin, July 2012.
24. FYCO1 implicated in the pathogenicity of autosomal recessive congenital cataracts. S.A. Riazuddin, J. Chen, Z. Ma, X. Jiao, R. Fariss, W.L. Kantorow, **M. Kantorow**, E. Pras, M. Frydman, E. Pras, S. Riazuddin, J.F. Hejtmancik. XX International Congress for Eye research, Berlin, July 2012.
25. The role of FYCO1 in lens and retinal autophagy. W. Lee Kantorow, L. Brennan, D. Chauss, L. Walsh, S. He, A. Cvekl, S.A. Riazuddin, J.F. Hejtmancik, **M. Kantorow**. XX International Congress for Eye research, Berlin, July 2012.
26. \***Marc Kantorow**, Wanda Lee Kantorow, Lisa A. Brennan, Daniel Chauss, Amer Riazuddin, Ales Cvekl, James F. Hejtmancik. Association for Research in Vision and Ophthalmology 2012, Ft. Lauderdale, FL
27. FYCO1 mutations and function in autosomal recessive congenital cataract. James F. Hejtmancik, Jianjun Chen, Zhiwei Ma, Xiaodong Jiao, Wanda L. Kantorow, Eran Pras, Moshe Frydman, Sheikh Riazuddin, **Marc Kantorow**, S. Amer Riazuddin. Association for Research in Vision and Ophthalmology 2012, Ft. Lauderdale, FL
28. \*The role of FYCO1 and autophagy in lens defense, differentiation and cataract formation. Marc Kantorow, Wanda Lee Kantorow, Lisa A. Brennan, Daniel Chauss, Amer Riazuddin, Ales Cvekl, James F. Hejtmancik. Association for Research in Vision and Ophthalmology 2012, Ft. Lauderdale, FL.
29.  $\alpha$ B-crystallin protects lens and retinal cell mitochondrial function under oxidative stress conditions. Rebecca S. McGreal, Daniel C. Chauss, Wanda Lee, Jianning Wei, Lisa A. Brennan, **Marc Kantorow**. Association for Research in Vision and Ophthalmology 2012, Ft. Lauderdale, FL
30. The Characterization of FYCO1 Expression and Function in Lens and Retinal Cells. Wanda Lee, Lisa A. Brennan, Daniel Chauss, Shuying He, Amer Riazuddin, Ales Cvekl, James F. Hejtmancik, **Marc Kantorow**. Association for Research in Vision and Ophthalmology 2012, Ft. Lauderdale, FL



31. \* $\alpha$ -crystallin Protects against apoptosis in lens cells by directly protecting cytochrome c against methionine oxidation. Rebecca S. McGreal, Lisa A. Brennan, Wanda Lee, Daniel Chauss, **Marc Kantorow**. Association for Research in Vision and Ophthalmology 2011, Ft. Lauderdale, FL
32. TXNL6 is a novel oxidative stress-inducible activator of MsrA repair in lens and retina. Wanda Lee, Lisa A. Brennan, **Marc Kantorow**. Association for Research in Vision and Ophthalmology 2011, Ft. Lauderdale, FL
33. \*MsrA repair of cytochrome c and alpha crystalline chaperone and oxidative repair pathways with mitochondrial protection and apoptotic control in lens cells. **M. Kantorow**, L. Brennan, R. McGreal, W. Lee, L. David, and F. Giblin. EVER 2010. Crete, Greece.
34. Thioredoxin-like protein 6 (TXNL6) is an H<sub>2</sub>O<sub>2</sub> inducible reducing system for methionine sulfoxide reductase A (MsrA) repair of oxidized proteins whose expression increases upon aging in the human lens. W. Lee, L. Brennan, R. McGreal, and **M. Kantorow**. EVER 2010. Crete, Greece.
35. \*Cytochrome c and Alpha Crystallin are repaired by MsrA which can serve to protect lens mitochondria and play a role in apoptosis. **M. Kantorow**. XIX International Conference on Eye Research. 2010. Montreal, Canada
36. Alpha crystallin and cytochrome c form mitochondrial complexes with MsrA in lens and heart cells. R. McGreal, W. Lee, L. Brennan and **M. Kantorow**. XIX International Conference on Eye Research. 2010. Montreal, Canada
37. TXNL6 is expressed by the aging human lens and can serve as a lens reducing system for MsrA. W. Lee, L. Brennan, R. McGreal, and **M. Kantorow**. XIX International Conference on Eye Research. 2010. Montreal, Canada
38. \* Repair of  $\alpha$ -Crystallin Chaperone Activity by MsrA: Implications for  $\alpha$ -Crystallin Function in the Lens and Other Tissues. **M. Kantorow** 2010. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
39. \* TXNL6 (RdCVF) is a Novel Lens Reducing System Required for MsrA Repair of  $\alpha$ -Crystallin and Cytochrome c. L.A. Brennan<sup>1</sup>, W. Lee<sup>1</sup>, R. McGreal<sup>1</sup>, L. David<sup>2</sup>, **M. Kantorow**<sup>1</sup> 2010. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
40.  $\alpha$ -Crystallin and Cytochrome C Form a Mitochondrial Complex With MsrA in Lens Cells. R. McGreal, W. Lee, M. Demos, L. Brennan, **M. Kantorow**. 2010 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

41. Expression and Localization of a Novel Lens Reducing System Called Thioredoxin-Like Protein 6 (TXNL6) in Human Lens and Retina. W. Lee, M. Demos, R. McGreal, L. Brennan, **M. Kantorow**. 2010. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
42. \* Restoration of Cytochrome c and  $\alpha$  Crystallin Function by MsrA Repair Suggests an Important Role for Methionine Oxidation in Lens Epithelium Function and Cataract. L.A. Brennan<sup>1</sup>, W. Lee<sup>1</sup>, M. Markosian<sup>1</sup>, M. Demos<sup>1</sup>, F. Giblin<sup>2</sup>, **M. Kantorow**<sup>1</sup>. 2009. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
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44. Methionine sulfoxide reductase A is a lens redox sensor acting through Cyt c repair. W. Lee, L. Brennan, A. Sur, and **M. Kantorow**. XVIII International Conference on Eye Research, 2008. Beijing, China.
45. \*MsrA repair of Cytochrome c and alpha crystallin function in human lens epithelium and cataract. **M.Kantorow**, L.Brennan, and W.Lee. XVIII International Conference on Eye Research, 2008. Beijing, China.
46. Molecular Characterization of a Sorsby Fundus Dystrophy (SFD) Mutants of TIMP-3. A. Hamze, W. Lee, **M. Kantorow**, K. Brew. 2007 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
47. \*Critical Role of MsrA in Repair of Oxidized Cytochrome c for Mitochondrial Function and Apoptosis. L.A. Brennan, W. Lee, A. Sur, T. Cowell, F. Giblin, and **M. Kantorow**. 2007. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
48. \*Sunday Symposium as Co-organizer and speaker. The Role of Mitochondria in Oxidative Eye Disease. **M. Kantorow** 2007. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
49. \*MsrA and Peroxiredoxin 3 are required for mitochondrial function in human lens cells and protects lens cells against oxidative stress damage. **M. Kantorow** and W. Lee. XVII International Conference on Eye Research, 2006. Buenos Aires, Argentina.
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52. \*Three Distinct Human Lens Methionine Sulfoxide B Genes Are Important for Lens Cell Viability and Provide Distinct Levels of Oxidative Stress Resistance. M. Marchetti, G.O. Pizarro, D. Sagher, C. DeAmicis, W. Lee, J.F. Hejtmancik, H. Weissbach, and **M. Kantorow**. Investigative Ophthalmology and Visual Science 2005. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
53. \*Expression and Localization of Methionine Sulfoxide Reductase A in the Retina. N.V. Gordiyenko, J.W. Lee, M. Marchetti, N. Tserentsoodol, R.N. Fariss, H. Weissbach, **M. Kantorow**, and I.R. Rodriguez. Investigative Ophthalmology and Visual Science 2005. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
54. \* Identification and localization of methionine sulfoxide reductase A in human lens and its direct protection of lens cells against oxidative stress damage. **Marc Kantorow**, John R. Hawse, Jer Kuzak, Gresin O. Pizarro, Venkat Reddy, J. Fielding Hejtmancik International Conference on Eye Research, 2004, Sydney, Australia.
55. \*Identification and localization of methionine sulfoxide reductase A in human lens and its direct protection of lens cells against oxidative stress damage. **Marc Kantorow**, John R. Hawse, Tracy L. Cowell, Sonia Habib, Gresin O. Pizarro, Venkat Reddy, J. Fielding Hejtmancik. Investigative Ophthalmology and Visual Science 2004 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
56. \*Genomic and bioinformatics identification of human lens cell differentiation pathways. John R. Hawse, Candy DeAmicus-Tress, Tracy L. Cowell and **Marc Kantorow**. Investigative Ophthalmology and Visual Science 2004 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
57. The role of lens metallothioneins in defending against cadmium and oxidative stress. Vanita A. Padgankar, John R. Hawse, Victor R. Leverenz, S.E. Pellica, Frank Giblin and **Marc Kantorow**. Investigative Ophthalmology and Visual Science 2004 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

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59. \*Identification of cataract-specific genes and their function in lens maintenance and cataract. **Marc Kantorow**, John Hawse, Quinglin Huang, Nancy Sheets, Doug Hosack, Richard Lempicki, J.Fielding Hejtmancik, Joseph Horwitz. EVER Meeting, Alicante, Spain, 2003
60. \*Identification and functional clustering of global gene expression differences between age-related cataract and clear human lenses. John Hawse, Quinglin Huang, Nancy Sheets, Doug Hosack, Richard Lempicki, J.Fielding Hejtmancik, Joseph Horwitz and **Marc Kantorow**. Investigative Ophthalmology and Visual Science 2003 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
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65. \*Ales Cvekl, Sumanto Goswami, Nancy Sheets, Bharesh Chauhan, Venkat Reddy, Deborah Carper and **Marc Kantorow**. Hydrogen peroxide induced oxidative stress response in human lens epithelial cells: a cDNA microarray study. Investigative Ophthalmology and Visual Science 2002 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

66. Mason Posner, S. Slow, Stephanie Runkle, Julie Hill, **Marc Kantorow** and Joseph Horwitz. Sequencing, tissue-specific expression and chaperone activity of zebrafish  $\alpha$ -crystallin. Investigative Ophthalmology and Visual Science 2002 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida
67. John Hawse, Venkat Reddy and **Marc Kantorow**. The role of metallothioneins in lens maintenance and cataract. Cooperative cataract research group meeting. November 3, 2001, Kona Hawaii
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72. B.P. Opperman, J. Hawse, W. Zhang, N. Sheets, V.N. Reddy, **M. Kantorow**. Metallothionein IIa is highly induced by toxic metals in cultured human lens epithelial cells. Investigative Ophthalmology and Visual Science 2001: **42**, S673 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
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Visual Science 2000: **41**, S629 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

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77. **\*Marc Kantorow**, Quing-Ling Wang, Kevin Miller, Joseph Horwitz and Deborah Carper. Differentially Expressed Genes in Human Age-related Cataract. US-Japan Cooperative Cataract Research Conference. 1999 Kona, Hawaii.
78. **\*Deborah Carper**, **Marc Kantorow**, Frank J. Giblin, N. Ibaraki, L-R Lin, V. N. Ready and Abraham Spector. Differential Display Analysis of Oxidative Stress Models of Cataract. US-Japan Cooperative Cataract Research Conference. 1999 Kona, Hawaii.
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81. C.Y. Gao, **M. Kantorow**, J. Piatigorsky and P. Zelenka. BetaB2-crystallin is an in vitro substrate for CDK5-associated kinase activity in rat lens fiber cells. Investigative Ophthalmology and Visual Science 1998: **39**, S788 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
82. Y.S. Xu, **M. Kantorow** and J. Piatigorsky. Isolation and characterization of a corneal protein in zebrafish. Investigative Ophthalmology and Visual Science 1998: **39**, S1039 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.
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85. \***M. Kantorow**, J. Horwitz, M.A.M. van Boekel, W. W. deJong and J. Piatigorsky. Tetramerization enhances autophosphorylation of lens  $\alpha$ A-crystallin. Investigative Ophthalmology and Visual Science 1995: **36**, S387 Association for Research in Vision and Ophthalmology. Sarasota, Florida.
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88. C.M. Sax, **M. Kantorow**, A. Cvekl, R. Gopal-Srivastava, J.G. Ilagan and J. Piatigorsky. Functional and protein binding analysis of the mouse  $\alpha$ A-crystallin PE1 regulatory region Investigative Ophthalmology and Visual Science 1994: **35**, S1706 Association for Research in Vision and Ophthalmology. Sarasota, Florida.
89. \***Marc Kantorow** and Joram Piatigorsky. Alpha-crystallin is an autokinase. Cooperative Cataract Research Group Meeting. 1994. Washington, D.C.
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91. **Marc Kantorow**, Kevin Becker, Christina M. Sax, Keiko Ozato and Joram Piatigorsky. Binding of tissue-specific forms of  $\alpha$ A-CRYBP1 to its regulatory sequence in the mouse  $\alpha$ A-crystallin gene: double label immunoblotting of UV-crosslinked complexes. 1993 NIH Research Festival. Bethesda, MD.
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93. **Marc Kantorow**, Ales Cvekl, Christina M. Sax and Joram Piatigorsky. Protein-DNA interactions of the mouse  $\alpha$ A-crystallin promoter. 1992 NIH Research Festival. Bethesda, MD.

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95. Joram Piatigorsky, Ales Cvekl, Andrew Cuthbertson, Cynthia Jaworsky, **Marc Kantorow**, H. John Roth, Christina M. Sax, Rashmi Gopal-Srivastava and Stanislav Tomarev. Molecular Biology of crystallins and enzyme crystallins. 1991 Cooperative Cataract Research Group Meeting. Honolulu, Hawaii.
96. **Marc Kantorow** and Keith McKenney. Site-Specific mutagenesis of the cAMP receptor protein by lac-Z fusion. 1988 Cold Spring Harbor Symposia: The molecular genetics of Bacteria and their Phages. Cold Spring Harbor, New York.

## LABORATORY AND RESEARCH MENTORING

### Post-doctoral Fellows and Research Professors

<b>Lisa Brennan PhD</b>	Associate Research Professor-2007-present
<b>Yoni Hertz PhD</b>	Assistant Research Professor 2014-2015
<b>Wanda Lee PhD</b>	Senior Post-doctoral Fellow 2007-2009
<b>Maria Marchetti PhD</b>	Assistant Research Professor-2004- 2006
<b>Weiyang Zhang MD</b>	Post-doctoral Fellow-1999-2001

### PhD and MS Students Directed and Chaired

<b>Rachel Zabizhin</b>	MS Thesis Student 2020-present
<b>Joshua Disatham</b>	PhD Thesis Student 2017-present
<b>David Blanco</b>	MS Thesis Student 2018-2020
<b>Angie Posada</b>	MS Thesis Student Graduated 2019
<b>Patrice Cherubin</b>	MS Thesis Student Graduated 2019
<b>Kawther Elsouri</b>	MS Thesis Student Graduated 2019
<b>Daniel Chauss</b>	PhD Thesis Student Graduated 2016
<b>Olga Bakina</b>	MS Thesis Student Graduated 2016
<b>Josef Houry</b>	MS Thesis Student, Graduated 2015
<b>Alex Loumakis</b>	MS Thesis Student Graduated 2015
<b>Karem Aktan</b>	MS Thesis Student Graduated 2015
<b>Lyndzie Matucci</b>	MS Thesis Student Graduated 2013
<b>Daniel Chauss</b>	MS Thesis Student Graduated 2012
<b>Rebecca McGreal</b>	PhD Thesis Student Graduated 2012
<b>Wanda Lee</b>	PhD Thesis Student Graduated 2007



**Tracy Cowell**  
**John Hawse**  
**Brian Oppermann**

MS Thesis Student Graduated 2006  
PhD Thesis Student Graduated 2004  
MS Thesis Student Graduated 2002

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### **Medical, BS and HS Research Students Directed**

<b>Sydney Richner</b>	Undergraduate Research Student 2020-present
<b>Lauren Dally</b>	Medical Research Student 2017-2018
<b>Evan Dillican</b>	Undergraduate Research Student 2015-2017
<b>Daniel Daroszewski</b>	Medical Research Student 2014-2015
<b>Steven Freeland</b>	Medical Research Student 2014-2015
<b>J.D.Wilcox</b>	Medical Research Student 2013-2014
<b>Victoria Gau</b>	Medical Research Student 2012-2013
<b>Sara Anastasis</b>	Medical Research Student, 2012-2013
<b>Aaron Weiss</b>	Medical Research Student 2009-2010
<b>Alex Diaz</b>	Undergraduate Research Student 2009
<b>Mary Mercer</b>	Medical Research Student 2009-2010
<b>Marie Barnicoat</b>	Undergraduate Research Student 2009-2010
<b>Emily Braun</b>	Undergraduate Research Student 2009-2010
<b>Charles Goldring</b>	HS Research Student 2009-2010
<b>Michael Markosian</b>	Medical Research Student 2008-2009
<b>Michael Demos</b>	Medical Research Student 2008-2009
<b>Sarah Wolochatiuk</b>	HS Research Student 2007-2008
<b>Chris DeLeo</b>	Medical Research Student 2005-2006
<b>Casandra Donaudy</b>	Undergraduate Research Student 2005-2006
<b>Valerie Peicher</b>	HS Research Student 2005-2006
<b>Eric Karlin</b>	Medical Research Student 2005-2006
<b>Marie Barthelemy</b>	Undergraduate Research Student 2004-2005
<b>Candy Deamicus</b>	Undergraduate Honors Research Student 2003-2005
<b>Gresin Pizzaro</b>	Undergraduate Student 2003-2004
<b>Tracy Cowell</b>	Undergraduate Honors Research Student 2002-2003
<b>Tressa Jones</b>	Undergraduate Honors Research Student 2001-2003
<b>Eric Peterson</b>	Undergraduate Honors Research Student 2001-2003
<b>Ben Lopez</b>	Undergraduate Honors Research Student 2002-2003

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### **COURSES TAUGHT**

<b>Spring</b>	<b>2020</b>	Human Genetics 38 students (graduate)
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<b>Spring</b>	<b>2019</b>	Human Genetics 39 students (graduate)
<b>Spring</b>	<b>2018</b>	Human Genetics 33 students (graduate)
<b>Fall</b>	<b>2017</b>	Human Genetics 36 students (graduate)
<b>Spring</b>	<b>2016</b>	Human Genetics 31 students (graduate)
<b>Spring</b>	<b>2015</b>	Human Genetics 30 students (graduate)
<b>Fall</b>	<b>2014</b>	Molecular Cell and Biology 25 students (graduate)
<b>Fall</b>	<b>2013</b>	Problem Based Learning 8 students (medical) Molecular Genetics 15 lectures 64 students (medical) Problem Based Learning 8 students (medical)
<b>Fall</b>	<b>2012</b>	Molecular Genetics 15 lectures 64 students (medical) Problem Based Learning 8 students (medical) Molecular Cell and Biology 25 students (graduate)
<b>Fall</b>	<b>2011</b>	Molecular Genetics 15 lectures 64 students (medical) Problem Based Learning 8 students (medical)
<b>Fall</b>	<b>2010</b>	Molecular Genetics 15 lectures 64 students (medical) Problem Based Learning 8 students (medical) Molecular Cell and Biology 25 students (graduate)
<b>Fall</b>	<b>2009</b>	Molecular Genetics 15 lectures 64 students (medical) Problem Based Learning 8 students (medical)
<b>Spring</b>	<b>2009</b>	Molecular Cell and Biology 25 students (graduate)
<b>Fall</b>	<b>2008</b>	Molecular Genetics 15 lectures 64 students (medical) Problem Based Learning 8 Students (medical)
<b>Spring</b>	<b>2007</b>	Topics in Biomedical Science 25 students (graduate)
<b>Fall</b>	<b>2006</b>	Molecular Genetics 30 students (medical)
<b>Spring</b>	<b>2006</b>	Biomedical Seminar 15 students (graduate)
<b>Fall</b>	<b>2004</b>	Biomedical Seminar 15 students (graduate)
<b>Spring</b>	<b>2004</b>	Biomedical Seminar 15 students (graduate)

<b>Fall</b>	<b>2003</b>	Biomedical Sciences I 25 students (graduate) Intro to Biomedicine 30 (UG)
<b>Fall</b>	<b>2002</b>	Biology 219 The Living Cell -lecture + 9 lab sections 223 students (UG)
<b>Spring</b>	<b>2002</b>	Biology 709H Scientific Writing 6 students (graduate)
<b>Fall</b>	<b>2001</b>	Biology 219 The Living Cell -lecture +9 lab sections 227 students (UG)
<b>Spring</b>	<b>2001</b>	Biology 311 Advanced Cell and Molecular Biology- 69 students (UG)
<b>Fall</b>	<b>2000</b>	Biology 709H Scientific Writing 13 students (graduate)
<b>Fall</b>	<b>2000</b>	Biology 609 Biology Graduate Seminar 15 students (Graduate)
<b>Spring</b>	<b>2000</b>	Biology 311 Advanced Cell and Molecular Biology 60 students (UG)
<b>Fall</b>	<b>1999</b>	Biology 219 The Living Cell -lecture +9 lab sections 219 students (UG)

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## **SERVICE TO THE PROFESSION**

### **Grant Reviews and Study Sections**

**2020-2025** Permanent Member NIH, Biology and Development of the Eye (BDE) Study Section.

**2019** Reviewer ad hoc NIH, Biology of the Visual System Study Section

**2018** Reviewer NIH, Visual Cell Biology Special Emphasis Panel

**2017** Chair and Reviewer NIH, Membrane Biology and Protein Processing Special Emphasis Panel.

**2017** Reviewer ad hoc NIH, Biology Visual System Study Section

**2016** Reviewer ad hoc NIH, Biology Visual System Study Section

<b>2015</b>	Reviewer ad hoc NIH, Biology Visual System Study Section
<b>2014</b>	Reviewer ad hoc NIH Cell Biology Special Emphasis Panel
<b>2014</b>	Reviewer ad hoc NIH Biology Visual System Study Section
<b>2013</b>	Reviewer and Chair ad hoc NIH Vision Special Emphasis Panel
<b>2013</b>	Reviewer ad hoc NIH, Biology Visual System Study Section
<b>2013</b>	Reviewer ad hoc NIH Special Emphasis Study Section
<b>2012</b>	Chair and Reviewer NIH, Cell Biology Special Emphasis Study Section
<b>2010</b>	Reviewer ad hoc National Institutes of Health, Visual Science Special Emphasis Panel
<b>2010</b>	Reviewer ad hoc National Institutes of Health
<b>2009</b>	Reviewer ad hoc National Institutes of Health, Anterior Eye Diseases
<b>2008</b>	Reviewer Department of Defense, Visual Sciences
<b>2007</b>	Reviewer Medical Research Council
<b>2006</b>	Reviewer: National Science Foundation-Cell Biology Group
<b>2004</b>	Reviewer Wellcome Trust Research Foundation (UK)
<b>2001</b>	Reviewer Wellcome Trust Research Foundation (UK)
<b>1999</b>	Reviewer Veterans Administration

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### **Editorial Board Memberships**

<b>2018-present</b>	Editorial Board Member -Investigative Ophthalmology & Visual Science
<b>2012-present</b>	Editorial Board Member-Journal of Molecular Vision
<b>2001</b>	Guest Editorial Board Member Investigative Ophthalmology and Visual Science

**1999** Guest Editorial Board Member Investigative Ophthalmology and Visual Science

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**Other Service to the Profession**

**National Eye Institute, NIH Audacious Goals Planning Committee 2012**

**National Alliance For Eye and Vision Research ARVO congressional advocate 2011**

**Association of American Medical Colleges (AAMC) Graduate Research, Education and Training (GREAT) Group Member 2017-present**

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**MEETING AND CONFERENCE ORGANIZATION**

- 2020** Session Co-organizer: Oxygen regulation of Lens Homeostasis and Development. International Conference Eye Research, Buenos Aries, Argentina (Canceled due to COVID).
- 2019** Session Co-organizer and Co-Chair Oxygen and Redox Regulation on lens differentiation, homeostasis and transparency. International Conference on Lens Research, Kona, Hawaii
- 2018** Session Co-organizer and Chair- Redox Biology of the Eye Lens, International Conference Eye Research, Belfast, Ireland.
- 2017** Meeting Co-organizer - International Conference on Lens Research, Kona, Hawaii
- 2017** Session Organizer and Co-Chair, Lens Gene Expression, International Conference on Lens Research, Kona, Hawaii
- 2016** Session Moderator Cataractogenesis Association for Research in Vision and Ophthalmology Seattle Washington
- 2015** Program Committee International Conference on Lens Research, Kona Hawaii

- 2015** Session Moderator Cataract Mechanisms International Conference on Lens Research, Kona Hawaii
- 2015** Session Moderator Fiber cell biology Association for Research in Vision and Ophthalmology Denver CO
- 2014** Session Moderator Death and Differentiation: Novel Pathways in the lens. XXI International Congress for Eye Research, San Francisco, CA
- 2013** Panel Discussion Member Mitochondria in Ocular Health and Disease Symposium Jefferson University, Philadelphia, PA
- 2013** Session Moderator Cataract Mechanisms Association for Research in Vision and Ophthalmology, Seattle, WA 2013
- 2012** Session Moderator Lens Gene Regulation Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, 2012
- 2011** Session Moderator Oxidative Stress and Lens Protective/Repair Mechanisms paper session. Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 5, 2011
- 2010** Lens Program Co-Chair International Conference on Eye Research Meeting Montreal, Canada 2010.
- 2010** Lens Program Chair Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL
- 2010** Session Moderator Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL Lens Oxidation and repair
- 2009** Lens Program Committee Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL
- 2009** Session Moderator Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL  
Cataract Mechanisms and Lens Defense
- 2008** Lens Program Committee Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL
- 2008** Session Moderator Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL. Oxidative Stress, Protection and Repair Mechanisms

- 2008** Young Investigator Session Organizer: International Conference on Eye Research Meeting Beijing, China 2008.
- 2007** Lens Program Committee Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL
- 2007** Session Organizer, Moderator and Speaker: Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL. Sunday Symposium, "The Role of Mitochondria in Oxidative Eye Disease"
- 2006** Session Chair International Conference on Eye Research Meeting. Buenos Aires Argentina 2006. Transcriptional Biology of the Eye
- 2005** Session Moderator Protection against Cell Death in the Lens. Association for Research in Vision and Ophthalmology meeting, Ft. Lauderdale FL
- 2004** Session Moderator Lens gene expression. European Vision and Eye Research meeting, Alicante, Spain
- 2004** Session moderator Lens Life and Death in the Lens Session. Association for Research in Vision and Ophthalmology Ft. Lauderdale FL
- 2003** Session moderator Lens Animal Models Session. Association for Research in Vision and Ophthalmology meeting, Ft. Lauderdale FL
- 2002** Session Moderator Oxidative Stress Session, Cooperative Cataract Meeting Kona, HI
- 1999** Special Interest Group Symposia Organizer, Recent Advances in Gene expression technology. Association for Research in Vision and Ophthalmology meeting, Ft. Lauderdale FL.
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### **ACADEMIC SERVICE AND COMMITTEES**

- 2018-2019** College of Medicine Assistant Dean for Graduate Programs Coordinator, College of Medicine Distinguished Research Seminar Series.  
Provosts Committee on Faculty Teaching Development Chair, Integrative Biology Biomedical Science PhD Program Committee  
Chair, Graduate Strategic Planning Committee  
Executive Committee Integrated Biology PhD Program

Tenured Faculty Committee (P&T)  
AAMC Graduate, Research, Education and Training Group

- 2017-2018** College of Medicine Assistant Dean for Graduate Programs  
Coordinator, College of Medicine Distinguished Research Seminar Series  
Chair, Biomedical Science, 7-year Review Committee  
Chair, Graduate Strategic Planning Committee  
Chair, Integrative Biology Biomedical Science PhD Program Committee  
Executive Committee Integrated Biology PhD Program  
Tenured Faculty Committee (P&T)  
AAMC Graduate, Research, Education and Training Group  
Committee for Developing New MS in Data Science and Analytics  
Exploratory Task Force for New Department in Biomedical Engineering
- 2016-2017** College of Medicine Assistant Dean of Graduate Programs  
Coordinator, College of Medicine Distinguished Research Seminar Series  
Chair, Graduate task force committee  
Charles. E. Schmidt College of Medicine, Dean Search Committee  
Tenured Faculty Committee (P&T)  
AAMC Graduate, Research, Education and Training Group
- 2015-2015** College of Medicine Director of Graduate Programs  
Coordinator College of Medicine Distinguished Research Seminar Series  
Chair, Graduate task force committee  
Biomedical Science Science Chair search committee  
LCME accreditation committee-graduate programs and faculty development  
Tenured Faculty Committee (P&T)
- 2013-2014** Graduate Committee  
Research Committee  
Tenured Faculty Committee (P&T)  
LCME accreditation committee-graduate programs and faculty development
- 2011-2012** Graduate Committee  
Research Committee  
Tenured Faculty Committee (P&T)



<b>2011-2012</b>	Graduate Committee Research Committee Tenured Faculty Committee (P&T)
<b>2010-2011</b>	Graduate Committee Research Committee Tenured Faculty Committee (P&T)
<b>2009-2010</b>	Graduate Committee Research Committee Tenured Faculty Committee (P&T) CMBB-Biomed Seminar Coordinator
<b>2008-2009</b>	Graduate Committee Research Committee Tenured Faculty Committee (P&T) CMBB-Biomed Seminar Coordinator Biomedical Science Chair Search Committee
<b>2007-2008</b>	Graduate Committee Research Committee Tenured Faculty Committee (P&T) CMBB-Biomed Seminar Coordinator University Outdoor Activities Committee University Background Investigation Committee
<b>2006-2007</b>	Associate Chair- Biomedical Science Chair: Basic Science Curriculum Planning Committee Chair of Annual Review Committee Chair of Integrative Biology PhD Admissions Committee Graduate Committee Research Committee Tenured Faculty Committee (P&T)
<b>2005-2006</b>	Associate Chair- Biomedical Science Chair of Annual Review Committee Chair of Integrative Biology PhD Admissions Committee Graduate Committee College Strategic Planning Committee Research Committee Tenured Faculty Committee (P&T) CMBB/Biomedical Seminar Series Coordinator
<b>2004-2005</b>	Graduate Committee CMBB-Biomed Seminar Coordinator College Strategic Planning Committee

	<p>Research Committee  Tenured Faculty Committee (P&amp;T)  Integrative Biology PhD Admissions Committee</p>
<b>2003-2004</b>	<p>Chairs Advisory Committee-WVU  Graduate Committee-WVU/FAU  Seminar Coordinator-WVU/FAU  College Faculty Committee-FAU  Research Committee-FAU  Promotion and Tenure Committee (P&amp;T)-FAU</p>
<b>2002-2003</b>	<p>Chairs Advisory Committee  Biology Promotion and Tenure committee  Graduate Committee  Seminar Coordinator  Developmental biologist search committee</p>
<b>2001-2002</b>	<p>Chairs Advisory Committee  Biology Promotion and Tenure committee  Eberly College Outstanding Researcher Awards Committee</p>
<b>2000-2001</b>	<p>Chair Environmental Physiologist Search Comm.  Chairs Advisory -CFAC committee  Biology Promotion and Tenure committee  Eberly College Outstanding Researcher Awards Committee</p>
<b>1999-2000</b>	<p>Chairs Advisory Committee, Department of Biology, WVU  Department of Biology Awards Committee, WVU  Forensics Search committee</p>
<b>1995-1996</b>	<p>NIH Fellows Research Awards Review Committee</p>
<b>1995-1996</b>	<p>Foundation for Advanced Education in the Sciences Fellows  Employment Committee</p>
<b>1994-1996</b>	<p>National Eye Institute Fellows Placement Committee</p>

### **Memberships**

Association for Research in Vision and Ophthalmology.

European Association for Vision and Eye Research.

International Society for Eye Research

## CURRICULUM VITAE

**NAME** James Alexander Scott Kelso  
Glenwood and Martha Creech Eminent Scholar Chair in Science  
Professor of Psychology and Neuroscience  
Professor of Biological Sciences  
Professor of Biomedical Sciences  
Florida Atlantic University  
Boca Raton, Florida 33431

Tel: 561-297-2230  
FAX: 561-297-3634  
E-mail: kelso@ccs.fau.edu

**BORN** February 27, 1947  
Derry ~ Londonderry, N. Ireland

**CITIZENSHIP**  
United States (Currently hold US, UK and Irish Passports)

**EDUCATION**  
University of Wisconsin, Madison, Ph.D. 1975  
University of Wisconsin, Madison, M.Sc. 1973  
University of Calgary, Alberta, Canada B.S. 1972  
Stranmillis University College, Queens University Belfast, N. Ireland 1965-1969

### ACADEMIC POSITIONS

2018- Glenwood and Martha Creech Eminent Scholar Chair in Science (Reappointed)

2009- Professor of Computational Neuroscience, University of Ulster (Emeritus, 2016)

1985-2018 Glenwood and Martha Creech Eminent Scholar Chair in Science. Professor of Complex Systems & Brain Sciences, Professor of Psychology and Neuroscience, Professor of Biological Sciences, Professor of Biomedical Sciences, Florida Atlantic University, Boca Raton, Fl

1985-2005 Founder and Director, Center for Complex Systems and Brain Sciences

1995 Co-Director, Santa Fe Institute Summer School in Complex Systems

1997 Invited Senior Fellow, The Neurosciences Institute, San Diego

2000 Distinguished Visiting Professor, University of Marseille

- 1982-85 Senior Research Staff, Haskins Laboratories, Yale University  
Professor, Departments of Psychology and Biobehavioral Sciences  
(Behavioral Genetics Unit), University of Connecticut.
- 1986 Guest Professor, USSR Academy of Sciences, Moscow
- 1984 Guest Professor, Institute for Theoretical Physics, University of Stuttgart
- 1983 INSERM Research Professor, Lyons, France
- 1978-82 Senior Research Staff, Haskins Laboratories, Yale University  
Associate Professor, Departments of Psychology and Biobehavioral Sciences (Unit of  
Behavioral Genetics), University of Connecticut
- 1975-1978 Assistant Professor and Director, Motor Behavior Laboratory  
The University of Iowa
- 1976 Invited Assistant Professor (Summer Semester)  
The University of Texas at Austin
- 1969-71 Schoolmaster, Coleraine Academical Institution, Coleraine, N. Ireland

## HONORS AND AWARDS

- 2018 The B.F. Skinner Lecture, ABAI, San Diego, California
- 2018 The Tourtellotte Lecture, Kalamazoo College, Michigan
- 2017 President of the International S.T.E.P.S (**S**cience, **T**echnology, **E**conomics & **P**olitics for  
**S**ociety) Foundation & Chairman of The Olympiads of the Mind
- 2016 Elected Honorary Member of The Royal Irish Academy (Hon. MRIA)
- 2016 Emeritus Distinguished Professor Award, Ulster University
- 2016 Member of World Economic Forum (Brain Research and Neurotechnologies)
- 2012 Fellow of The Society of Experimental Psychologists (SEP)
- 2011 Bernstein Prize, International Society of Motor Control (ISMC)
- 2010 Cathedra Chair, Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Brazil
- 2008 President, Foyle College (est. 1617) Former Pupils Association
- 2007 Pierre de Fermat Laureate (Chaire d' Excellence)
- 2007 Geraldine Pellecchia Memorial Lecture on Coordination and Cognition,  
University of Connecticut
- 2006 Director's Innovations Award, National Institute of Mental Health
- 2005 A.S. Iberall Memorial Lecture, University of Connecticut
- 2005 F.J. McGuigan Prize Lecture, American Psychological Association
- 2004 Fellow, AAAS: "For innovative use of brain imaging and behavioral techniques to  
uncover the principles and mechanisms of coordination"
- 2002 Docteur Honoris Causa, Republic of France and University of Toulouse (est.1228)

- 2001 Francois Erbsmann Prize (with V.K. Jirsa, A.Fuchs & K.J. Jantzen)
- 2001 Neurosciences Research Program Fellow, La Jolla, California
- 2000 *Rugby* Magazine, Feb 29, Voted All-time All-American USA Eagles
- 2000 Distinguished Lecture Series, International School for Computable Economics, Trento, Italy
- 1999 US Delegation to inaugurate the National Brain Research Institute of India, New Delhi
- 1999 Distinguished Scientist Award, NASPSPA
- 1999 Smithsonian Institution Lecturer, Washington, DC
- 1999 Brain Bursary Lectures, London, UK
- 1998 Invited Fellow, Center for Advanced Studies in the Behavioral Sciences
- 1997 Senior Scientist Award, National Institute of Mental Health
- 1997 MERIT Award, National Institute of Mental Health
- 1996 Professorial Excellence Award, State University System of Florida.
- 1996 Sir Runrun Shaw Fellow, Chinese University of Hong Kong
- 1995-1999 President, South Florida Chapter, Sigma Xi (Scientific Research Society)
- 1991 W.J. Bryan Lectures in Cognitive Science, Indiana University
- 1990 Founding Fellow, American Psychological Society
- 1990 Distinguished Alumni Research Achievement Award, The University of Wisconsin, Madison (rec'd from Chancellor Donna Shalala)
- 1989 Kenwood-Smith Lectures, University of North Carolina
- 1989 Centennial Lecture, University of Tokyo, Japan
- 1986 Fellow, American Psychological Association
- 1986 American Society of Biomechanics (Honorary member)
- 1984 Nominated Fellow, Center for Advanced Study in the Behavioral Sciences
- 1984 Fellow, Center for Interdisciplinary Research (ZIF), Bielefeld, FRG.
- 1979 Fellow, NATO Advanced Study Institute on Motor Control, Senanque, France.
- 1977 Old Gold Fellow, University of Iowa.
- 1973-1975 University Research Fellow, University of Wisconsin, Madison.

## **PROFESSIONAL SOCIETIES**

American Association for the Advancement of Science (Fellow)

American Psychological Association, Divisions 1 and 3 (Fellow)

American Psychological Society (Fellow)

International Neural Network Society

Psychonomic Society

Associate, Behavioral and Brain Sciences

Sigma Xi, Scientific Research Society

American Society of Biomechanics (Honorary member)

Society for Neuroscience

Society of Experimental Psychologists (Fellow)

International Society of Motor Control

New York Academy of Sciences

## EDITORSHIPS

- 1981-1988 Executive Editor, *Journal of Motor Behavior* (Editor Emeritus, 1988- )  
1981-1989 Editorial Board, *Journal of Experimental Psychology: Human Perception and Performance*  
1988- Editorial Board (Founding Member) *Neural Networks*.  
1990-2000 Editorial Board, *International Journal of General Systems*  
1992- Editorial Board, *Human Movement Science*  
1996-2007 Editorial Board, *Motor Control*  
2002- Editorial Board, *Chaos and Complexity Letters*  
2002- Founding Editor, *Understanding Complex Systems*, Springer, Berlin-Heidelberg  
2004- Editorial Board, *Cognitive Processing*  
2006- Editorial Board, *Springer Series in Synergetics*  
2011- Editorial Board, *Cognitive Systems Monographs (COSMOS)*, Springer Verlag  
2013- Editorial Board, *Connection Science*  
2019- Editorial Board, *Adaptive Behavior*  
2020- Co-Executive Editor, *Frontiers in Network Physiology*

## ADVISORY BOARDS

- 1982 Executive Board, International Society for Ecological Psychology.  
Elected to the first Board of Directors  
1995- Foundation for Biomusicology, Stockholm, Sweden and Florence, Italy  
2003 - Scientific Advisory Board, Plexus Institute  
1997- World Council, The Einstein Institutes  
2009- Advisory Board, Intelligent Systems Research Institute, University of Ulster  
2016-2018 Member of the Global Future Council on Neurotechnologies and Brain Science, World Economic Forum

## SAMPLES OF SERVICE

Regular reviews for funding agencies around the world, including The Wellcome Trust (UK), The Riken Brain Institute (Professorial Tenure Committee), Japan, NSF, MRC (Canada), Australian Medical Research Council, Templeton Foundation, Israel Research Foundation, Netherlands Organisation for Scientific Research

Since 1987, organized regular satellite meetings to the Society for Neuroscience, sponsored by the National Institutes of Health (and occasionally the Office of Naval Research and the National Science Foundation), dealing with various topics surrounding neurobehavioral dynamical systems, including Dynamical Neuroscience I (1991) to XX (New Orleans, 2012).

Inaugural Review Panel, Theoretical/Mathematical /Computational Neuroscience, NIMH, 1989-1990

Special Emphasis Review Panel, NIH, *Neuroinformatics/Human Brain Project*, Washington, D.C.

Consultant, NIMH, *New Directions for Neuroscience: The Next 10 Years*. Washington, D.C., 1995.

Advisory Board, *Restructuring NIH Peer Review Process and Study Sections in Cognitive and Behavioral*

*Neuroscience*, Washington, DC 1997

Invited Speaker, *Future Career Opportunities in Neuroscience: Computational Neuroscience*. Special meeting for NIH Predoctoral Fellows. Washington, D.C., 1999.

NIMH/US delegation to inaugurate the National Brain Research Institute of India, New Delhi, 1999

Invited Speaker, NIH Training Director's meeting for recruitment of minority students in the Neurosciences: *Computational Neuroscience: The brain as a complex dynamical system*, Washington, D.C., 2000

Member, Review Panel for Sylvio O.Conte Centers for Neuroscience Research, NIH/NIMH, 2005

Member, Review Panel, NIH/NINDS Fellowship Program, 2005

Member, Review Panel, K99/R00 NIH Pathway to Independence Awards, 2012

NSF Reviewer, International Science Collaboration (ORA) Program, 2013

Member (ex officio) NIMH Board of Scientific Counselors, June, 2014 (invited, 2018).

Member, Special Emphasis Panel, BRAIN Initiative, NIH/NINDS, July, 2014

Member of the Global Future Council on Neurotechnologies and Brain Science for the World Economic Forum (2016-2018)

Member of Study Section to review Institutional Training Grants in Neuroscience, NIMH, Nov., 2018

## **SELECTED INVITED LECTURES**

In the U.S.: *Brandeis University, Brown University, Rockefeller University, Harvard University, MIT, Yale University, Columbia University, University of Pennsylvania, Duke University, University of Miami, University of Florida, Emory University, University of Chicago, University of Illinois, University of Minnesota, University of Wisconsin, Madison, Indiana University, University of Colorado, Penn State University, Ohio State University, University of Texas, Austin, USC, UC San Diego, UCLA, University of Oregon, Rutgers University, etc.*

In South America: *Sao Paulo, Brazil, UFMG, Belo Horizonte, Ouro Preto, National Autonomous University of Mexico (UNAM)*

In Canada: *McGill University, University of Montreal, York University, Laval, Waterloo, Western Ontario, Calgary, Simon Fraser, U. British Columbia, etc.*

In the U.K. and Ireland: *Oxford, Cambridge, Trinity College Dublin, Queens University Belfast, University of Ulster, University of Sheffield, NUI Galway, UCD, etc.*

In Australia and New Zealand: *Universities of Queensland, Melbourne, Adelaide, Sydney, Western Australia (Perth), University of Otago (Dunedin)*

In Europe: Finland (*Helsinki*); Germany (*Bielefeld, Hamburg, Heidelberg, Stuttgart, Berlin, Potsdam, Munich, Leipzig, Schloss Elman*); France (*Marseilles, Lyons, Arc et Senanque, Toulouse, Paris, Nice, Montpellier*); Greece (*Chania, Crete*); Italy (*Bologna, Trieste, Milano, Perugia, Trento, Elba, Erice, Sicily*); Portugal (*Sintra, Lisbon*); Spain (*Barcelona*); Sweden (*Royal Swedish Academy of Sciences; Foundation for Biomusicology, Sigtuna, etc.*); Switzerland (*Maccolin, Ascona*); The Netherlands (*Free University of Amsterdam, Royal Dutch Academy of Science; Technical University Delft*); Belgium (*Free University of Brussels; KULeuven*)

In Russia: *Moscow (Academy of Sciences), Suzdal*

In Japan: *University of Tokyo; ATR Kyoto.*

In India: *The National Brain Research Institute, New Delhi*

In China and Taiwan: *Chinese University of Hong Kong, National University of Taiwan*



## SELECTED KEYNOTE ADDRESSES

- International Neuropsychology Symposium, Oxford, England, "Toward a theory of apractic syndromes" (1978).
- NATO Advanced Study Institute: "Coordinative Structures as Dissipative Structures: Theory and Experiment", Abbaye de Senanque, France (1979)
- International Conference on Attention and Performance, "Contrasting Perspectives on Order and Regulation in Movement", Jesus College, Cambridge (1980)
- Nonlinearities in Brain Function, Kroc Foundation, Santa Barbara, USA (1982)
- VII Commonwealth Games International Conference, Brisbane, Australia (1982)
- Complex Systems: Operational Approaches in Neurobiology, Physics and Computers, Schloss Elmau, Germany (1984)
- Physics of Complexity, International Center for Theoretical Physics, Trieste, Italy (1986)
- American Society of Biomechanics (1987)
- 51st Meeting of the German and British Physical Societies, Berlin, Germany (1987)
- Centennial Symposium, Information creation in biological complex systems, University of Tokyo, Tokyo, Japan (1989)
- Kenwood-Smith Lectures, University of North Carolina, Greensboro (1989)
- Sigma Xi (Scientific Research Society) Lecturer (1990)
- Solvay Foundation Symposium, Self-organization, emergent properties and learning, University of Texas, Austin (1990)
- W. J. Bryan Lectures in Cognitive Science, Indiana University (1991)
- IV<sup>th</sup> Waddington Memorial Conference, Significance and Form in Nature and Art, Spello-Perugia, Italy (1993)
- 25<sup>th</sup> Anniversary Symposium, Nonlinear Systems in Medicine and Biology, Purdue University (1994)
- Man, Mind, and Music, Milano, Italy (1994)
- Sports, Dance, Movement, and the Brain, Art Institute of Chicago (1995)
- Gordon Conference on Multisegmental Motor Control: Neural, Behavioral, and Biomechanical Approaches, New Hampshire (1995)
- International Conference on Intentional and Perceptual Dynamics, Amsterdam (1995)
- The Fourth International Conference on Simulation of Adaptive Behavior, Cape Cod, MA (1996)
- Sir Runrun Shaw Lectures, Chinese University of Hong Kong (1996)
- Developmental Science and the Holistic Approach, Wiks Castle and the Nobel Institute Stockholm (1997)
- Smithsonian Institution Lecture, Washington, D.C., "How the brain changes its mind" (1999)
- Distinguished Lecture Series (5), Guarantors of *Brain*, London, England, "The self-organizing coordination dynamics of brain and behavior" (1999)
- Plenary talk, NIH delegation to inaugurate the National Brain Research Institute of India, Delhi, October (1999; Gandhi's birthday).
- Fondazione Carlo Erba meeting on "The Emergence of Mind" Milano, Italy, April (2000)

Keynote Speaker, "Great Unsolved Problems in Biology". Society for Experimental Biology, Cambridge, England, August (2000)

Distinguished Lecture Series (3) on Coordination Dynamics at The International School for Computable Economics, October (2000), Trento, Italy.

Herbstakademie on "Self- Organization of Cognition and applications to psychology", Nov. (2000), Monte Verita, Switzerland. "Cognitive Coordination Dynamics"

Opening address, "Directed self-organization", International Conference on Coordination Dynamics 2002, Delray Beach, May, 9-12, 2002.

Keynote Speaker, International Conference on "Uncertainty and Surprise", Ilya Prigogine Center, University of Texas, Austin, April, 2003

Opening address, Cognitive Science in the 21<sup>st</sup> Century, Sao Paulo, Brazil, April, 2003.

Invited Speaker, Royal Dutch Academy of Science meeting on "Binding and its Breakdown", Amsterdam, The Netherlands, September, 2003.

Distinguished Lecturer, "New vistas for the plasticity of brain" National Yang-Ming University, Taiwan, February, 2004

Jane Goodall Distinguished Scientist Lecture, CREST, Portland, Oregon, March, 2004

Presidential (Human Kinetics) Lecture, NASPSPA, Vancouver, BC, June, 2004.

Plenary Speaker, Symposium on "Dynamic Approaches to Consciousness", Antwerp, Belgium, June, 2004

FJ McGuigan Prize Lecture for Understanding the Mind, APA Convention, Washington, DC, August, 2005

A S Iberall Distinguished Lecture on Life and the Sciences of Complexity, University of Connecticut, December 2, 2005

Keynote speaker, International meeting on Cognitive Neuroscience and Motor Control, Dunedin, New Zealand, 7-9 December, 2005

Keynote address, Inaugural Meeting of EuCognition, A European Union research programme to develop Artificial Cognitive Systems, Nice, France, Feb., 16, 2006.

Conference Exceptionnelle du Pr. J.A.Scott Kelso, «Coordinating Brains » Dr Honoris Causa de l'Université Paul Sabatier, Oct., 27, 2006.

Keynote address, IBM Almaden Institute Symposium on "Navigating Complexity", San Jose, California, April, 10-11, 2007.

Invited speaker, Templeton Foundation Symposium on "Top down causation and volition", Yosemite, California, April 19-21, 2007.

Opening address, International Symposium on "Brain-Mind in Probabilistic Hyperspace" Istanbul, Turkey, October 19-21, 2007.

Inaugural Geraldine Pellicchia Memorial Lecture on Coordination and Cognition, University of Connecticut, Storrs, October 26, 2007.

Invited Speaker, 8<sup>th</sup> Olympiad of the Mind Symposium, "Brain Research: Improving Global Harmony", National Academies of Science, Washington, DC, November, 14-16, 2007.

Invited Speaker, Parmenides Foundation "Dynamics in and of attractor landscapes", Elba, May 21-23, 2008.

Keynote Speaker, Delft School of Design "TransThinking the City: Architecture in Mind, Delft, Holland, October 31-Nov 1, 2008.

Pierre de Fermat Lecture, "A brief history of coordination". Symposium on 'Brain, Behavior and Beyond' held in honor of J.A. Scott Kelso, Pierre de Fermat Laureate, University of Toulouse, April, 24, 2009.

B.F. Skinner Lecture, "The complementary nature of coordination dynamics", Advanced

Behavioral Analysis International, Phoenix, Arizona, May, 2009.

Invited Lecture, Society for Psychology and Philosophy, “Mechanisms and principles of adaptive change” Bloomington, Indiana, June, 2009

Keynote Speaker, International Workshop on Rhythmicity and Motor Control, “Coordination dynamics of rhythmic behavior” Sheffield, England, July1-4, 2009.

Invited speaker, Computer Science Research Institute Workshop, University of Ulster “Challenges for Computational Neuroscience: How to handle complexity”, Belfast, N. Ireland, July 7-8, 2009.

Invited address, 7th International Congress on Progress in Motor Control, “Control and Coordination Dynamics”, Marseille, France, July 22-25, 2009.

Invited participant, Ernst Strüngmann Forum, “Dynamic Coordination in the Brain: From Neurons to Mind”, Frankfurt am Main, Germany, August 16-21, 2009.

Invited response to Dr Bert Sakmann, Nobel Laureate, International Conference on Cognitive Robotics, University of Ulster, Derry~Londonderry, N. Ireland, September, 2009.

Invited address “Coordination, Complementarity and Understanding” NSF Meeting on Neurocognitive Networks, Boca Raton, Fla, Jan 28-29, 2010

Keynote speaker, “Coordination, Chimeras and Complementarity”, International Conference on Brain Coordination Dynamics, March 1-5, 2010.

Keynote Speaker, Nour Foundation Symposium on “Shifting Realities”, New York Academy of Sciences, May 12, 2010

Invited Lecture Series (6) “The Science of Coordination: Coordination Dynamics” Technical University of Lisbon, June 1-2, 2010

Keynote Speaker, 21<sup>st</sup> International Conference on Artificial Intelligence and Cognitive Sciences (AICS 2010), Aug 30-Sept 1, 2010

Invited Speaker, Opportunities and Challenges in Social Neuroscience, Utrecht, The Netherlands, March 21-23, 2011

Grande Conferencia, “Coordination and The Complementary Nature”, Programa Cathedra, UFMG, Brazil, June 27, 2011.

Keynote Speaker “Music, Mind and Movement”, Belo Horizonte, Brazil, July 1, 2011.

Invited speaker, International Conference on Perception and Action XVI, “Some consequences of bidirectional coupling between humans, machines and nervous systems. Ouro Preto, Brazil, July 9, 2011

Keynote Speaker, International Conference of the European SKILLS project, Montpellier, France, Dec 15-16, 2011 “How humans learn new skills”.

Opening address, International Conference on Rethinking Meaning, “The Four Ms: Matter, Meaning, Movement and Myth”, University of Bologna, Italy, April 12-13, 2012.

Invited Speaker, NIH Conference on Criticality in Neural Systems, "Criticality and coordination in people and brains", Natcher Auditorium, April 30-May 1, 2012.

Keynote Speaker, European Cooperation in Science and Technology Meeting on The Physics of Competition and Conflict, “Coordination, Conflict and Complementarity”, Aras Moyola, Galway, Ireland, July 11-14, 2012.

Co-Organizer and Invited Speaker, NIMH sponsored Dynamical Neuroscience XX, "The neural choreography of social interaction: How people and brains couple". New Orleans, October 11-12, 2012

Invited participant, Round Table on "Life and Movement", New Helix Center, New York City, October 26, 2012.

Invited Speaker, Tribute to the work of Maxine Sheets-Johnstone, SPEP, University of Rochester, November, 2-4, 2012.

Invited Seminar, NINDS Human Motor Control Section “The Neural Choreography of Behavior: Multiscale Coordination Dynamics”, November, 30, 2012.

Keynote Speaker, Intelligent Systems Research Summit, "Brain breakthroughs: From cells to society", Derry~Londonderry, N. Ireland, June 11-12, 2013.

Plenary Speaker, 4th International Conference on Cognitive Neurodynamics, "Bidirectional coupling between humans, machines and nervous systems", Sigtuna, Sweden, June, 23-27, 2013.

Plenary Speaker, 18th European College of Sports Science, "The neural choreography of coordinated behavior", Barcelona, Spain, June 26-29, 2013.

Keynote Speaker, International Conference on Complexity, Cognition, Urban Planning and Design, "Cities as Coordinative Structures", Delft, Holland, October 10-12, 2013.

Invited Speaker, International Conference on Diversity in Macroeconomics. Economic & Social Research Council (UK), “Dynamic neuromarkers and neuromarker dynamics of social coordination”, Colchester, England, February 24-25, 2014.

Invited Colloquium, Cognitive Science Program, University of Connecticut, “Coordinative structures, criticality and Crick’s conjecture”, April 3-4, 2014.

Invited Speaker, International Conference on Social Science, “The neural choreography of social coordination”, Honolulu, Hawaii, May 28-31, 2014.

Invited Speaker, 2014 IEEE International Conference on Systems, Man & Cybernetics, “Coordination Dynamics: Bidirectional coupling between humans, machines and brains”. San Diego, CA, Oct 5-8, 2014

Keynote Speaker, 18<sup>th</sup> Herbstakademie on The Circularity of Mind and Body, “The dynamical origins of conscious agency”, Heidelberg, Germany, March 26-28, 2015.

Invited Howard Hughes Medical Institute (HHMI) Lecture “Coordinated movement: Making the familiar strange”, The Claremont Colleges, June, 17-18, 2015.

Keynote Address, Society for Complex Systems in Cognitive Science, “From finger wiggling to mobile jiggling: Self Organizing Self”, Pasadena, California, July 21, 2015

Keynote Address, 25<sup>th</sup> Anniversary of Society for Chaos Theory and Life Sciences, “Night thoughts of a dynamicist”, Gainesville, Fla, July 29-31<sup>st</sup>, 2015

Invited Seminar, Intelligent Systems Research Centre, “On the origins of agency”, Ulster University, Magee Campus, Derry, N. Ireland, September 29<sup>th</sup>, 2015.

Invited Visiting Scientist Lectures, The Weizmann Institute of Science, Rehovot, Israel, Contemporary Systems Biology Group, “The Coordination Dynamics of Moving Bodies” and “The Origins of Agency”, November 5<sup>th</sup>-11<sup>th</sup>, 2015.

Invited Lecture “On the self-organizing origins of agency”, Washington University, St Louis, December 2<sup>nd</sup>, 2015.

Invited Lecture, “Self-organizing self”, The Cognitive & Brain Sciences Institute, UC Berkeley, April, 29<sup>th</sup>, 2016.

Keynote speaker, "On the self-organizing origins of agency", Rapaport-Klein Study Group, Austen Riggs Center, Stockbridge, MA, June 16<sup>th</sup>-19<sup>th</sup>, 2016

Invited Speaker, "Bidirectional coupling of bodies, brains, babies and machines", Ettore Majorana Foundation Meeting on Dynamical Coupling: From brain-to-brain to social interaction, Erice, Sicily, Sept 7-13, 2016.

Keynote Speaker, "Self-Organizing Coordination Dynamics of Bodies, Brains, Babies and Machines", Nebraska Research & Innovation Conference on Biomechanics, University of Nebraska, Omaha, Oct 12- 14, 2016.

Invited Speaker, Bernstein Prize Ceremony, 2017. Introduction to Sten Grillner's Research, Progress in Motor Control XI, Miami, Florida, July 19-22, 2017.

Invited Speaker, 9th Olympiad of the Mind, Walls and Borders and Strangers on the Shore: On Learning to Live Together from the Perspective of the Science of Coordination and The Complementary Nature, Chania, Crete, Sept 14-16, 2017.

Keynote Speaker, "Principles of Coordination: Synergies of Synergies", International Congress on Complex Systems in Sport: Linking theory and practice, Camp Nou, Barcelona, Oct 5-6, 2017.

The Tourtellotte Lecture, "The laws that bind us", Kalamazoo College, May 6-8, 2018

The B.F. Skinner Lecture, "Matter, Movement and Mind", ABAI Annual Conference, San Diego, CA, May, 27, 2018

Keynote Speaker, "Social coordination: Laws of the many, the few and the in between", International Conference on Social Cognition in Humans and Robots, Hamburg, Germany, September 28-30, 2018.

Invited Lecture, "The measure of man: From two to infinity", Conference on Coordination Dynamics and Mathematical Education, UC Berkeley, October 24-26, 2018.

Invited talk, "Coordination Dynamics: The Laws that Bind Us", Presidential Scholars in Society and Neuroscience, Columbia University, March 11, 2019.

Invited seminar, "Concepts, methods and tools of Coordination Dynamics for The Complementary Nature of Living Together", First Buffalo Symposium, Pine Ridge Reservation, South Dakota, May 16-18, 2019.

Keynote Address. "What binds us? The 'new' science of coordination", Summer School in Cognitive Science, UNAM, Mexico City, June 2-7, 2019.

Keynote Speaker, Neural Oscillation Conference 2019: Towards Integrative Understanding of Human Nature, Kyoto, Japan, Nov.17-19, 2019.

Keynote Address, VI JORNADAS FIDIAS, Charlas FID "Becoming a Metastabilian", Nov. 14-15, 2020.

Plenary Lecture, International Conference on Complex Systems (CCS2020), "On Coordination", December 4-11, 2020.

## PUBLICATIONS<sup>1</sup>

### 2021/in press

- Argueta, A., Sloan, A., Jones, N., & Kelso, J.A.S. (in press). Emergence of agency in infants. *FAU Undergraduate Research Journal*
- Kelso, J.A.S. (submitted). On the physical basis of biological coordination: Uniting the many and the few
- Torrents, C., Balagué, N., Hristovski, R., Almarcha, M., & Kelso, J.A.S. (in press) Metastable coordination dynamics of collaborative activity in educational settings. *Sustainability*

### 2020

- Alderson, T., Bokde, A., Kelso, J.A.S., Maguire, L., & Coyle, D. (2020). Metastable neural dynamics underlies cognitive performance across multiple behavioural paradigms. *Human Brain Mapping*, 41, 3212-3224. DOI: 10.1002/hbm.25009
- Baillin, F., Lefebvre, A., Pedoux, A., Beauxis, Y., Engemann, D., Maruani, A., Amsellem, F., Kelso, J.A.S., Bourgeron, T., Delorme, R., Dumas, G. (2020) Interactive psychometrics for autism with the Human Dynamic Clamp: Interpersonal synchrony from sensory-motor to socio-cognitive domains. *Frontiers in Psychiatry* 11:510366. doi: 10.3389/fpsy.2020.510366
- Dodel, S., Tognoli, E., & Kelso, J.A.S. (2020) Degeneracy and complexity in neuro-behavioral correlates of team coordination. *Frontiers in Human Neuroscience-Cognitive Neuroscience* <https://doi.org/10.3389/fnhum.2020.00328>. Special Issue on Neurodynamics of Teams: Theory, Models, and Applications
- Dumas, G., Moreau, Q., Tognoli, E., & Kelso, J.A.S. (2020). The Human Dynamic Clamp reveals the fronto-parietal network linking real-time social coordination and cognition. *Cerebral Cortex*, 30 (5), 3271-3285.
- Fuchs, A., & Kelso, J.A.S. (2020). Movement Coordination. In *Synergetics* (A.Hutt & H.Haken, Eds.), pp. 287-308. Springer, New York [https://doi.org/10.1007/978-1-0716-0421-2\\_341](https://doi.org/10.1007/978-1-0716-0421-2_341).
- Kelso, J.A.S. (2020) On becoming a Metastabilian. FIDIAS2020 Cadiz and Malaga DOI: [10.13140/RG.2.2.16106.95684](https://doi.org/10.13140/RG.2.2.16106.95684)

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<sup>1</sup> Excluding Conference Abstracts

Kelso, J.A.S. (2020) On Coordination. CCS2020 Plenary Address DOI: [10.13140/RG.2.2.14848.66568](https://doi.org/10.13140/RG.2.2.14848.66568)

Tognoli, E., & Kelso, J.A.S. (2020) Spectral dissociation of lateralized brain rhythms *Neuroscience Research*, 156, 141-146. <https://doi.org/10.1016/j.neures.2019.12.006>

Tognoli, E., Zhang, M., Fuchs, A., Beetle, C.B., & Kelso, J.A.S. (2020) Coordination Dynamics: A foundation for understanding social behavior. Special Issue on Sensorimotor Foundations of Social Cognition. *Frontiers in Human Neuroscience* | doi: 10.3389/fnhum.2020.00317

Zhang, M., Kalies, W.D., Kelso, J.A.S., & Tognoli, E. (2020) Topological portraits of multiscale coordination dynamics. *Journal of Neuroscience Methods*, 339, 108672. <https://doi.org/10.1016/j.jneumeth.2020.108672>

## 2019

Alderson, T., Bokde, A., Kelso, J.A.S., Maguire, L., & Coyle, D. (2019). Metastable neural dynamics underlies cognitive performance across multiple behavioural paradigms. bioRxiv June, 02 doi: <https://doi.org/10.1101/657569>

Benites, D., Tognoli, E., & Kelso, J. A. S. (in press). Dinâmicas de Coordenação e Metaestabilidade. In V. G. Haase & G. Gauer (Eds.), *Elementos de Psicologia Cognitiva*. Porto Alegre: ARTMED.

Dumas, G., Moreau, Q., Tognoli, E., & Kelso, J.A.S. (2019). The Human Dynamic Clamp reveals the fronto-parietal network linking real-time social coordination and cognition (bioRxiv May 27, 2019 651232) *Cerebral Cortex*, 23 December, 2019. <https://doi.org/10.1093/cercor/bhz308>

Tognoli, E., Benites, D., & Kelso, J.A.S. (submitted) A blueprint for the study of the brain's spatiotemporal patterns. *Frontiers in Computational Neuroscience*

Zhang, M., Beetle, C., Kelso, J.A.S., & Tognoli, E. (2019). Connecting empirical phenomena and theoretical models of biological coordination across scales. *J. Royal Society Interface* 16: 20190360. <http://dx.doi.org/10.1098/rsif.2019.0360>

Zhang, M., Kalies, W.D., Kelso, J.A.S., & Tognoli, E. (2019) Topological portraits of multiscale coordination dynamics. <https://arxiv.org/abs/1909.08809>

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Alderson, T., Bokde, A., Kelso, J.A.S., Maguire, L., & Coyle, D. (2018) Metastable neural dynamics in Alzheimer's disease is disrupted by lesions to the structural connectome. *NeuroImage*, 183, 438-455.

- DeGuzman, G.C. & Kelso, J.A.S. (1992/2018). The flexible dynamics of biological coordination: Living in the niche between order and disorder. In A.B. Baskin & J.E. Mittlethal (Eds.), *Principles of Organization of Organisms*. Routledge, New York, pp. 11-34.
- Dumas, G., Lefebvre, A., Zhang, M., Tognoli, E., & Kelso, J.A.S. (2018) The human dynamic clamp: a probe for social coordination dynamics. In Mueller, S., et al (Eds) *Complexity and Synergetics*, Springer-Verlag, Heidelberg, pp. 317-333.
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Fuchs, A., Hotiu, A., Jantzen, K.J., Steinberg, F., & Kelso, J.A.S. (2015) Diffusion tensor imaging in mild traumatic brain injuries-Acute state and short-term recovery. *Medical Research Archives*

Kostrubiec, V., Dumas, G., De Guzman, G.C., Zanone, P.-G., & Kelso, J.A.S. (2015) The Virtual Teacher (VT) Paradigm: Learning new patterns of interpersonal coordination using the Human Dynamic Clamp. *PLoS ONE* 10(11): e0142029. doi:10.1371/journal.pone.0142029

Tognoli, E. & Kelso, J.A.S. (2015). The coordination dynamics of social neuromarkers. *Frontiers in Human Neuroscience*, 9, 563, <http://dx.doi.org/10.3389/fnhum.2015.00563>

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## 2014

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- Tognoli, E., & Kelso, J.A.S. (2013) System and method for analysis of spatio-temporal data. US Patent 8542916



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March, 1993 - Received M.S. degree from the Georgia Institute of Technology

July, 1995 - Attended summer school on cognitive modeling in ACT-R at Carnegie Mellon University

September, 1995 - Received Ph.D. degree with minor in Linguistics from the Georgia Institute of Technology

September 1995 to June 1998 - Postdoctoral research scientist at Indiana University as part of a developmental training grant

September 1997 to December 1997 - Adjunct professor at Indiana University

August 1998 to May 2004 - Assistant professor at Florida Atlantic University

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## **Refereed Articles, Book Chapters, and Conference Proceedings**

Kersten, A.W., Earles, J.L., Vernon, L.L., McRostie, N., & Riso, A. (in press). Negative emotion increases false memory for person/action conjunctions. *Cognition & Emotion*.  
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- Kersten, A.W., Meissner, C.A., Lechuga, J., Schwartz, B.L., Albrechtsen, J.S., & Iglesias, A. (2010). English speakers attend more strongly than Spanish speakers to manner of motion when classifying novel objects and events. *Journal of Experimental Psychology: General*, 139, 638-653. [doi.org/10.1037/a0020507](https://doi.org/10.1037/a0020507)
- Chin, S.L., & Kersten, A.W. (2010). The application of the Less is More hypothesis in foreign language learning. In S. Ohlsson & R. Catrambone (Eds.), *Proceedings of the 32<sup>nd</sup> Annual Conference of the Cognitive Science Society* (pp. 150-155). Austin, TX: Cognitive Science Society.

- Kersten, A.W., & Earles, J.L. (2010). Effects of aging, distraction, and response pressure on the binding of actors and actions. *Psychology and Aging, 25*, 620-630. [doi.org/10.1037/a0019131](https://doi.org/10.1037/a0019131)
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- Kersten, A.W., Smith, L.B., & Yoshida, H. (2006). Influences of object knowledge on the acquisition of verbs in Japanese and English-speaking children. In K. Hirsh-Pasek and R. Golinkoff (Eds.), *Action meets word: How children learn verbs* (pp. 499-524). Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195170009.003.0020>
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- Kersten, A.W., & Earles, J.L. (2004). Semantic context influences memory for verbs more than memory for nouns. *Memory & Cognition, 32*, 198-211. [doi.org/10.3758/BF03196852](https://doi.org/10.3758/BF03196852)
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- Goldstone, R.L., & Kersten, A.W. (2003). Concepts and categorization. In A. F. Healy & R. W. Proctor (Eds.), *Experimental Psychology* (pp. 599-621). Volume 4 in I. B. Weiner (Editor-in-Chief) *Handbook of psychology*. Hoboken, NJ: Wiley. [doi.org/10.1002/0471264385.wei0422](https://doi.org/10.1002/0471264385.wei0422)
- Earles, J.L., & Kersten, A.W. (2002). Directed forgetting of actions by younger and older adults. *Psychonomic Bulletin and Review, 9*, 383-388. [doi.org/10.3758/BF03196297](https://doi.org/10.3758/BF03196297)
- Kersten, A.W., & Smith, L.B. (2002). Attention to novel objects during verb learning. *Child Development, 73*, 93-109. [doi.org/10.1111/1467-8624.00394](https://doi.org/10.1111/1467-8624.00394)
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- Earles, J.L., & Kersten, A.W. (2000). Adult age differences in memory for verbs and nouns. *Aging, Neuropsychology, and Cognition, 7*, 130-139. [doi.org/10.1076/1382-5585\(200006\)7:2:1-U;FT130](https://doi.org/10.1076/1382-5585(200006)7:2:1-U;FT130)

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- Earles, J.L., & Kersten, A.W. (1999). Processing speed and adult age differences in activity memory. *Experimental Aging Research*, 25, 243-253. [doi.org/10.1080/036107399244011](https://doi.org/10.1080/036107399244011)
- Earles, J.L., Kersten, A.W., Turner, J.M., & McMullen, J. (1999). Influences of age, performance, and item relatedness on verbatim and gist recall of verb-noun pairs. *Journal of General Psychology*, 126, 97-110. [doi.org/10.1080/00221309909595354](https://doi.org/10.1080/00221309909595354)
- Kersten, A.W., Goldstone, R.L., & Schaffert, A. (1998). Two competing attentional mechanisms in category learning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 24, 1437-1458. [doi.org/10.1037/0278-7393.24.6.1437](https://doi.org/10.1037/0278-7393.24.6.1437)
- Kersten, A.W. (1998). An examination of the distinction between nouns and verbs: Associations with two different kinds of motion. *Memory & Cognition*, 26, 1214-1232. [doi.org/10.3758/BF03201196](https://doi.org/10.3758/BF03201196)
- Earles, J.L., & Kersten, A.W. (1998). Influences of age and perceived activity difficulty on activity recall. *Journals of Gerontology: Psychological Sciences*, 53B, P324-P328. [doi.org/10.1093/geronb/53B.5.P324](https://doi.org/10.1093/geronb/53B.5.P324)
- Kersten, A.W. (1998). A division of labor between nouns and verbs in the representation of motion. *Journal of Experimental Psychology: General*, 127, 34-54. [doi.org/10.1037/0096-3445.127.1.34](https://doi.org/10.1037/0096-3445.127.1.34)
- Kersten, A.W., & Billman, D.O. (1997). Event category learning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 23, 638-658. [doi.org/10.1037/0278-7393.23.3.638](https://doi.org/10.1037/0278-7393.23.3.638)
- Kersten, A.W., & Billman, D.O. (1995). The roles of motion and moving parts in noun and verb meanings. *Proceedings of the Seventeenth Annual Conference of the Cognitive Science Society*. Hillsdale: Erlbaum.
- Salthouse, T.A., & Kersten, A.W. (1993). Decomposing adult age differences in symbol arithmetic. *Memory and Cognition*, 21, 699-710. [doi.org/10.3758/BF03197200](https://doi.org/10.3758/BF03197200)
- Kersten, A.W., & Billman, D.O. (1992). The role of correlational structure in learning event categories. *Proceedings of the Fourteenth Annual Conference of the Cognitive Science Society*. Hillsdale: Erlbaum.

#### **Manuscripts Submitted for Publication**

- Kersten, A.W., Earles, J.L., & Brymer, J. Effects of age and self-performance on memory for who did what.

St. Peter, K.S., Vernon, L.L., & Kersten, A.W. The influence of movement on negative and positive emotional responses to animals.

**Grants Submitted or Awarded**

Project Title: Influences of Executive and Memory Functioning on Memory for the Sources of Actions and Words

Budget Period: 8/15/19 – 8/14/22

Funding Agency: National Institutes of Health

Principal Investigator: Alan Kersten

Award Amount: \$437,674

Status: Awarded

Project Title: The Roles of Frontal and Medial Temporal Lobe Functioning in Memory for Events

Budget Period: 3/1/12 – 2/28/14

Funding Agency: Florida Atlantic University College of Science

Principal Investigator: Alan Kersten

Award Amount: \$5,000

Status: Awarded

Project Title: Adult Age Differences in Binding Actors and Actions

Budget Period: 9/1/04 – 6/30/08

Funding Agency: National Institutes of Health

Principal Investigator: Alan Kersten

Award Amount: \$206,700

Status: Awarded

Project Title: Adult Age Differences in Event Memory

Budget Period: 1/1/04 – 12/31/04

Funding Agency: Florida Atlantic University Division of Research

Principal Investigator: Alan Kersten

Award Amount: \$14,900

Status: Awarded

Project Title: Verb Learning in English and Spanish Speakers

Budget Period: 8/1/00 – 7/31/01

Funding Agency: Florida Atlantic University Charles E. Schmidt College of Science

Principal Investigator: Alan Kersten

Award Amount: \$5000

Status: Awarded

**Awards**

1999 APA Division of Experimental Psychology New Investigator Award in Experimental Psychology: General

2014 Florida Atlantic University Charles E. Schmidt College of Science Distinguished Teacher of the Year

2020 Florida Atlantic University Charles E. Schmidt College of Science Researcher of the Year – Associate Professor Level

### **Selected Conference Presentations**

- Kersten, A.W., Earles, J.L., Smithwick, M., & Petroz, C. (2020, November). Effects of distraction on source memory for actions. Paper presented at the Meeting of the Psychonomic Society, Austin, TX.
- Kersten, A.W., Earles, J.L., Brydon, C., Lopes, M., & Boerth-Dryden, L. (2020, April). The PAC test: A novel method for testing the binding of features in episodic memory. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
- St. Peter, K., Vernon, L., & Kersten, A. (2020, April). Influence of movement on negative emotional reactions to animals. Poster presented at the Meeting of the Southeastern Psychological Association, New Orleans, LA.
- Kersten, A.W., Earles, J.L., Smithwick, M., & Frank, C.S. (2019, November). Memory for the sources of actions and words. Paper presented at the Meeting of the Psychonomic Society, Montreal, Canada.
- Kersten, A.W., Earles, J.L., Perry, J. (2018, November). Influences of actor appearance and movement features on action recognition. Poster presented at the Meeting of the Psychonomic Society, New Orleans, LA.
- Kersten, A.W., Earles, J.L., Aucello, K., & Tautiva, E. (2018, April). Neuropsychological correlates of source memory for actions depend upon the number of sources. Plenary presentation at the Cognitive Aging Conference, Atlanta, GA.
- Kersten, A.W., Earles, J.L., Vernon, L.L., McRostie, N., & Riso, A. (2017, November). Effects of emotional context on false memory for person/action conjunctions. Poster presented at the Meeting of the Psychonomic Society, Vancouver, BC.
- Pruzansky, R.M., Kersten, A.W., & Earles, J.L. (2017, April). Children and adults benefit from object consistency when learning novel verbs. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Austin, TX.
- Kersten, A.W., & Earles, J.L. (2016, November). Executive function in older adults predicts source memory for actions only for small numbers of sources. Paper presented at the Meeting of the Psychonomic Society, Boston, MA.

- Kersten, A.W., Earles, J.L., Khan, L., & Negri, L. (2016, October). Effects of attending to manner and path on memory for characters in events. Poster presented at the Second Annual Florida Psycholinguistics Meeting, Davie, FL.
- Kersten, A.W., & Earles, J.L. (2016, May). Feelings of familiarity and false memory for specific associations resulting from mugshot exposure. Paper presented at Fishschrift: Applied Cognition and the Cognitive Interview: A Conference in Honor of Dr. Ron Fisher, Miami, FL.
- Kersten, A.W., Earles, J.L., & Negri, L. (2015, November). Memory for characters and their motions in events. Paper presented at the Meeting of the Psychonomic Society, Chicago, IL.
- Kersten, A.W., Earles, J.L., & Berger, J.D. (2014, November). Recollection and unitization in memory for people's paths and manners of motion. Paper presented at the Meeting of the Psychonomic Society, Long Beach, CA.
- Pruzansky, R., Kersten, A.W., & Earles, J.L. (2014, May). Increasing complexity in a blocked learning order may facilitate novel verb generalization. Poster presented at the Convention of the Association for Psychological Science, San Francisco, CA.
- Kersten, A.W., Earles, J.L., & Paulvin, C. (2014, April). Effects of frontal and medial temporal lobe functioning on memory for actors and their actions. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
- Kersten, A.W., Earles, J.L., & Paulvin, C. (2013, November). Frontal and medial temporal contributions to memory for actor-action associations. Paper presented at the Meeting of the Psychonomic Society, Toronto, ON.
- Earles, J.L., Kersten, A.W., & Moriarity, B.L. (2013, November). Effects of semantic context on memory for nouns and verbs sharing the same root. Poster presented at the Meeting of the Psychonomic Society, Toronto, ON.
- Kersten, A.W., & Terrazas, D. (2013, April). Attention to path and manner of motion in English- and Spanish-speaking children. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Seattle, WA.
- Pruzansky, R., Kersten, A.W., & Earles, J.L. (2013, April). Is he flooping or wuzzing? Novel verb generalization strategies of preschool children. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Seattle, WA.
- Kersten, A.W., Earles, J.L., & Berger, J.D. (2012, November). Recollection and unitization in associating actors with actions. Poster presented at the Meeting of the Psychonomic Society, Minneapolis, MN.
- Earles, J.L., & Kersten, A.W. (2012, November). Influences of familiarity and recollection on memory for event roles. Poster presented at the Meeting of the Psychonomic Society, Minneapolis, MN.

- Kersten, A., Earles, J.L., Walsh, J., & Keif, A.A. (2012, April). Effects of age and self-performance on memory for who did what. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
- Rowell, S.F., Earles, J.L., & Kersten, A.W. (2012, April). Effects of age on unconscious plagiarism. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
- Kersten, A.W. (2011, November). Attention to manner of motion and moving parts in object categorization. Paper presented at the Meeting of the Psychonomic Society, Seattle, WA.
- Chin, S.L., & Kersten, A.W. (2011, July). Motion influences children's attention to object properties during noun learning. Poster presented at the Conference of the Cognitive Science Society, Boston, MA.
- Kersten, A.W., Berger, J.D., & Earles, J.L. (2010, November). Effects of attending to manner and path on memory for actors. Poster presented at the Meeting of the Psychonomic Society, St. Louis, MO.
- Earles, J.L., & Kersten, A.W. (2010, November). Effects of static and moving lineups on eyewitness memory for events. Paper presented at the Meeting of the Psychonomic Society, St. Louis, MO.
- Chin, S.L., & Kersten, A.W. (2010, August). The application of the Less is More hypothesis in foreign language learning. Paper presented at the Conference of the Cognitive Science Society, Portland, OR.
- Curtayne, E., Peluso, J., & Kersten, A. (2010, May). Thematic arousal and attention magnets: Different effects for reported emotional reactions and event valence. Poster presented at the Convention of the Association for Psychological Science, Boston, MA.
- Earles, J.L., & Kersten, A.W. (2010, April). Age differences in the use of context to prevent binding errors in event memory. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
- Butler, L.A., & Kersten, A.W. (2010, March). Forgetting who did what: The impact of emotion on binding in memory. Poster presented at the American Psychology-Law Society Conference, Vancouver, BC.
- Kersten, A.W., Meissner, C.A., Lechuga, J., Schwartz, B.L., Albrechtsen, J.S., & Iglesias, A. (2009, November). Classification of novel manners of motion by monolingual English and Spanish speakers. Paper presented at the Meeting of the Psychonomic Society, Boston, MA.
- Earles, J.L., Kersten, A.W., Butler, L.A., & Rowell, S.F. (2009, November). Binding errors in memory for criminal actions and their perpetrators. Poster presented at the Meeting of the Psychonomic Society, Boston, MA.
- Kersten, A.W., Chin, S.L., Earles, J.L., & Thomas, J.A. (2009, April). Attention to manner of motion during noun and verb learning. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Denver, CO.



- Kersten, A.W., Berger, J.D., & Earles, J.L. (2008, November). Associating human actors with two different kinds of motion. Paper presented at the Meeting of the Psychonomic Society, Chicago, IL.
- Earles, J.L., Kersten, A.W., Vernon, L.L., & Starkings, R. (2008, November). Effects of emotion on feature memory and feature binding in event memory. Poster presented at the Meeting of the Psychonomic Society, Chicago, IL.
- Kersten, A.W., & Earles, J.L. (2008, April). Effects of mugshot viewing on memory for events in young and older adults. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
- Earles, J.L., & Kersten, A.W. (2008, April). Effects of age and repetition on the binding of actors and actions. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
- Kersten, A.W., Chin, S.L., & Cedeno, M.A. (2007, November). Attention to manner of motion in a speeded classification task. Paper presented at the Meeting of the Psychonomic Society, Long Beach, CA.
- Earles, J.L., Kersten, A.W., Curtayne, E.S., & Perle, J.G. (2007, November). Actor similarity and binding errors in event memory. Poster presented at the Meeting of the Psychonomic Society, Long Beach, CA.
- Kersten, A.W. (2007, April). Attention to object properties during the learning of intrinsic and extrinsic motion verbs. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Boston, MA.
- Kersten, A.W., Meissner, C.A., Schwartz, B.L., Iglesias, A., & Albrechtsen, J.S. (2006, November). Effects of linguistic context and age of exposure to English on attention to manner of motion. Paper presented at the Meeting of the Psychonomic Society, Houston, TX.
- Earles, J.L., Kersten, A.W., & Upshaw, C. (2006, November). False recollection of the role played by an actor in an event: Implications for eyewitness testimony. Poster presented at the Meeting of the Psychonomic Society, Houston, TX.
- Kersten, A.W., & Earles, J.L. (2006, April). Effects of age and temporal proximity on false bindings of actors with actions. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
- Earles, J.L., Kersten, A.W., & Pacific, J.B. (2006, April). Effects of age and distraction on unconscious transference in eyewitness memory. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
- Kersten, A.W., Earles, J.L., & Lomer, A. (2005, November). Effects of age and response deadlines on unconscious transference in eyewitness memory. Paper presented at the Meeting of the Psychonomic Society, Toronto, ON.

- Kersten, A.W., Earles, J.L., Klein, E., & Jonas, F. (2005, November). False associations of actors with actions as a result of mugshot viewing. Poster presented at the Meeting of the Psychonomic Society, Toronto, ON.
- Kersten, A.W., & Iglesias, A. (2005, April). Children attend to intrinsic motions when learning nouns. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Atlanta, GA.
- Kersten, A.W., & Earles, J.L. (2004, November). Effects of semantic context on memory for nouns and verbs. Paper presented at the Meeting of the Psychonomic Society, Minneapolis, MN.
- Kersten, A.W., Earles, J.L., Curtayne, E.S., & Pacific, J.B. (2004, April). Effects of familiarity and recollection on the binding of actors and actions in eyewitness memory. Paper presented at the Meeting of the Cognitive Aging Conference, Atlanta, GA.
- Kersten, A.W., Earles, J.L., Curtayne, E.S., & Lane, J.C. (2003, November). Adult age differences in binding actors and actions in eyewitness memory. Poster presented at the Meeting of the Psychonomic Society, Vancouver, BC.
- Earles, J.L., Kersten, A.W., Klein, E., & Phelan, A. (2003, November) Event memory in and out of context. Poster presented at the Meeting of the Psychonomic Society, Vancouver, BC.
- Kersten, A.W., Meissner, C.A., Schwartz, B.L., & Rivera, M.L. (2003, April). Differential sensitivity to manner of motion in adult English and Spanish speakers. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Tampa, FL.
- Kersten, A.W., Earles, J.L., & Curtayne, E. (2002, November). Binding actors and actions in eyewitness memory. Paper presented at the Meeting of the Psychonomic Society, Kansas City, MO.
- Earles, J.L., Kersten, A.W., & Curtayne, E. (2002, November). Effects of distraction on unconscious transference in eyewitness memory. Poster presented at the Meeting of the Psychonomic Society, Kansas City, MO.
- Earles, J.L., Kersten, A.W., Berlin Más, B., & Miccio, D. (2002, April). Age differences in the effects of task-induced anxiety on task recall. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
- Kersten, A.W., & Rivera, M.L. (2001, November). English and Spanish speakers attend differently to attributes of novel events. Paper presented at the Meeting of the Psychonomic Society, Orlando, FL.
- Earles, J.L., & Kersten, A.W. (2001, November). Older adults have difficulty remembering difficult activities. Poster presented at the Meeting of the Psychonomic Society, Orlando, FL.

- Kersten, A.W. (2001, April). Attention to novel objects during verb learning in different languages. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Minneapolis, MN.
- Kersten, A.W., & Earles, J.L. (2000, November). A role for the motions of whole objects in object representations. Paper presented at the Meeting of the Psychonomic Society, New Orleans, LA.
- Earles, J.L., & Kersten, A.W. (2000, November). Effects of semantic context on memory for nouns and verbs. Poster presented at the Meeting of the Psychonomic Society, New Orleans, LA.
- Kersten, A.W., Earles, J.L., Dietrich, E., & Turner, S. (2000, April). The effects of age and encoding context on the recognition of nouns and verbs. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
- Kersten, A.W. (2000, February). The different types of motion conveyed by verbs and nouns in event descriptions. Paper presented at the Workshop on Conceptualization, Heidelberg, Germany.
- Kersten, A.W., & Earles, J.L. (1999, November). Is less really more? Learning a miniature artificial language in adulthood. Paper presented at the Meeting of the Psychonomic Society, Los Angeles, CA.
- Kersten, A.W. (1999, April). Children attend to objects as well as motions when learning verbs. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Albuquerque, NM.
- Kersten, A.W. (1998, November). Object-based and part-based attention during categorization of a complex object. Poster presented at the Meeting of the Psychonomic Society, Dallas, TX.
- Earles, J.L., & Kersten, A.W. (1998, November). Influences of age and perceived activity difficulty on activity recall. Poster presented at the Meeting of the Psychonomic Society, Dallas, TX.
- Earles, J.L., Kersten, A.W., Turner, J.M., & McMullen, J. (1998, April). Influences of age, performance, and context on verbatim and gist recall of verb-noun pairs. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
- Kersten, A.W. (1997, November). The development of noun and verb learning biases. Poster presented at the Meeting of the Psychonomic Society, Philadelphia, PA.
- Earles, J.L., Kersten, A.W., & Downie, N. (1997, November). Directed forgetting of performed actions. Poster presented at the Meeting of the Psychonomic Society, Philadelphia, PA.
- Kersten, A.W., Fancher, C., Remec, N.M., & Schaefer, J.M. (1997, April). Evidence for different learning biases when children learn nouns and verbs. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Washington, DC.

- Kersten, A.W., Goldstone, R.L., & Schaffert, A. (1996, November). The segmentation of events into features during category learning. Poster presented at the Meeting of the Psychonomic Society, Chicago, IL.
- Earles, J.L., Kersten, A.W., Hadden, J., & Zola, R. (1996, November). Age differences in memory for nouns and verbs. Poster presented at the Meeting of the Psychonomic Society, Chicago, IL.
- Kersten, A.W., & Billman, D.O. (1995, July). The roles of motion and moving parts in noun and verb meanings. Poster presented at the Conference of the Cognitive Science Society, Pittsburgh, PA.
- Kersten, A.W., & Billman, D.O. (1994, November). Dynamic properties and frames of reference in object and event category learning. Paper presented at the Meeting of the Psychonomic Society, St. Louis, MO.
- Kersten, A.W., & Billman, D.O. (1992, August). The role of correlational structure in learning event categories. Paper presented at the Conference of the Cognitive Science Society, Bloomington, IN.
- Billman, D.O., & Kersten, A.W. (1991, November). Learning event categories: Effects of correlational structure. Paper presented at the meeting of the Psychonomic Society, San Francisco, CA.

**General Research Interests**

Language Development  
Categorization  
Memory and Aging  
Event Perception and Memory  
Object Recognition  
Biological Bases of Perception and Memory

**Teaching Interests**

Psychology of Human Development  
Cognition  
Language Acquisition  
Human Learning and Memory  
Language and Thought  
Human Memory and the Hippocampus  
Memory and Eyewitness Testimony

**Teaching Experience**

May 2004 to Present – Associate Professor, Florida Atlantic University

August 1998 to May 2004 - Assistant Professor, Florida Atlantic University

September 1997 to December 1997 - Visiting Assistant Professor in Developmental Psychology at Indiana University

Spring 1995 - Instructor of Statistics lab at Georgia Tech

Summer 1994 - Lecturer in Introductory Psychology class at Georgia Tech

Winter 1992, 1993, and 1994 - Instructor of Cognition lab at Georgia Tech

Fall 1991 to Spring 1995 - Teaching assistant at Georgia Tech

## Service

### Journal reviews

Consulting Editor for *Memory & Cognition* – March 2016 to Present

Member of the Review Committee for the Psychonomic society – May 2018 to Present

Ad-hoc reviewer for *Acta Psychologica*, *Applied Cognitive Psychology*, *Applied Psycholinguistics*, *Behavioural Brain Research*, the Biennial Meeting of the Society for Research in Child Development, *Child Development*, *Cognition*, *Cognitive Science*, *Consciousness and Cognition*, *Developmental Review*, *Developmental Psychology*, *Developmental Science*, *Experimental Aging Research*, *Experimental Psychology*, the *Journal of Child Language*, the *Journal of Cognitive Psychology*, the *Journal of Cognitive Science*, the *Journal of Experimental Child Psychology*, the *Journal of Experimental Psychology: Applied*, the *Journal of Experimental Psychology: Human Perception and Performance*, the *Journal of Experimental Psychology: Learning, Memory, and Cognition*, the *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, the *Journal of Memory and Language*, *Language Learning & Development*, *Memory*, *Memory & Cognition*, the *Proceedings of the Cognitive Science Society*, *Psychology & Aging*, *PLOS ONE*, *Psychonomic Bulletin & Review*, and the *Quarterly Journal of Experimental Psychology*.

### Grant proposal reviews

Ad-hoc reviewer for the National Science Foundation and for the Economic & Social Research Council.

## Johanna Elizabeth Kowalko

Assistant Professor  
Florida Atlantic University  
MC-19, Room 207  
3535 Parkside Dr.  
Jupiter, Florida 33458  
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### Education/Employment History

#### Education

2013	Ph.D., Genetics	Harvard University, Boston MA
2005	B.A., Biology	Brown University, Providence MA

#### Research experience/Employment

2018-present	<b>Assistant Professor</b> , Wilkes Honors College at Florida Atlantic University
2014-2018	<b>Adjunct Assistant Professor</b> , Iowa State University
2013-2018	<b>Assistant Scientist (Independent Postdoc)</b> , Iowa State University Research mentor: Dr. Jeffrey Essner
2007-2013	<b>Graduate Research</b> , Harvard University Research mentor: Dr. Clifford Tabin Thesis: The genetic basis of behavior in the blind Mexican cavefish, <i>Astyanax mexicanus</i>
2005-2007	<b>Research Technician</b> , Children's Hospital of Philadelphia Research supervisor: Dr. Michael Sebert
2004-2005	<b>Laboratory Assistant and Senior Thesis Project</b> , Brown University Research mentor: Dr. David Rand

### Scholarship/Research/Creative Activity

#### Publications in print

##### *Refereed journal articles – Research articles*

Jaggard J, Lloyd E, Yuiska A, Patch A, Fily Y, **Kowalko JE**, Appelbaum L, Duboue ER, Keene AC. Cavefish brain atlases reveal functional and anatomical convergence across independently evolved populations. *Science Advances*. 2020 Sep 16; 6(38):eaba3126. doi: 10.1126/sciadv.aba3126. Print 2020 Sept.

Paz A, McDole B, **Kowalko JE**, Duboue ER, Keene AC. Evolution of the acoustic startle response of Mexican cavefish. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution (Impact Factor: 1.897)*. 2020 Nov;334(7-8):474-485. doi: 10.1002/jez.b.22988. Epub 2020 Aug 10.

Chin JSR, Loomis CL, Albert LT, Medina-Trenche S, **Kowalko J**, Keene AC, Duboue ER. Analysis of stress responses in *Astyanax* larvae reveals heterogeneity among different

populations. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* (Impact Factor: 1.897). 2020 Nov;334(7-8):486-496. Doi: 10.1002/jez.b.22987. Epub 2020 Aug 6.

Sifuentes-Romero I, Ferrufino E, Thakur S, Laboissonniere LA, Solomon M, Smith CL, Keene AC, Trimarchi JM, **Kowalko JE**. Repeated evolution of eye loss in Mexican cavefish: Evidence of similar developmental mechanisms in independently evolved populations. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* (Impact Factor: 1.897). 2020 Nov;334(7-8):423-437. doi: 10.1002/jez.b.22977. Epub 2020 July 2.

Krishnan J, Persons JL, Peuß R, Hussan H, Kenzior A, Xiong S, Olsen L, Maldonado E, **Kowalko JE**, Rohner N. Comparative transcriptome analysis of wild and lab populations of *Astyanax mexicanus* uncovers differential effects of environment and morphotype on gene expression. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* (Impact Factor: 1.897). 2020 Nov;334(7-8):530-539. doi: 10.1002/jez.b.22933. Epub 2020 Feb 4.

Stahl BA, Jaggard JB, Chin JSR, **Kowalko JE**, Keene AC, Duboue ER. Manipulation of gene function in Mexican cavefish. *Journal of Visualized Experiments* (Impact Factor: 1.325). 2019 April 22;(146). doi: 10.3791/59093.

Gunesch JT, Angelo LS, Mahaptra S, Deering RP, **Kowalko JE**, Sleiman P, Tobias JW, Monaco-Shawver L, Orange JS, Mace EM. Genome-wide analysis and functional profiling of human NK cell lines. *Molecular Immunology* (Impact Factor: 3.641). 2019 Nov;115:64-75. doi: 10.1016/j.molimm.2018.07.015. Epub 2018 Jul 24.

Tabin JA\*, Aspiras A, Martineau B, Riddle M, **Kowalko J**, Borowsky R, Rohner N, Tabin CJ. Temperature preference of cave and surface populations of *Astyanax mexicanus*. *Developmental Biology* (Impact Factor: 2.895). 2018 Sep 15;441(2):338-344. doi: 10.1016/j.ydbio.2018.04.017. Epub 2018 April 25.

Klaassen H, Wang Y, Adamski K, Rohner N, **Kowalko JE**. CRISPR mutagenesis confirms the role of *oca2* in melanin pigmentation in *Astyanax mexicanus*. *Developmental Biology* (Impact Factor: 2.895). 2018 Sep 15;441(2):313-318. doi: 10.1016/j.ydbio.2018.03.014. Epub 2018 Mar 16.

**Kowalko JE**, Ma L, Jeffery WR. Genome Editing in *Astyanax mexicanus* Using Transcription Activator-like Effector Nucleases. *Journal of Visualized Experiments* (Impact Factor: 1.325). 2016 June 20; (112):54113. doi: 10.3791/54113.

Ma L, Jeffery WR, Essner JJ, **Kowalko JE**. Genome editing using TALENs in blind Mexican cavefish, *Astyanax mexicanus*. *PLoS One* (Impact Factor: 2.740). 2015 Mar 16; 10(3): e0119370. doi: 10.1371/journal.pone.0119370. eCollection 2015.

Kuo T, **Kowalko JE**, DiTommaso T, Nyambi M, Montoro DT, Essner JJ, Whited JL. TALEN-mediated gene editing of the *thrombospondin-1* locus in axolotl. *Regeneration* 2015 Apr 8;2(1):37-43. Doi: 10.1002/reg2.29. eCollection 2015 Feb.

Rohner N, Jarosz DF, **Kowalko JE**, Yoshizawa M, Jeffery WR, Borowsky RL, Lindquist S, Tabin CJ. Cryptic variation in morphological evolution: HSP90 as a capacitor for the loss of



eyes in cavefish. *Science* (Impact Factor: 41.845). 2013 Dec 13; 342(6164): 1372-5. Doi: 10.1126/science.1240276.

**Kowalko JE**, Rohner N, Linden TA, Rompani SB, Warren WC, Borowsky R, Tabin CJ, Jeffery WR, Yoshizawa M. Convergence in feeding posture occurs through different genetic loci in independently evolved cave populations of *Astyanax mexicanus*. *Proceedings of the National Academy of Sciences* (Impact Factor: 9.412). 2013 Oct 15; 110(42): 1633-8.

**Kowalko JE**, Rohner N, Rompani SB, Peterson BK, Linden TA, Yoshizawa M, Kay EH, Weber J, Hoekstra HE, Jeffery WR, Borowsky R, Tabin CJ. Loss of schooling behavior in cavefish through sight-dependent and sight-independent mechanisms. *Current Biology* (Impact Factor: 9.601). 2013 Oct 7; 23(19): 1874-83.

**Kowalko JE**, Sebert ME. The *Streptococcus pneumoniae* competence regulatory system influences respiratory tract colonization. *Infection and Immunity* (Impact Factor: 3.256). 2008 Jul;76(7):3131-40.

*Refereed journal articles – Reviews/commentaries/Editorials*

**Kowalko JE**, Franz-Odendall T, Rohner N. Introduction to the Special Issue: Cavefish – Adaptation in the dark. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* (Impact Factor: 1.897). 2020 Nov; 334(7-8):393-396. doi: 10.1002/jez.b.23014. Epub 2020 Dec 1.

Mammola S, Amorim IR, Bichuette ME, Borges PA, Cheeptham N, Cooper SJB, Culver DC, Deharveng L, Eme D, Ferreira RL, Fiser C, Fiser Z, Fong DW, Griebler C, Jeffery WR, Jugovic J, **Kowalko JE**, Lilley TM, Malard F, Manenti R, Martinez A, Meierhofer MB, Niemiller ML, Northup DE, Pellegrini TG, Pipan T, Protas M, Reboleira ASPS, Venarsky MP, Wynne JJ, Zamajster M, Cardoso P. Fundamental research questions in subterranean biology. *Biological Reviews Cambridge Philosophical Society* (Impact Factor: 10.701). 2020 Dec;95(6):1855-1872. doi: 10.1111/brv.12642. Epub 2020 Aug 25.

**Kowalko JE**. In the Spotlight – Early Career Researcher. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* (Impact Factor: 1.897). 2020 Nov;334(7-8):389-390. doi: 10.1002/jez.b.22989. Epub 2020 Aug 10.

McGaugh SE, **Kowalko JE**, Duboue E, Lewis P, Franz-Odendall T, Rohner N, Gross JB, Keene A. Dark world rises: The emergence of cavefish as a model of the study of evolution, behavior and disease. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* (Impact Factor: 1.897). 2020 Nov;334(7-8):397-404. doi: 10.1002/jez.b.22978. Epub 2020 July 7.

**Kowalko JE**. Utilizing the blind cavefish *Astyanax mexicanus* to understand the genetic basis of behavioral evolution. *Journal of Experimental Biology* (Impact Factor: 3.014). 2020 Feb 7;223(Pt Suppl 1):jeb208835. doi: 10.1242/jeb.208835.

*Encyclopedia articles*

**Kowalko JE**. Adaptations: Behavioral. In White W, Culver D and Pipan T editors. *Encyclopedia of Caves*, 3<sup>rd</sup> Edition. Elsevier. p. 24-32. 2019 May 16.

### Publications in Press

Warren WC, Aspiras A, Boggs TE, Borowsky R, Carlson BM, Ferrufino E, Gross JB, Hillier L, Hu Z, Keene AC, Kenzior A, **Kowalko JE**, Tomlinson C, Kremitzki M, Lemieux ME, Graves-Lindsay T, McGaugh SE, Miller JT, Mommersteeg MTM, Moran RL, Peuß R, Rice ES, Riddle MR, Sifuentes-Romero I, Stanhope BA, Tabin CJ, Thakur S, Yamamoto Y, Rohner N. High-quality *Astyanax mexicanus* genome sheds new light on evolution in the dark. *In press*. Nature Communications. Expected publication date: 2021.

### Publications under review

Mack KL, Jaggard JB, Persons JL, Passow CN, Stahl BA, Ferrufino E, Tsuchiya D, Smith SE, Slaughter B, Kono TJY, **Kowalko JE**, Rohner N, Keene AC, McGaugh SE. Convergent dysregulation of the circadian clock in cavefish populations. *Under review at PLOS Genetics* Preprint: <https://www.biorxiv.org/content/10.1101/2020.01.14.906628v1>

O’Gorman M, Thakur S, Imrie G, Moran RL, Duboue E, Rohner N, McGaugh SE, Keene AC, **Kowalko JE**. Pleiotropic function of the *oca2* gene underlies the evolution of sleep loss and albinism in cavefish. *Under review at Current Biology*. Preprint: <https://www.biorxiv.org/content/10.1101/2020.09.27.314278v1>

Patch A, Paz A, Holt K, Duboue E, **Kowalko JE**, Keene A, Fily Y. Kinematic analysis deconstructs the evolved loss of schooling behavior in cavefish. *Under review at PLoS Comp Biol*. Preprint: <https://www.biorxiv.org/content/10.1101/2020.01.31.929323v2>

Underlined = Dr. Kowalko’s undergraduate mentees

\* = K-12 mentees

### Presentations

#### Research Talks

Examining the role of albinism in the evolution of the cavefish *Astyanax mexicanus*. University of Miami. Miami, Florida. 2020 (Invited talk)

Uncovering the genetic basis of trait evolution in the cavefish. Stowers Institute. Kansas City, Missouri. 2020 (Invited talk)

Examining the pleiotropic effects of mutations in the oculocutaneous albinism 2 gene in the cavefish *A. mexicanus*. Ecology, Evolution and Behavior Seminar Series, University of Minnesota. Saint Paul, MN. 2019 (Invited talk)

Uncovering the genetic basis of trait evolution in the cavefish *Astyanax mexicanus*. EEBB Seminar Series, Michigan State University. Lansing, MI. 2019 (Invited talk)

Leveraging genome editing to understand the genetic basis of complex traits. CMBB seminar series, FAU. 2019 (Internal FAU presentation)

Examining the pleiotropic effects of mutations in the *oculocutaneous albinism 2* gene in the cavefish *Astyanax mexicanus*. Society for Developmental Biology. Boston, MA. 2019 (Talk chosen from abstract submission)

Why the cavefish lost its pigment: Understanding the role of *oca2* in cavefish evolution. College of Saint Rose Colloquium Series. Albany, New York. 2019 (Invited talk)

The genetic basis of behavioral variation in natural populations. Journal of Experimental Biology Symposium on 'Genome editing for comparative physiology.' Massa Marittima, Italy. 2019 (Invited talk)

Elucidating the genetic basis of trait evolution in the cavefish. *Astyanax* International Meeting. Queretaro, Mexico. 2019 (Talk chosen from abstract submission)

Wilkes Honors College Forum talk. FAU. Fall 2018 (Internal FAU presentation)

Uncovering the role of the *oculocutaneous albinism 2* gene in the evolution of albinism in the Mexican cavefish *Astyanax mexicanus*. Society for Developmental Biology. Minneapolis, MN. 2017 (Talk chosen from abstract submission)

Uncovering the genetic basis of evolution. Midwest Zebrafish Conference. St. Louis, Missouri. 2015 (Talk chosen from abstract submission)

The genetic basis of loss of schooling behavior in the blind Mexican cavefish, *Astyanax mexicanus*. AAMHD/Midwest Zebrafish Meeting. Milwaukee, Wisconsin. 2013 (Talk chosen from abstract submission)

Genetic approaches to studying morphological and behavior traits in *Astyanax mexicanus*. *Astyanax* International Meeting. Ciudad Valles, Mexico. 2009 (talk chosen from abstract submission)

#### Research Posters

Thakur S, O'Gorman M, Benesh K, Hamill C, Keene A, **Kowalko JE** (2020) Genetic basis of behavioral evolution in the cavefish *Astyanax mexicanus*. Society for Developmental Biology. Virtual.

Thakur S, O'Gorman M, Keene A, **Kowalko JE** (2019) Uncovering the relationship between pigmentation and behavior in evolution of the blind Mexican cavefish. Zebrafish Neural Circuits and Behavior meeting. Cold Spring Harbor Lab. Cold Spring Harbor, NY.

Klaassen H, Greiner H, **Kowalko JE** (2016) Leveraging genome editing to uncover the genetic basis of trait evolution in an evo-devo model, *Astyanax mexicanus*. Society for Developmental Biology. Boston, MA.

**Kowalko JE**, Ma L, Jeffery W, Essner J (2015) Uncovering the genetic basis of evolution. Midwest Zebrafish Conference. St. Louis, Missouri.

**Kowalko JE**, Ma L, Jeffery W, Essner J (2014) Utilizing genome editing to explore the genetic basis of evolution in the cavefish *Astyanax mexicanus*. Society for Developmental Biology. Seattle, Washington.

**Kowalko JE**, Rohner N, Rompani S, Peterson B, Linden TA, Yoshizawa M, Jeffery WR, Hoekstra HE, Tabin CJ (2013) The genetic basis of loss of schooling behavior in the blind Mexican cavefish, *Astyanax mexicanus*. AAMHD/Midwest Zebrafish Meeting. Milwaukee, Wisconsin.

**Kowalko JE**, Yoshizawa M, Rohner N, Rompani S, Jeffery WR, Borowsky R, and Tabin C (2012) Exploring the evolution of behavior using the Mexican cave fish, *Astyanax mexicanus*. Genes and Behavior Gordon Research Conference. Galveston, Texas.

**Kowalko JE**, Yoshizawa M, Jeffery WR, Borowsky R, and Tabin C (2010) Exploring the evolution of behavior using the Mexican cave fish, *Astyanax mexicanus*. Genes and Behavior Gordon Research Conference. Ventura, California.

*Undergraduate mentee co-authors are underlined.*

Research presented by mentees

Sifuentes-Romero. Repeated evolution of eye loss: A role for *rx3*? Stowers Research Conference EvoDevo. Virtual. 2020. (Invited talk)

Sifuentes-Romero I, Ferrufino E, Thakur S, Solomon M, Kowalko JE. Repeated evolution of eye loss in *Astyanax mexicanus*. Society for Developmental Biology. Virtual. 2020. (Talk chosen from abstract submission)

Thakur S, O’Gorman M, Keene A, Kowalko JE. Leveraging gene editing to examine the genetic basis of convergent evolution. Southeast Regional Zebrafish Conference. Miami, FL. 2019. (Talk chosen from abstract submission)

Sifuentes-Romero I, Ferrufino E, Thakur S, Kowalko JE. Morphological variations in eye size: Does *rx3* play a role? Southeast Regional Zebrafish Conference. Miami, FL. 2019. (poster)

Ferrufino E, Thakur S, Duboue E, Keene A, Kowalko JE. Adapting genome engineering techniques for functional genetics in Mexican cavefish. Southeast Regional Zebrafish Conference. Miami, FL. 2019. (poster)

Sifuentes-Romero I, Ferrufino E, Thakur S, Kowalko JE. Morphological variations in eye size: Does *rx3* play a role? *Astyanax* International Meeting. Queretaro, Mexico. 2019. (poster)

Sifuentes-Romero I, Ferrufino E, Thakur S, Kowalko JE. Morphological variations in eye size in cavefish: Does *rx3* play a role? Pan-American Society for Evolutionary Developmental Biology. Coral Gables, Florida. 2019 (poster)

Thakur S, Solomon M, Cree-Newman A, Lloyd E, Jaggard J, Keene A, Kowalko JE. Examining the role of albinism in the evolution of cave populations of *Astyanax mexicanus*. Pan-American Society for Evolutionary Developmental Biology. Coral Gables, Florida. 2019 (poster)

Solomon M, Thakur S, Kowalko JE. Elucidating the role of eye loss in the evolution of adaptive traits in the cavefish *Astyanax mexicanus*. Pan-American Society for Evolutionary Developmental Biology. Coral Gables, Florida. 2019 (poster)

Kowalko, Johanna – CV

Holt K, Paz A, Patch A, Kowalko JE. Ontogeny of schooling and shoaling behavior in *Astyanax mexicanus*. Pan-American Society for Evolutionary Developmental Biology. Coral Gables, Florida. 2019 (poster)

Cree-Newman A, Jaggard J, Ferrufino E, Thakur S, Keene A, Kowalko JE. The role of maternal genetic effects in brain development and behavior in the cavefish *Astyanax mexicanus*. Pan-American Society for Evolutionary Developmental Biology. Coral Gables, Florida. 2019 (poster)

Holt K, Paz A, Patch A, Kowalko JE. Ontogeny of schooling and shoaling behavior in *Astyanax mexicanus*. Scripps Undergraduate Research Symposium. Jupiter, Florida. 2019 (poster)

*Undergraduate mentee co-authors are underlined.  
First author in this section is the presenter.*

## **Grants**

### Funded

Evolutionary approaches to identify genetic architecture regulating aggression

PI: **Johanna Kowalko**

National Institutes of Health MIRA for Early Stage Investigators (R35)

\$1,691,644

9/1/2020-8/31/2025

The relationship between eye morphogenesis and brain development

PI: **Johanna Kowalko**

National Institute for Health R15

\$437,673

7/2/2020-6/30/2022

REU Site: Summer Integrative Neuroscience Experience (SINE) in Jupiter

PI: Alex Keene

Co-PI: **Johanna Kowalko**

National Science Foundation

1/15/2020-12/31/2022

Collaborative Research: The evolution of phenotypic plasticity in sleep across variable environments

PI: **Johanna Kowalko**

Co-PIs: Nicolas Rohner and Suzanne McGaugh

National Science Foundation

\$463,232

11/1/2019-10/31/22

NSF-BSF: EDGE: Functional Genomics Toolkit for Genotype-Phenotype Mapping in Cavefish

PI: Erik Duboue

Co-PIs: **Johanna Kowalko**, Nicholas Rohner, Suzanne McGaugh

National Science Foundation

\$1,148,464

9/1/2019-8/31/22

Uncovering the contributions of albinism to the evolution of the Mexican cavefish

PI: **Johanna Kowalko**

Co-PI: Alex Keene, Florida Atlantic University

National Science Foundation

\$200,000

9/1/2018-8/31/2020, NCE to 2021

Pending

A screen for identifying insomnia genes

MPI: Johanna Kowalko

MPI: Alex Keene

National Institutes of Health R21

Score: 8<sup>th</sup> percentile

BII-Implementation: Interdisciplinary investigation of the relationship between ecosystems

PI: Alex Keene

co-PIs/senior personnel: Johanna Kowalko, Erik Duboue, Yaoen Fily, Suzanne McGaugh, Andrew Gluesenkamp, Magdalena Osburn, Jessica Hua

National Science Foundation

### **Courses taught at FAU**

#### Courses

Fall 2019, 2020	PBC 4253: <b>Honors Developmental Biology</b> , undergraduates, Florida Atlantic University <i>This course was previously listed, but had not been taught recently, so I developed the course from scratch in Fall 2019, and made major revisions to the class to convert it to a remote course in Fall 2020.</i>
Spring 2020	BSC 4930-13H: <b>Honors Evolutionary Developmental Biology</b> , Undergraduates, Florida Atlantic University <i>This was a new course I developed.</i>
Spring 2020	BSC 4930-14H: <b>Honors CRISPR Technologies</b> , undergraduates, Florida Atlantic University <i>This was a new Course Based Undergraduate Research Experience course that I co-developed with Bethany Stanhope.</i>
Spring 2019	PCB 3063: <b>Honors Genetics</b> , undergraduates, Florida Atlantic University
2018-2021	BSC 4915: <b>Honors Dir Ind Res in Biology</b> , undergraduates, Florida Atlantic University
2020-2021	BSC 4970: <b>Honors Thesis in Biology</b> , undergraduates, Florida Atlantic University
Fall 2020	BSC 6905: <b>Directed Independent Study</b> , graduate students, Florida

Atlantic University

Supervision of Graduate students

Spring 2020	Christa Hamill	MS student, IB program
Spring 2018-present	Alexandra Paz	PhD student, IBN program, co-mentor

Supervision of Undergraduate students

*FAU undergraduate students*

Spring 2019	Marc Guttentag
Spring 2019-present	Alexia Bullock <sup>%</sup>
Spring 2019	Joelle Dwek
2018-2019	Reilly Bassford
Fall 2018-S2020	Michael Soloman <sup>*%</sup>
2018-2019	Meghana Arza
Fall 2018-present	Karla Holt <sup>#%</sup>
Fall 2019-present	Nikita Jayan <sup>*</sup>
Summer 2020-pres	Lama Al Abdul Razzak <sup>*</sup>
Summer 2020-pres	Manuel Contreras <sup>*</sup>
Fall 2020-present	Amanda Wade <sup>*</sup>
Fall 2020-present	Ari Aviles
Spring 2021-present	Anik Clark
Spring 2021-present	Ellen Polyakov

\*Thesis students, present and current

*Undergraduate thesis students with completed theses*

Michael Soloman	Spring 2020
Title: Characterizing the relationship of the evolution of the lateral line to the evolution of other traits	

Lama Al Abdul Razzak	Fall 2020
Title: Association of Cancer and Autism in Kids and Adolescents	

*Non-FAU students*

Summer 2020	Jakiyah Lee	REU student
Summer 2020	Lilia Welsh	REU student
2018	Courtney Smith <sup>#</sup>	Iowa State University
2017-2018	Ellie Clark	Iowa State University
2016-2017	Emily Salmon	Iowa State University
2016-2017	Kay Adamski <sup>#</sup>	Iowa State University
2014, 2016-2017	Hannah Klaassen <sup>#</sup>	Iowa State University
2014-2016	Hanna Greiner	Iowa State University
2014	Rachel Weber	Iowa State University
2012-2013	Tess Linden <sup>#</sup>	Harvard University

#Indicates co-author on a paper

%Indicates the student gave a presentation at a conference

Advisees

*Undergraduate*

2018	Frida Zavala
2019	Mario Del Rio
2019-present	Ellen Diez
2019-present	Candice Hill
2019-present	Ellen Polyakov
2019-present	Maxx Sundeen
2019-present	Anthony Tulip
2020-present	Janara Arencibia
2020-present	Anna Armbrust
2020-present	Benjamin Barger
2020-present	Julianna Booth
2020-present	Drew Burgess
2020-present	Ianis Ciolacu
2020-present	Yessenia Concepcion
2020-present	Mikayla Kopf

*Graduate*

2020-present	Christa Hammill, MS student
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**Service**

Service to the Institution

*Department/College service*

Fall 2020	member of the adhoc committee to review and revise WHC tenure guidelines
Fall 2020-present	member of the WHC Diversity taskforce, Chair of subcommittee on Diversity in Research
Spring 2020	Met with NIH delegates to discuss the Honors College and FAU
Spring 2020	Attended the WHC Benefactors Dinner
Spring 2020	Spoke at ISC 3933 Class about research
2018-2020	member of the WHC Undergraduate Symposium Committee
2019-2020	Search Committee member, Biology Instructor
Spring 2018	Attended Honors College Recruitment

*University service*

2021-present	member of the IMPRS graduate selection committee
2020-present	member of the IB graduate admissions committee
Summer 2020-pres.	Co-director of the SINE REU program
Spring 2020	Hosted Cliff Tabin, CMBB seminar speaker
Spring 2020	Hosted Kristen Kwan, CMBB seminar speaker
2019-present	advisor to the Network for Women in Stem FAU club



2019-2020 Organizer, Neurogenetics seminar series through I-HEALTH

Service to the Discipline

*Paper reviewer*

8/2018 JEZ part B: Molecular and Developmental Evolution  
4/2019 Journal of Experimental Biology  
6/2019 Journal of Experimental Biology  
9/2019 Journal of Experimental Biology  
9/2019 Scientific Reports  
11/2019 ELife  
11/2019 Genes, Brains and Behavior  
11/2019 Neotropical Ichthyology  
3/2020 ELife  
5/2020 ELife  
6/2020 Hydrobiologia  
6/2020 BMC Biology  
7/2020 ELife  
10/2020 Current Biology  
12/2020 BMC Neuroscience  
12/2020 ELife

*Other service*

2020 Ad hoc reviewer – NSF EDGE proposal  
2020 Admissions, NSF REU Summer Integrative Neuroscience Experience  
2020 Mentor, Tri-institutional Network for Women in STEM Mentorship group  
2020-2021 Steering Committee member, Tri-institutional Network for Women in STEM Mentorship group  
2019-2020 Guest Editor, JEZ part B special issue on cavefish  
Spring 2019 Led a discussion group at the Astyanax International Meeting

Service to the Community

2020-present contributor to the podcast Research Diaries  
<https://www.theresearchdiaries.com/bios>  
*A second season of this podcast is currently being written/produced*

*Past service*

2016-2017 Member of the Biology Curriculum Committee, Iowa State University  
2016-2017 Advisor, Alpha Lambda Delta Phi Eta Sigma, Iowa State University  
2016-2017 Presenter, Women in Science and Engineering's Taking the Road Less Traveled, Iowa State University  
Spring 2016 Evaluator, Biology 313 Lab poster session, Iowa State University  
2009-2010 Tutor for Hinton Scholars AP Biology, high school students, Harvard University

Professional Development

Kowalko, Johanna – CV

*Since FAU appointment:*

Completed the Academic Continuity Course Build for Honors Developmental Biology, Fall 2020-Spring 2021, Florida Atlantic University

Attended webinar on “Designing Effective Assessments That Go Beyond the Grade.” Summer Institutes on Scientific Training, Fall 2020

*Prior to FAU:*

Courses and workshops:

The Federal Government in the Schools (Harvard Graduate School of Education)  
Applying Cognitive Science Research Principles to Learning and Teaching (Harvard Graduate School of Education)  
Teaching 101: Bringing Effective Teaching Practices to your Classroom (Division of Medical Sciences, Harvard University)  
Micro-teaching Workshop (Derek Bok Center for Teaching and Learning, Harvard University)  
Nano-teaching Workshop (Derek Bok Center for Teaching and Learning, Harvard University)  
Classroom Training Workshop (Derek Bok Center for Teaching and Learning, Harvard University)  
Philosophy of Education (Brown University)

Other professional development trainings/activities:

2014 National Academies Education Fellow in the Life Sciences  
2010-2013 Harvard Division of Medical Sciences Education Path leader

**Awards and Honors**

2019 Division of Research Mentoring Award – Mentee  
2017 Travel Award from Society for Developmental Biology  
2016 Travel Award from Society for Developmental Biology  
2014 Postdoc Travel Award from Society for Developmental Biology  
2013 AAMHD/Midwest Zebrafish Meeting Student Poster Award  
2012 Certificate of Distinction in Teaching, Derek Bok Center for Teaching and Learning  
2009 National Science Foundation Graduate Research Fellowship  
2005 B.A. awarded with Honors, Brown University

**Dawei Li, Ph.D.**

Position Associate Professor (*starting from January 2021*)

Address Department of Biomedical Science  
Florida Atlantic University  
Boca Raton, FL 33431  
E-mail: [dawei.li@uvm.edu](mailto:dawei.li@uvm.edu)

**Education and Training**

<i>Years</i>	<i>Institution</i>	<i>Title/Degree</i>
2008-2012	Yale University	Associate Research Scientist in Genomics and Bioinformatics
2006-2008	Rockefeller University	Postdoctoral Associate in Statistical Genetics
2001-2006	Shanghai Jiao Tong University, China	Ph.D. in Genetics
1997-2001	Northwest University, China	B.S. in Microbiology

**Faculty Position**

<i>Years</i>	<i>Institution</i>	<i>Title</i>
2021-present ( <i>projected</i> )	Florida Atlantic University, Charles E. Schmidt College of Medicine	Director of Genomic Medicine
2021-present ( <i>projected</i> )	Florida Atlantic University, Department of Biomedical Science	Associate Professor
2012-2020	University of Vermont, Department of Microbiology and Molecular Genetics	Assistant Professor

**Other Affiliations**

2020-present	NIH Center of Excellence on ME/CFS (ICanCME)	Investigator
2020-present	Open Medicine Foundation ME/CFS Collaborative Research Center Montréal	Investigator
2020-present	Interdisciplinary Canadian Collaborative Myalgic Encephalomyelitis (ICanCME) Research Network	Investigator
2018-present	Connecticut West Haven Veterans Affairs Medical Center	Assistant Professor (WOC)

2013-2020	University of Vermont, Department of Computer Science	Assistant Professor (secondary)
2012-2020	University of Vermont, Neuroscience, Behavior, and Health Initiative	Assistant Professor
2008-2012	Yale University, Center for Statistical Genomics and Proteomics	Associate Research Scientist
2008-2012	Yale University, Department of Psychiatry	Associate Research Scientist

## Publications and Presentations

Summary of peer-reviewed journal articles: 53 publications (20 first-, 13 last- or 24 corresponding-author); h-index = 28.

Year	Ph.D. Training (Shanghai Jiaotong U.)				Postdoc Training (Rockefeller University & Yale University)								Assistant Professor (University of Vermont)						Total		
	04	05	06 Jan-Oct	Sub- total	06 Oct-Dec	07	08	09	10	11	12 Jan-Aug	Sub- total	13	14	15	17	18	19		20	Sub- total
First	1	0	5	6	1	4	1	2	-	1	3	12	-	1	1	-	-	-	-	2	20
Last	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	1	2	3	2	13	13
Corresponding	-	-	-	-	-	3	1	2	-	1	2	9	2	3	2	1	2	3	2	15	24
Total	3	3	6	12	2	4	2	4	3	2	4	21	3	4	2	1	3	4	3	20	53

## Peer-reviewed Research Articles

2020

- Chen X, **Li D\***. Sequencing facility and DNA source associated patterns of virus-mappable reads in whole-genome sequencing data. *Genomics*. 2020 Dec 7. doi: 10.1016/j.ygeno.2020.12.004. Online ahead of print. (\* **corresponding author**). PMID: 33301893. (*This study identified viral reads in whole-genome sequencing data derived from human specimens and distinguished true viral reads from reads associated with technical variables sequencing platform and DNA source. Filtering of technical variable-associated reads improves quality of (meta)genomic analyses.*)
- Sulovari A, **Li D\***. VIpover: Simulation-based tool for estimating power of viral integration detection via high-throughput sequencing. *Genomics*. 2020 Jan 10;112(1):207-211. PMID: 30710609. (\* **corresponding author**). (*This study helps design new sequencing experiments to increase the power and accuracy to detect genome-wide viral integrations, including ERVs and other transposable elements.*)
- Nepotchatykh E, Elremaly W, Caraus I, Godbout C, Leveau C, Chalder L, Beaudin C, Kanamaru E, Kosovskaia R, Lauzon S, Maillet Y, Franco A, Lascau-Coman V, Bouhanik S, Gaitan YP, **Li D**, Moreau A. Profile of circulating microRNAs in myalgic encephalomyelitis and their relation to symptom severity, and disease pathophysiology. *Scientific Reports*. 2020 Nov 12;10(1):19620. PMID: 33184353.

2019

- Chen X, Kost J, Sulovari A, Wong N, Liang WS, Cao J, **Li D\***. A virome-wide clonal integration analysis platform for discovering cancer viral etiology. *Genome Research*. 2019 May;29(5):819-830.

PMID: 30872350. (\* **corresponding author**). (*A high-throughput sequencing-based bioinformatics approach to detection of viral integration events in the human genome on the virome-wide level, named Vcaller, was developed and demonstrated in genome datasets.*)

5. Chen X, **Li D\***. ERVcaller: Identifying polymorphic endogenous retrovirus and other transposable element insertions using whole-genome sequencing data. **Bioinformatics**. 2019 Oct 15;35(20):3913-3922. PMID: 30895294. (\* **corresponding author**). (*A high-throughput sequencing-based bioinformatics approach to genome-wide genotyping of ERVs and other TEs, named ERVcaller, was developed. This tool allows for genome-wide association studies of TEs with any complex disease.*)
6. Chen X, Kost J, **Li D\***. Comprehensive comparative analysis of methods and software for identifying viral integrations. **Briefings in Bioinformatics**. 2019 Nov 27;20(6):2088-2097. PMID: 30102374. (\* **corresponding author**). (*This study, for the first time, proposed the “virome-wide” concept for viral integration detection.*)
7. Nada D, Julien C, Rompré PH, Akoume MY, Gorman KF, Samuels ME, Levy E, Kost J, **Li D**, Moreau A. Association of Circulating YKL-40 Levels and CHI3L1 Variants with the Risk of Spinal Deformity Progression in Adolescent Idiopathic Scoliosis. **Scientific Reports**. 2019 Apr 5;9(1):5712. PMID: 30952886.

2018

8. Sulovari A, Liu Z, Zhu Z\*, **Li D\***. Genome-wide meta-analysis of copy number variations with alcohol dependence. **Pharmacogenomics Journal**. 2018 May 22;18(3):398-405. PMID: 28696413. (\* **corresponding author**). (*First genome-wide meta-analysis of CNVs in any substance abuse*)
9. Zhao FQ, Misra Y, Li DB, Wadsworth MP, Krag D, Weaver D, Tessitore J, **Li DW**, Zhang G, Tian Q, Buss K. Differential expression of Oct3/4 in human breast cancer and normal tissues. **International Journal of Oncology**. 2018 Jun;52(6):2069-2078. PMID: 29620155.

2017

10. Sulovari A, Chen YH, Hudziak JJ, **Li D\***. Atlas of human diseases influenced by genetic variants with extreme allele frequency differences. **Human Genetics**. 2017 Jan;136(1):39-54. PMID: 27699474. (\* **corresponding author**). (*This study found that variants with large allele frequency variations were associated with a wide range of human complex diseases*)

2015

11. **Li D\***, Zhao H, Kranzler HR, Li M, Jensen KP, Zayats T, Farrer LA, Gelernter J. Genome-wide Association Study of Copy Number Variations (CNVs) With Opioid Dependence. **Neuropsychopharmacology**. 2015 Mar;40(4):1016-26. PMID: 25345593. PMCID: PMC4330517. (\* **corresponding author**) (*First genome-wide CNV study in any drug dependence*)
12. Sulovari A, Kranzler HR, Farrer LA, Gelernter J, **Li D\***. Eye Color: A Potential Indicator of Alcohol Dependence Risk in European Americans. **American Journal of Medical Genetics Part B: Neuropsychiatric Genetics**. 2015 Jul;168(5):347-53. PMID: 25921801. (\* **corresponding author**). (*Featured in Huffington Post, ABC news, CBS News, WPTZ-TV, and other media reports in July 2015*)

2014

13. Sulovari A, **Li D\***. GACT: a Genome build and Allele definition Conversion Tool for SNP imputation and meta-analysis in genetic association studies. **BMC Genomics**. 2014 Jul 19;15(1):610. PMID:

25038819. (\* **corresponding author**)

14. **Li D\***, Sulovari A, Cheng C, Zhao H, Kranzler HR, Gelernter J. Association of Gamma-Aminobutyric Acid A Receptor  $\alpha$  2 Gene (GABRA2) with Alcohol Use Disorder. *Neuropsychopharmacology*. 2014 Mar;39(4):907-18. PMID: 24136292. PMCID: PMC3924525. (\* **corresponding author**) (*NIH Relative Citation Ratio = 3.90; NIH Percentile = 90.3*). (*First meta-analysis of drug dependence with GABA receptor genes*)
15. Cao J, Liu X, Han S, Zhang CK, Liu Z, **Li D\***. Association of the HTR2A gene with alcohol and heroin abuse. *Human Genetics*. 2014 Mar;133(3):357-65. PMID: 24178752. PMCID: PMC4085799. (\* **corresponding author**)
16. Yang H, **Li D**, Cheng C. Relating gene expression evolution with CpG content changes. *BMC Genomics*. 2014 Aug 20;15(1):693. PMID: 25142157. PMCID: PMC4148958.

2013

17. Cao J, Hudziak J, **Li D\***. Multi-cultural Association of the Serotonin Transporter Gene (SLC6A4) with Substance Use Disorder. *Neuropsychopharmacology*. 2013 Aug;38(9):1737-47. PMID: 23518607. PMCID: PMC3717550. (\* **corresponding author**)
18. Cao J, LaRocque E, **Li D\***. Associations of the 5-hydroxytryptamine (Serotonin) Receptor 1B Gene (HTR1B) with Alcohol, Cocaine, and Heroin Abuse. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*. 2013 Mar;162(2):169-76. PMID: 23335468. PMCID: PMC4089973. (\* **corresponding author**)
19. Wang L, Jiao Y, Huang Y, Liu X, Gibson G, Bennett B, Hamre KM, **Li D**, Zhao H, Gelernter J, Kranzler HR, Farrer LA, Lu L, Wang Y, Gu W. Critical evaluation of transcription factor Atf2 as a candidate modulator of alcohol preference in mouse and human populations. *Genetics and Molecular Research*. 2013 Nov 26;12(4):5992-6005. PMID: 24338393.

2012

20. **Li D**, Zhao H, Kranzler HR, Oslin D, Anton RF, Farrer LA, Gelernter J. Association of COL25A1 with comorbid antisocial personality disorder and substance dependence. *Biological Psychiatry*. 2012 Apr 15;71(8):733-40. PMID: 22297151. PMCID: PMC3548659. (*First genome-wide association study of this disorder; another study showed COL25A1 was a driver gene for behavioral alteration in mice.*)
21. **Li D\***, Zhao H, Gelernter J. Further clarification of the contribution of the ADH1C gene to vulnerability of alcoholism and selected liver diseases. *Human Genetics*. 2012 Aug;131(8):1361-74. PMID: 22476623. PMCID: PMC3557796. (\* **corresponding author**)
22. **Li D\***, Zhao H, Gelernter J. Strong protective effect of the aldehyde dehydrogenase gene (ALDH2) 504lys (\*2) allele against alcoholism and alcohol-induced medical diseases in Asians. *Human Genetics*. 2012 May;131(5):725-37. PMID: 22102315. PMCID: PMC3548401. (\* **corresponding author**) (*120 citations*) (*NIH Relative Citation Ratio = 2.70; NIH Percentile = 83.1*)
23. Zhang H, **Li D**, Su Y, Jiang S, Xu Y, Jiang K, Cui D. Identification of the N-acylsphingosine amidohydrolase 1 gene (ASAH1) for susceptibility to schizophrenia in a Han Chinese population. *World Journal Biological Psychiatry*. 2012 Feb;13(2):106-13. PMID: 21375364.

2011

24. **Li D\***, Zhao H, Gelernter J. Strong association of the alcohol dehydrogenase 1B gene (ADH1B) with

alcohol dependence and alcohol-induced medical diseases. *Biological Psychiatry*. 2011 Sep 15;70(6):504-12. PMID: 21497796. PMCID: PMC3142297. (\* corresponding author) (131 citations; NIH Relative Citation Ratio = 3.71; NIH Percentile = 89.5)

25. Cui D, Zhang H, Yang BZ, Listman JB, **Li D**, Price LH, Carpenter LL, Tyrka AR, Anton RF, Kranzler HR, Gelernter J. Variation in NGFB is associated with primary affective disorders in women. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*. 2011 Jun;156B(4):401-12. PMID: 21294249. PMCID: PMC3108453.

2010

26. Bertisch H, **Li D**, Hoptman MJ, Delisi LE. Heritability estimates for cognitive factors and brain white matter integrity as markers of schizophrenia. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*. 2010 Jun 5;153B(4):885-94. PMID: 20052692. PMCID: PMC3446203.
27. Proudnikov D, Krosiak T, Sipe JC, Randesi M, **Li D**, Hamon S, Ho A, Ott J, Kreek MJ. Association of polymorphisms of the cannabinoid receptor (CNR1) and fatty acid amide hydrolase (FAAH) genes with heroin addiction: impact of long repeats of CNR1. *Pharmacogenomics Journal*. 2010 Jun;10(3):232-42. PMID: 20010914.
28. Hilner JE, Perdue LH, Sides EG, Pierce JJ, Wagner AM, Aldrich A, Loth A, Albret L, Wagenknecht LE, Nierras C, Akolkar B; Type 1 Diabetes Genetics Consortium. Designing and implementing sample and data collection for an international genetics study: the Type 1 Diabetes Genetics Consortium (T1DGC). *Clinical Trials*. 2010;7(1 Suppl):S5-S32. PMID: 20603248.

2009

29. Barrett JC, Clayton DG, Concannon P, Akolkar B, Cooper JD, Erlich HA, Julier C, Morahan G, Nerup J, Nierras C, Plagnol V, Pociot F, Schuilenburg H, Smyth DJ, Stevens H, Todd JA, Walker NM, Rich SS; Type 1 Diabetes Genetics Consortium. Genome-wide association study and meta-analysis find that over 40 loci affect risk of type 1 diabetes. *Nature Genetics*. 2009 Jun;41(6):703-7. PMID: 19430480. PMCID: PMC2889014.
30. **Li D\***, Feng G, He L\*. Case-control study of association between the functional candidate gene ERBB3 and schizophrenia in Caucasian population. *World Journal of Biological Psychiatry*. 2009;10(4 Pt 2):595-8. PMID: 19995212. (\* co-corresponding author)
31. **Li D\***, He G, Xu Y, Duan Y, Gu N, Li X, Shi Y, Qin W, Feng G, He L. Schizophrenia is not associated with the ERBB3 gene in a Han Chinese population sample: Results from case-control and family-based studies. *Genetics and Molecular Biology*. 2009 Oct;32(4):729-30. PMID: 21637446. PMCID: PMC3036886. (\* co-corresponding author)
32. He C, Hamon S, **Li D**, Barral S, Ott J. MHC fine mapping of human type 1 diabetes using the T1DGC data. *Diabetes, Obesity and Metabolism*. Vol 11, Suppl 1, 2009 Jan, 53-9. PMID: 19143815. PMCID: PMC2753855.

2008

33. **Li D\***, He L\*. Meta-study on association between the monoamine oxidase A gene (MAOA) and schizophrenia. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*. 2008 Mar 5;147B(2):174-8. PMID: 17894408. (\* co-corresponding author)
34. Levran O, O'Hara K, Peles E, **Li D**, Barral S, Ray B, Borg L, Ott J, Adelson M, Kreek MJ. ABCB1

(MDR1) genetic variants are associated with methadone doses required for effective treatment of heroin dependence. *Human Molecular Genetics*. 2008 Jul 15;17(14):2219-27. PMID: 18424454. PMCID: PMC2599947. (158 citations; NIH Relative Citation Ratio = 3.45; NIH Percentile = 88.2)

2007

35. **Li D**, He L. Meta-analysis supports association between serotonin transporter (5-HTT) and suicidal behavior. *Molecular Psychiatry*. 2007 Jan;12(1):47-54. PMID: 16969368. (212 citations)
36. **Li D\***, He L\*. Association study between the NMDA receptor 2B subunit gene (GRIN2B) and schizophrenia: a HuGE review and meta-analysis. *Genetics in Medicine*. 2007 Jan;9(1):4-8. PMID: 17224684. (\*co-corresponding author)
37. **Li D\***, He L. G72/G30 genes and schizophrenia: a systematic meta-analysis of association studies. *Genetics*. 2007 Feb;175(2):917-22. PMID: 17179078. PMCID: PMC1800627. (\* corresponding author)
38. **Li D\***, He L\*. Association study between the dystrobrevin binding protein 1 gene (DTNBP1) and schizophrenia: a meta-analysis. *Schizophrenia Research*. 2007 Nov;96(1-3):112-8. PMID: 17604607. (\*co-corresponding author)

2006

39. **Li D**, Sham PC, Owen MJ, He L. Meta-analysis shows significant association between dopamine system genes and attention deficit hyperactivity disorder (ADHD). *Human Molecular Genetics*. 2006 Jul 15;15(14):2276-84. PMID: 16774975. (671 citations; NIH Relative Citation Ratio = 10.13; NIH Percentile = 98.3)
40. **Li D**, Collier DA, He L. Meta-analysis shows strong positive association of the neuregulin 1 (NRG1) gene with schizophrenia. *Human Molecular Genetics*. 2006 Jun 15;15(12):1995-2002. PMID: 16687441. (352 citations; NIH Relative Citation Ratio = 6.12; NIH Percentile = 95.5)
41. **Li D**, He L. Further clarification of the contribution of the tryptophan hydroxylase (TPH) gene to suicidal behavior using systematic allelic and genotypic meta-analyses. *Human Genetics*. 2006 Apr;119(3):233-40. PMID: 16450114. (126 citations)
42. **Li D**, He L. Meta-analysis shows association between the tryptophan hydroxylase (TPH) gene and schizophrenia. *Human Genetics*. 2006 Aug;120(1):22-30. PMID: 16741719.
43. **Li D**, He L. Association study of the G-protein signaling 4 (RGS4) and proline dehydrogenase (PRODH) genes with schizophrenia: a meta-analysis. *European Journal of Human Genetics*. 2006 Oct;14(10):1130-5. PMID: 16791139.
44. **Li D**, Duan Y, He L. Association study of serotonin 2A receptor (5-HT2A) gene with schizophrenia and suicidal behavior using systematic meta-analysis. *Biochemical and Biophysical Research Communications*. 2006 Feb 17;340(3):1006-15. PMID: 16405867. (122 citations)
45. Zhang X, **Li D**, Duan S, Duan Y, Chen Q, Li X, Liu Z, Feng G, He L. Analysis of the association between Apolipoprotein D and schizophrenia. *Neuropsychobiology*. 2006 Nov;54(1):40-4. PMID: 16966838.
46. Liu X, Li H, Qin W, He G, **Li D**, Shen Y, Shen J, Gu N, Feng G, He L. Association of TPH1 with suicidal behaviour and psychiatric disorders in the Chinese population. *Journal of Medical Genetics*. 2006 Feb;43(2):e4. PMID: 16467214. PMCID: PMC2564644.



2005

47. Pan Y, **Li D**, Duan Y, Zhang Z, Xu M, Feng G, He L. Predicting protein subcellular location using digital signal processing. *Acta Biochimica et Biophysica Sinica*. 2005 Feb;37(2):88-96. PMID: 15685365.
48. Liu X, Qin W, He G, Yang Y, Chen Q, Zhou J, **Li D**, Gu N, Xu Y, Feng G, Sang H, Hao X, Zhang K, Wang S, He L. A family-based association study of the MOG gene with schizophrenia in the Chinese population. *Schizophrenia Research*. 2005 Mar 1;73(2-3):275-80. PMID: 15653272.
49. Liu J, Shi Y, Tang W, Guo T, **Li D**, Yang Y, Yang Y, Zhao X, Wang H, Li X, Feng G, Gu N, Zhu S, Liu H, Guo Y, Shi J, Sang H, Yan L, He L. Positive association of the human GABA-A-receptor beta 2 subunit gene haplotype with schizophrenia in the Chinese Han population. *Biochemical and Biophysical Research Communications*. 2005 Sep 2;334(3):817-23. PMID: 16023997.

2004

50. **Li D**, Pan Y, Duan Y, Hung Z, Xu M, He L. Understanding SARS with Wolfram approach. *Acta Biochimica et Biophysica Sinica*. 2004 Jan;36(1):1-10. PMID: 14732867.
51. Liu X, He G, Wang X, Chen Q, Qian X, Lin W, **Li D**, Gu N, Feng G, He L. Association of DAAO with schizophrenia in the Chinese population. *Neuroscience Letters*. 2004 Oct 21;369(3):228-33. PMID: 15464270.
52. Yang Y, Xiao Z, Chen W, Sang H, Guan Y, Peng Y, Zhang D, Gu Z, Qian M, He G, Qin W, **Li D**, Gu N, He L. Tumor suppressor gene TP53 is genetically associated with schizophrenia in the Chinese population. *Neuroscience Letters*. 2004 Oct 14;369(2):126-31. PMID: 15450681.

### Peer-reviewed Review Articles

2018

1. Cao\* J, **Li D\***. Searching for human oncoviruses: histories, challenges, and opportunities. *Journal of Cellular Biochemistry*. 2018 Jun;119(6):4897-4906. PMID: 29377246. (\* corresponding author). (This study, for the first time, proposed the “clonal integration analysis” concept.)

### Non-Peer Reviewed Journal Publications

#### Letters to editor

1. Sulovari A, Kranzler HR, Farrer LA, Gelernter J, **Li D\***. Further analyses support the association between light eye color and alcohol dependence. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*. 2015 Dec;168(8):757-60. PMID: 26290254. (\* corresponding author).
2. Han S, Ma L, **Li D**, Yang BZ. Is the tail-strength measure more powerful in tests of genetic association? *American Journal of Human Genetics*. 2009 Feb;84(2):295-8. PMID: 19215734. PMCID: PMC2668021.

### Manuscripts (selected)

1. Mathkar P, Chen X\*, Sulovari A, **Li D\***. Characterization of hepatitis B virus integrations identified in hepatocellular carcinoma genomes. (\* **corresponding author**). *Viruses*. Under review (Invited manuscript).
2. Liu G, Mariani M, Chen X, Single RM, Luan Y, Moore JH, Cao J, **Li D\***. UvirusPredict: A machine learning based approach and software to predict uncharacterized viruses using human high-throughput sequence data. (\* **corresponding author**). Revision.
3. **Li D**, Moreau A. Epigenome-wide study of myalgic encephalomyelitis/chronic fatigue syndrome. (\* **corresponding author**). In preparation.
4. Peipert D, Baronas J, Cao J, **Li D\***. Characterization of integrated viral sequences. (\* **corresponding author**). *Viruses*. In preparation (Invited manuscript).

### Invited Oral Presentations

#### **National**

2020	The NIH All-Centers of Excellence on ME/CFS Annual Meeting, hosted by Cornell University “ME/CFS and endogenous retroviruses”	Ithaca, NY
2020	University of Connecticut, UConn Health “Genome-wide detection of viral integrations, endogenous retroviruses, and applications”	Farmington, CT
2020	Florida Atlantic University, College of Medicine “Multi-omics analyses of endogenous retroviruses and viral integrations, and applications”	Boca Raton, FL
2020	ME/CFS Working Group Annual Meeting at Stanford University “DNA methylome profiling and analyses of ME/CFS identical twins”	Palo Alto, CA
2020	Midwestern University, Department of Biochemistry and Molecular Genetics “Genetic and genomic risk discoveries in human diseases”	Glendale, AZ
2020	Research Triangle Institute (RTI) International, Genomics, Bioinformatics, and Translational Research Center “Genome-wide detection of endogenous retroviruses and viral integrations, and applications”	Research Triangle Park, NC
2020	Baylor College of Medicine, Human Genome Sequencing Center “Genome-wide analyses of viral integrations and transposable elements”	Houston, TX
2019	Nationwide Children's Hospital, Institute for Genomic Medicine “Omics in pediatric behavioral disorders”	Columbus, OH
2019	Geisinger, Geisinger Medical Center “Genetic and genomic studies of human complex diseases”	Danville, PA

2019	National Institutes of Health, National Institute of Neurological Disorders and Stroke, Section of Infections of the Nervous System “Genomic analyses of endogenous retroviruses and viral integrations”	Bethesda, MD
2019	The Ohio State University, Department of Pediatrics “Genetic and genomic studies of complex diseases”	Columbus, OH
2019	Rutgers, The State University of New Jersey, New Jersey Medical School, Department of Psychiatry “Genetic studies of psychiatric and addictive disorders”	Newark, NJ
2018	Advances in Genome Biology and Technology (AGBT) General Meeting “A novel omics approach to identifying oncoviruses in human cancers”	Orlando, FL
2018	National Institute on Drug Abuse (NIDA) Genetics and Epigenetics Cross-cutting Research Meeting “Deletions in the SLC25A18 and ZNF490 Genes Associated with Alcohol Dependence - A Genome-wide Copy Number Variation Screen”	North Bethesda, MD
2017	Gordon Research Conference (GRC) in Human Genetics & Genomics “Identify Novel Oncovirus in Human Cancers Using Whole-Genome Sequencing”	Stowe, VT
2017	Gordon Research Seminar (GRS) in Human Genetics and Genomics “Identify oncogenic viruses using whole-genome sequencing”	Stowe, VT
2017	Dartmouth College, Department of Biomedical Data Sciences, Department of Molecular and Systems Biology “Identify viral integrations in cancer genomes”	Hanover, NH
2017	Dartmouth College, 31 <sup>st</sup> Annual Neuroscience Day “Genome-wide copy number variation analyses identify two deletions associated with alcohol dependence”	Hanover, NH
2012	University of Vermont, Neuroscience, Behavior and Health Initiative Seminar	Burlington, VT
2012	Wayne State University, Genomics Seminar “Genetic studies for identifying genes associated with human complex diseases”	Detroit, MI
2012	University of Pennsylvania, Children’s Hospital of Philadelphia “Genetic studies for identifying variants associated with selected mental disorders”	Philadelphia, PA
2012	University of Vermont, Neuroscience, Behavior and Health Initiative Seminar “Genetic studies for identifying variants associated with selected psychiatric disorders”	Burlington, VT
2011	University of California, San Francisco, and Blood Systems Research Institute “Genetic Association Analyses of Opiate Dependence and Antisocial Personality Disorder”	San Francisco, CA

- 2009 American Society of Human Genetics Annual Meeting Platform Talk  
“The Gamma-Aminobutyric Acid Receptor Genes Are Strongly Associated with Drug Dependence” Honolulu, HI
- 2008 Yale University, Center for Statistical Genomics and Proteomics  
“Genome-Wide Linkage Analyses of Bipolar Disorder and Autoimmune Thyroid Disease in Amish” New Haven, CT
- 2007 NKS 2007 Wolfram Science Conference  
“A subsequent study of visualized sequence comparison based on ten types of viruses” Burlington, VT

## Vermont

- 2020 The 2020 Annual Neuroscience, Behavior and Health Research Forum  
“Multi-omics analyses in myalgic encephalomyelitis/chronic fatigue syndrome” Burlington, VT
- 2019 University of Vermont, Department of Molecular Physiology & Biophysics  
Research in Progress Forum  
“A pilot study of myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS)” Burlington, VT
- 2019 University of Vermont, Department of Microbiology and Molecular Genetics,  
Research Seminar  
“Genetics, genomics, and bioinformatics research of human complex diseases” Burlington, VT
- 2018 University of Vermont, Department of Obstetrics, Gynecology and  
Reproductive Sciences, Research Seminar  
“Genetic studies of substance use disorder” Burlington, VT
- 2017 University of Vermont Cancer Center, Molecular Mechanism of Malignancy  
Research Program Meeting  
“Identify Oncoviruses for Cancer Prevention and Immunotherapies” Burlington, VT
- 2017 The 2017 Annual Neuroscience, Behavior and Health Research Forum  
“Genetics of Familial Chiari I Malformation” Burlington, VT
- 2017 University of Vermont, Department of Plant Biology  
“Identifying novel viral integrations using whole-genome sequencing” Burlington, VT
- 2016 The Sixth Annual Neuroscience, Behavior and Health Research Forum  
“Viral DNA integration in the human genome and brain disease” Burlington, VT
- 2015 University of Vermont, Computer Science Research Day: Celebrating the  
Diversity of Computer Science at University of Vermont  
“Method to Identify Viral Integrations in the Human Genome” Burlington, VT
- 2015 The Fifth Annual Neuroscience, Behavior and Health Research Forum Burlington, VT

## “Alcohol Dependence and Copy Number Variations”

- |      |   |                |
|------|---|----------------|
| 2014 | University of Vermont, Department of Obstetrics, Gynecology and Reproductive Sciences Annual Research Retreat: Genetics, Sex and Environment<br>“Human Genomics: A Tool to Identify Disease Genes” (Featured Speaker) | Burlington, VT |
| 2014 | University of Vermont, Department of Biochemistry<br>“Genetic Association Approach to Identify Disease Gene Targets”  | Burlington, VT |
| 2014 | University of Vermont, Computer Science Research Day<br>“Genetic Association Studies of Mental Disorders”   | Burlington, VT |
| 2014 | Vermont Vascular Medicine Conference<br>“Genetic studies in vascular disease: post-GWAS era”  | Burlington, VT |
| 2014 | The Fourth Annual Neuroscience, Behavior and Health Research Forum<br>“Genetic Studies in Mental Illnesses: GWAS and Beyond”  | Burlington, VT |
| 2013 | University of Vermont, Neuroscience Research Seminar<br>“A Genome-wide Association Study of Copy Number Variations (CNVs) with Substance Use Disorder”  | Burlington, VT |

**China**

- |      |   |                 |
|------|---|-----------------|
| 2020 | Shanghai Jiao Tong University, Bio-X Institutes<br>“A novel approach to detect virome-wide viral integrations in human genomes” | Shanghai, China |
| 2016 | Chinese Academy of Sciences, Institute of Computing Technology<br>“The human genetic research development in our laboratory”    | Beijing, China  |
| 2016 | Huazhong Agricultural University<br>“Bioinformatics and genomics research and training programs at University of Vermont”       | Wuhan, China    |
| 2016 | Shanghai Jiao Tong University-Yale Joint Center<br>“Genome-wide CNV study of addiction”   | Shanghai, China |
| 2016 | Xi’an Jiao Tong University, Health Science Center<br>“Genome-wide association study of human complex diseases”                  | Xi’an, China    |
| 2016 | Tibet Minzu University<br>“Genome-wide association study of CNVs of human complex diseases”                                     | Xianyang, China |
| 2014 | Fudan University<br>“The first genome-wide CNV association study of opiate dependence. Institute of Biomedical Science”         | Shanghai, China |
| 2013 | Shanghai Jiao Tong University, Department of Bioscience and Biotechnology   | Shanghai, China |

“Needles in The Haystack: Genome-wide SNP/CNV Studies in Addictive Disorders”

2012 Shanghai Mental Health Center Shanghai, China  
 “COL25A1 Gene May Be Associated with Comorbid Antisocial Personality Disorder and Substance Dependence”

2012 Xi’an Jiao Tong University Xi’an, China  
 “Identification of Genetic Variants in Mental Illnesses”

## **Research Awards, Grants, Funds, and Other Support**

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### Ongoing Research Support

NIH/NIAID R03 Li (PI) 7/1/19-6/30/21  
 “Comprehensive analyses of endogenous retroviruses with severe chronic fatigue syndrome”  
 The primary goal of this grant is to develop a novel algorithm and comprehensive analytic pipeline that can be used for using deep sequencing data to examine ERV variations associated with immune responses and inflammation in chronic fatigue syndrome (CFS).

Role: PI

Department of Defense Li (PI) 9/30/20-9/29/21  
 Congressionally Directed Medical Research Programs  
 “Human papillomavirus and lung cancer”

The primary goal of this grant is to use genome and transcriptome sequencing to develop a virome-wide viral integration detection approach to identify integrations of viruses, particularly HPV, in HIV+ lung cancer genomes and to develop the bioinformatics protocols for broad applications into human diseases and health.

Role: PI

Solve ME/CFS Initiative, Ramsay Award Li (PI) 1/15/19-12/31/20  
 “Endogenous retroviruses (ERVs) and their expression in chronic fatigue syndrome (CFS)”

The primary goal of this grant is to use omics sequencing dataset to create a new concept for measuring ERV locations and copy numbers, and identifying families and genes of expressed ERVs, and correlating with immune responses and neuroinflammatory cytokines in CFS.

Role: PI

Open Medicine Foundation Li (PI) 7/1/2020-6/30/2022  
 “Viral risk factors in myalgic encephalomyelitis/chronic fatigue syndrome”

The primary goal of this grant is to use ME/CFS omics dataset to build a new bioinformatics method and to characterize the human virome and identify virome-wide somatic infections associated with immune responses and inflammation in ME/CFS.

Role: PI

The ICanCME Research Network Li (PI) 4/1/20-3/31/22  
 “Genomic and transcriptomic analyses of endogenous retroviruses (ERVs) in ME”

The primary goal of this grant is to analyze the genomic and transcriptomic data from the ICanCME Research Network and investigate the roles of ERVs in myalgic encephalomyelitis.

Role: PI

The CHU Sainte-Justine Foundation Li (PI) 1/15/19-1/14/22  
 “Genetics and DNA methylation of familial myalgic encephalomyelitis/chronic fatigue syndrome”

The primary goal of this grant is to analyze whole-genome sequencing and methylome-wide array data from family and twin pair sample set to identify genetic and methylation markers and genes associated with ME/CFS.

Role: PI

- Foundation for Alcoholism Research  
 “Identify alcohol use disorder early stage risks”  
 The primary goal of this grant is to identify early stage risks that can predict the development and progression of alcohol use disorder. We will use a patient life-span approach and big data mining and machine learning approaches to identify actionable disease risks that may be used for early intervention and prevention of this disease and related deaths.  
 Role: PI
- Li (PI) 2/1/20-1/31/21
- Scoliosis Research Society, Small Exploratory Grant  
 “Genetic analysis of familial congenital scoliosis”  
 The primary goal of this grant is to use whole-exome sequencing to map mutations cosegregating with congenital scoliosis in multiplex families. The identified genes will be validated in additional sporadic affected individuals.  
 Role: PI
- Li (PI) 9/1/18-8/31/21
- Solve ME/CFS Initiative, Cathleen J. Gleeson Ph.D. Fund (Gift)  
 “Characterize whole-genome endogenous retroviruses (ERVs) with chronic fatigue syndrome (CFS) using third-generation sequencing”  
 The primary goal of this grant is to use long read sequencing to develop a new method to genotype ERVs and to identify ERVs associated with mitochondrial dysfunction and neuroinflammatory cytokines in a CFS patient sample set.  
 Role: PI
- Li (PI) 9/1/19-8/31/21
- Open Medicine Foundation  
 “Study of COVID-19 Survivors Profiles for detection of Myalgic Encephalomyelitis Development: A Pilot Study”  
 This is the first longitudinal study of critically ill COVID-19 survivors to determine the incidence and the clinical and epigenome-wide profiles underlying the development of ME. My role as Co-PI is to perform all the epigenomic and bioinformatics analyses in this project. The identified regions will be validated by bisulfite pyrosequencing.  
 Role: Co-PI
- Moreau (PI) 6/1/20-5/31/21
- Canadian Institutes of Health Research (“Canada’s NIH”)  
 Catalyst Network Grant on ME  
 “Interdisciplinary Canadian Collaborative Myalgic Encephalomyelitis (ICanCME) Research Network”  
 This is a large international interdisciplinary collaborative ME/CFS research network, patient-centered research program, from discovery to implementation, with the ultimate vision of reducing the impact of ME/CFS. I am on the steering committee of the network.  
 Role: Co-Investigator (Site PI)
- Moreau (PI) 9/1/19-8/31/24
- Pending Research Support
- NIH/NIAID R21  
 “Endogenous retroviruses and myalgic encephalomyelitis”  
 The primary goal of this grant is to use multi-omics sequencing datasets, including genome, transcriptome, and methylome data, to examine the connections between of endogenous retroviruses (ERVs) and myalgic encephalomyelitis (ME).  
 Role: PI
- Li (PI) 5/1/21-4/30/23
- Canadian Institutes of Health Research  
 “Study of COVID-19 lOng-haulers’ Profiles for detectIon of Myalgic Encephalomyelitis Development - SCOPIMED”  
 This is a longitudinal study of COVID-19 “long haulers” to determine the incidence of ME, and its clinical features as well as examine the genome-wide DNA methylation and circulating miRNAs profiles underlying the
- Moreau (PI) 7/1/21-6/30/26

development of ME. My role is to perform multi-omics data generation and all related bioinformatics analyses in this project.

Role: Co-PI

## **Teaching**

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### Formal Classes

<i>Year</i>	<i>Course Title</i>	<i>Students</i>
2020 Fall	Genetics and Genomics	53
2020 Spring	Methods in Bioinformatics	25
2019 Fall	Genetics and Genomics	49
2018 Fall	Genetics and Genomics	29
2018 Spring	Emerging Technology & Health	20
2018 Spring	Methods in Bioinformatics	26
2017 Fall	Genetics and Genomics	48
2017 Spring	Methods in Bioinformatics	25
2016 Fall	Genetics and Genomics	32
2016 Summer	Human Genetics	20
2016 Spring	Methods in Bioinformatics	13
2015 Fall	Genetics and Genomics	16
2015 Spring	Methods in Bioinformatics	19
2014 Fall	Current Topic	4
2014 Spring	Eukaryotic Genetics & Epigenetics	6
2014 Spring	Programming for Bioinformatics	26
2014 Spring	Short Course in Molecular Biology	16
2013 Fall	Genetics and Genomics	10

## **Postdoc and Student Training**

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### Postdoctoral Fellows



<i>Dates</i>	<i>Name</i>	<i>Title</i>	<i>Academic Role</i>	<i>Current Position</i>
2014-2019	Xun Chen, Ph.D.	Postdoctoral Associate	Postdoctoral supervisor	Associate professor (China)

Predoctoral Students

## Ph.D. Thesis Advisor

<i>Dates</i>	<i>Name</i>	<i>Program/Major</i>	<i>Academic Role</i>	<i>Current Position</i>
2020-present	Xugang Shi	Genetics	Thesis advisor (jointly with China)	Current student
2014-2016	Guangchen Liu	Probability & Mathematical Statistics	Thesis advisor (jointly with China)	Associate professor, Department Chair (China)
2012-2017	Arvis Sulovari	Cellular, Molecular & Biomedical Sciences	Thesis advisor	Senior Postdoc fellow (Evan Eichler's Lab)

## Ph.D. Thesis Committee

2020-present	Bharath Mulakla	Animal & Veterinary Sciences	Member	Current student
2018-2020	Kristian Brevik	Plant & Soil Science	Member	Postdoc
2017	Matthew Ung	Dartmouth College	Member	Industry
2016-2019	Abbas Raza	Cellular, Molecular & Biomedical Sciences	Member	Postdoc
2015-2020	Md Mahmudul Hasan	Cellular, Molecular & Biomedical Sciences	Member	Postdoc
2015-present	Bonnie Cantrell	Animal & Veterinary Sciences	Member	Current student

## M.S. Thesis Committee

2017-2019	Mallory Honan	Animal & Veterinary Sciences	Chair	PhD student
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## Undergraduate Students (selected)

2021-present	Joshua Collier	Molecular Genetics	Supervised research	Current student
2020-present	Andrew Pieper	Biology	Thesis advisor	Current student

2020	Yousef Khan	Computer Science	Supervised research	Current student
2019-2020	Sophie Kogut	Biological Sciences	Thesis advisor	Research assistant
2019	Isaac Racine	Biological Sciences	Supervised research	Current student
2018-2019	John Baronas	Biochemistry	Supervised research	Harvard Univ.
2018	Boone Wilson	Molecular Genetics	Supervised research	-
2018	Erik Brown	Data Science	Supervised research	Graduate student
2016	Rohit Nawani	Computer Science	Career advisor	-
2015-2017	Acadia Moeyersoms	Biochemistry	Thesis advisor	PhD student at Univ. of Miami
2015-2016	David Miserak	Software Engineering	Supervised research	Master student
2015-2016	Addison Marcus	Biological Science	Supervised research	-
2015-2016	Gina Castellano	Biological Sciences	Supervised research	Graduate student
2014-2015	Robert Bachman	Molecular Genetics	Supervised research	-
2014-2015	Robert Howe	Biochemistry	Supervised research	-
2014	Braeden Hughes	Biology	Supervised research	-
2013-2014	Kelly Nguyen	Molecular Genetics	Thesis advisor	-
2012	Emily LaRocque	Premed student	Supervised research	Medical school

#### Residents and Other Students Supervised or Mentored

<i>Dates</i>	<i>Name</i>	<i>Position</i>	<i>Role</i>	<i>Current Position</i>
2020-present	Sen Guo, M.S.	Computational biologist	Supervised research	Li Lab
2016-present	Jason Kost, M.S.	Bioinformatician	Supervised research	Li Lab
2016-2019	Erin Lips, M.D.	Resident (OB/GYN)	Research project	Fellowship
2016	Maria Kogan	High school student	Supervised research	UVM 2017 student

#### Service

#### Journals

<i>Years</i>	<i>Journal/Program/Organization/Committee</i>	<i>Role</i>
2019-present	<i>Journal of Bio-X Research (published by Wolters Kluwer)</i>	Editorial Board
2010-2018	<i>International Journal of Knowledge Discovery in Bioinformatics</i>	Editorial Board
2007-present	<i>Nature Genetics; British Medical Journal; Journal of Molecular Cell Biology; Human Molecular Genetics; JAMA Psychiatry; Bioinformatics; Briefings in Bioinformatics; Human Genetics; Neuropsychopharmacology; Biological Psychiatry; American Journal of Psychiatry; British Journal of Psychiatry; Translational Psychiatry; Genes, Brain and Behavior; Psychological Medicine; Pharmacogenomics Journal; Schizophrenia Research; Acta Psychiatrica Scandinavica; American Journal of Medical Genetics - Neuropsychiatric Genetics; Genetic Epidemiology; BMC Genomics; Journal of Neuroimmune Pharmacology; Progress in Neuro-Psychopharmacology &amp; Biological Psychiatry; Alcoholism: Clinical and Experimental Research; Drug and Alcohol Dependence; Neuropsychobiology; Infection, Genetics and Evolution; BMC Psychiatry; Gene; Carcinogenesis; Scientific Reports; Cells</i>	<i>Ad Hoc Peer Reviewer</i>

#### Award Peer-review

2020	Czech Republic, Czech Science Foundation	Grant Reviewer
2020	ME Research UK	Grant Reviewer
2020	Vermont Genetics Network, Faculty Project Research Awards	Grant Reviewer
2019	Vermont Genetics Network, Faculty Pilot Research Awards	Grant Reviewer
2018	National Natural Science Foundation of China, Genetics and Bioinformatics Study Section	Grant Reviewer
2016	Vermont Genetics Network, Faculty Pilot Research Awards	Grant Reviewer
2016	National Natural Science Foundation of China, Genetics and Bioinformatics Study Section	Grant Reviewer
2015	National Institutes of Health of the USA, Genetics of Health and Disease Study Section	Grant Reviewer
2014	Louisiana Board of Regents, Research Competitiveness Subprogram	Grant Reviewer
2014	Louisiana Board of Regents, Pilot Funding for New Research Program	Grant Reviewer
2014	National Natural Science Foundation of China, Genetics and Bioinformatics Study Section	Grant Reviewer

#### Organizations

2020-present	Interdisciplinary Canadian Collaborative Myalgic Encephalomyelitis (ICanCME) Research Network, Genetics/Epigenetics Working Group	Chair
2020-present	Interdisciplinary Canadian Collaborative Myalgic Encephalomyelitis (ICanCME) Research Network	Steering Committee
2017	American Society of Human Genetics Annual Meeting, “Non-coding Variation and Epigenetic Effects in Cancer” Session, Orlando, Florida	Platform Session Moderator
2016-2019	Association of Chinese Geneticists in America	Awards Committee
2016	American Society of Human Genetics Annual Meeting, “Novel Methods for Analyzing GWAS and Sequencing Data” Session, Vancouver, Canada	Platform Session Moderator
2016	American Society of Human Genetics Annual Meeting, “Statistical Genetics and Genetic Epidemiology” Session	Reviewer
2011	IEEE International Conference on Data Mining	Program Committee

### Society Membership

2018-present	European Virus Bioinformatics Center	Member
2016-present	Association of Chinese Geneticists in America	Member
2007-present	American Society of Human Genetics	Member
2007-2010	Type 1 Diabetes Genetics Consortium	Selected colleague

### University

2015-2017	Cardiovascular Research Institute of Vermont, Early Career Advisory Committee	Member
2014-2017	University of Vermont, President’s Our Common Ground Staff Award Committee	Member

### College

2018-2020	University of Vermont, College of Agriculture and Life Sciences, Equity, Diversity, and Inclusion Committee (two terms)	Member
2017-2020	University of Vermont, Neuroscience Graduate Program, Admissions and Recruitment Committee (two terms)	Member
2015-2019	University of Vermont, College of Agriculture and Life Sciences, Academic Awards Committee (two terms)	Member

2014-2020	University of Vermont, College of Medicine, Faculty Nominating Committee (three terms)	Member
2014-2017	University of Vermont, Cellular, Molecular and Biomedical Sciences Graduate Program, Admissions and Recruitment Committee	Member

Department

2018-19	University of Vermont, Department of Microbiology and Molecular Genetics, Scientific Programming and Retreats Committee	Member
2017	University of Vermont, Bioinformatics Shared Resource Core, Faculty Scientist Search Committee	Member

## Honors and Awards

2020	Foundation for Alcoholism Research, Advisory Board
2014	University of Vermont, Sustainability Teaching Fellowship
2014	University of Vermont, Honors College Teaching Fellowship
2013	Shanghai Jiao Tong University, Visiting Professor Scholarship, China
2008	Outstanding Thesis of Shanghai, China
2006	Outstanding Graduate Student of Shanghai, China
1998	Northwest University, Lu Xiufang Award, China

# GREGORY T. MACLEOD

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## CURRICULUM VITAE

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### Education

<i>Ph.D.</i>	University of Sydney	1995-99	Neuroscience
<i>M.B.A.</i>	AGSM - Australian Graduate School of Management	1989-90	General Management
<i>B.Sc. Hons.</i>	University of Sydney	1986	Plant Physiology & Biophysics
<i>B.Sc.</i>	University of Sydney	1983-85	Cell Biology & Plant Physiology

### Employment History

Professor	2020-present	Florida Atlantic University, Wilkes Honors College
Associate Professor	2013-2020	Florida Atlantic University, Wilkes Honors College & Dept. of Biology
Assistant Professor	2006-13	University of Texas Health Science Center at San Antonio (UTHSCSA), Dept. of Physiology
Postdoctoral Fellow	2004-06	University of Arizona, Div. of Neurobiology
Postdoctoral Fellow	2000-04	University of Toronto, Dept. of Physiology
Postdoctoral Fellow	1999-00	University of Sydney, Dept. of Physiology
Graduate Student	1994-99	University of Sydney, Dept. of Physiology
Management / Consulting	1991-93	Dalton Pacific, DataView Solutions, Godfrey Pembroke Sydney, Australia
Research Assistant	1987-88	University of Sydney, Neurobiology Research Centre

### Refereed Journal Articles

1. Han, T.H., Vicidomini, R., Ramos, C.I., Wang, Q., Nguyen, P., Jarnik, M., Lee, C.H., Stawarski, M., Hernandez, R.X., Macleod, G.T., Serpe, M. (2020) Neto- $\alpha$  controls synapse organization and homeostasis at the *Drosophila* neuromuscular junction. **Cell Reports**. Vol.32: pp.1-17.
2. Stawarski, M., Hernandez, R.X., Fegghi, T., Borycz, J.A., Lu, Z., Agarwal, A.B., Reihl, K.D., Tavora, R., Lau, A.W.C., Meinertzhagen, I.A., Renden R., Macleod G.T. (2020) Neuronal glutamatergic synaptic clefts alkalize rather than acidify during neurotransmission. **Journal of Neuroscience**. Vol.40: pp.1611-1624.

3. Gratz, S.J., Goel, P., Bruckner, J.J., Hernandez, R.X., Khateeb, K., Macleod, G.T., Dickman, D., O'Connor-Giles, K.M. (2019) Endogenous tagging reveals differential regulation of Ca<sup>2+</sup> channels at single AZs during presynaptic homeostatic potentiation and depression. **Journal of Neuroscience**. Vol.39: pp.2416-2429.
4. Stawarski, M., Justs, K.A., Hernandez, R.X., Macleod, G.T. (2018) The application of 'kisser' probes for resolving the distribution and microenvironment of membrane proteins *in situ*. **Journal of Neurogenetics**. Vol.32: pp.236-245.
5. Ugur, B., Bao, H., Stawarski, M., Duraine, L.R., Zuo, Z., Lin, Y.Q., Neely, G.G., Macleod, G.T., Chapman, E.R., Bellen, H.J. (2017) The Krebs cycle enzyme isocitrate dehydrogenase 3A couples mitochondrial metabolism to synaptic transmission. **Cell Reports**. Vol.21: pp.3794-3806.
6. Rossano, A.J., Kato, A., Minard, K.I., Romero, M.F., Macleod G.T. (2017) Na<sup>+</sup>/H<sup>+</sup>-exchange via the *Drosophila* vesicular glutamate transporter (DVGLUT) mediates activity-induced acid efflux from presynaptic terminals. **Journal of Physiology**. Vol.595: pp.805-824.
7. Lu, Z., Chouhan, A.K., Borycz, J.A., Lu, Z., Rossano, A.J., Brain, K.L., Zhou, Y., Meinertzhagen, I.A., Macleod, G.T. (2016) High-probability neurotransmitter release sites represent an energy-efficient design. **Current Biology**, Vol.26: pp.2562-2571.
8. Wong C-O., Lin Y-Q., Chen K., Chao Y., Duraine L., Lu Z., Yoon W-H., Sullivan J-M., Broadhead G.T., Sumner C.J., Lloyd T.E., Macleod G.T., Bellen H.J. & Venkatachalam K. (2014) A TRPV channel in *Drosophila* motor neurons regulates presynaptic resting Ca<sup>2+</sup> levels, synapse growth, and synaptic transmission. **Neuron**. Vol.84: pp.764-777.
9. Shi Y., Ivannikov M.V., Walsh M.E., Liu Y., Zhang Y., Jaramillo C.A., Macleod G.T., Van Remmen H. (2014) The lack of CuZnSOD leads to impaired neurotransmitter release, neuromuscular junction destabilization and reduced muscle strength in mice. **PLoS One**. Vol.9, e100834
10. Grygoruk A., Chen A., Martin C.A., Lawal H.O., Fei H., Gutierrez G., Biedermann T., Najibi R., Hadi R., Chouhan A.K., Murphy N.P., Schweizer F.E., Macleod G.T., Maidment N.T. & Krantz D.E. (2014) The redistribution of *Drosophila* vesicular monoamine transporter mutants from synaptic vesicles to large dense-core vesicles impairs amine-dependent behaviors. **Journal of Neuroscience**. Vol.34, pp.6924-6937.
11. Daniels R.W., Rossano A.J., Macleod G.T., Ganetzky B. (2014) Expression of multiple transgenes from a single construct using viral 2A peptides in *Drosophila*. **PLoS One**. Vol.9, e100637.
12. Sakellariou G.K., Davis C.S., Shi Y., Ivannikov M.V., Zhang Y., Vasilaki A., Macleod G.T., Richardson A., Van Remmen H., Jackson M.J., McArdle A. & Brooks S.V. (2014) Neuron-specific expression of CuZnSOD prevents the loss of muscle mass and function that occurs in homozygous CuZnSOD knockout mice. **FASEB Journal**. Vol.28, pp.1666-1681.
13. Ivannikov M.V. & Macleod G.T. (2013) Mitochondrial free Ca<sup>2+</sup> levels and their effects on energy metabolism in *Drosophila* motor nerve terminals. **Biophysical Journal**. Vol.104, pp.2353-2361.
14. Rossano, A.J., Chouhan A.K. & Macleod G.T. (2013) Genetically-encoded pH-indicators (GEpHIs) reveal activity-dependent cytosolic acidification of *Drosophila* motor nerve termini *in vivo*. **Journal of Physiology**. Vol.591, pp.1691-1706.

15. Rawson, J.M., Kreko, T., Davidson, H., Mahoney, R., Bokov, A., Chang, L., Gelfond, J., Macleod G.T. & Eaton, E.A. (2012) Effects of diet on synaptic vesicle release in dynactin complex mutants: a mechanism for improved vitality during motor disease. **Aging Cell**. Vol.11, pp.418-427.
16. Chouhan A.K., Ivannikov M.V., Lu Z., Sugimori M., Llinas R.R. & Macleod G.T. (2012) Cytosolic calcium coordinates mitochondrial energy metabolism with presynaptic activity. **Journal of Neuroscience**. Vol.32, pp.1233–1243.
17. Macleod G.T. (2012) Calcium imaging at the *Drosophila* larval NMJ. **Cold Spring Harbor Protocols**. No.7. July 2<sup>nd</sup>.
18. Macleod G.T. (2012) Topical application of indicators for calcium imaging at the *Drosophila* larval NMJ. **Cold Spring Harbor Protocols**. No.7. July 2<sup>nd</sup>.
19. Macleod G.T. (2012) Forward-filling of dextran-conjugated indicators for calcium imaging at the *Drosophila* larval NMJ. **Cold Spring Harbor Protocols**. No.7. July 2<sup>nd</sup>.
20. Macleod G.T. (2012) Direct injection of indicators for calcium imaging at the *Drosophila* larval NMJ. **Cold Spring Harbor Protocols**. No.7. July 2<sup>nd</sup>.
21. Macleod G.T. (2012) Imaging and analysis of nonratiometric calcium indicators at the *Drosophila* larval NMJ. **Cold Spring Harbor Protocols**. No.7. July 2<sup>nd</sup>.
22. George A.A., Macleod G.T. & Zakon H.H. (2011) Calcium-dependent phosphorylation regulates neuronal stability and plasticity in a highly precise pacemaker nucleus. **Journal of Neurophysiology**. Vol.106, pp.319–331.
23. Shakiryanova D., Morimoto T., Zhou C., Chouhan A.K., Sigrist S.J. Nose A., Macleod G.T., Deitcher D.L. & Levitan, E.S. (2011) Differential control of presynaptic CaMKII activation and translocation to active zones. **Journal of Neuroscience**. Vol.31, pp.9093–9100.
24. Chouhan A.K., Zhang J., Zinsmaier K.E. & Macleod G.T. (2010) Presynaptic mitochondria in functionally different motor neurons exhibit similar affinities for Ca<sup>2+</sup> but exert little influence as Ca<sup>2+</sup> buffers at nerve firing rates *in situ*. **Journal of Neuroscience**. Vol.30, pp.1869-1881.
25. Russo G.J., Louie K., Wellington A., Macleod G.T., Hu F., Panchumarthi S., & Zinsmaier K.E. (2009) *Drosophila* Miro is required for both anterograde and retrograde axonal mitochondrial transport. **Journal of Neuroscience**. Vol.29, pp.5443-5455.
26. Lagow R.D., Bao H., Cohen E.N., Daniels R.W., Zuzek A., Williams W.H., Macleod G.T., Sutton R.B. & Zhang B. (2007) Modification of a hydrophobic layer by a point mutation in syntaxin 1A regulates the rate of synaptic vesicle fusion. **PLoS Biology**. Vol.5(4), e72.
27. Rossano A.J. & Macleod G.T. (2007) Loading *Drosophila* nerve terminals with Ca<sup>2+</sup>-indicators. **Journal of Visualized Experiments**. Vol.6. <http://www.jove.com/video/250>
28. Macleod G.T., Chen L., Karunanithi S., Peloquin J.B., Atwood H.L., McRory J.E., Zamponi G.W. & Charlton M.P. (2006) The *Drosophila cac*<sup>ts2</sup> mutation defines an element critical for inactivation in Ca<sub>v</sub>2.1 channels. **European Journal of Neuroscience**. Vol.23, pp.3230-3244.



29. Guo<sup>†</sup> X., Macleod<sup>†</sup> G.T., Wellington A., Hu F., Panchumarthi S., Schoenfield M., Marin L., Charlton M.P., Atwood H.L. & Zinsmaier K.E. (2005) The GTPase dMiro is required for axonal transport of mitochondria to *Drosophila* synapses. **Neuron**. Vol.47, pp.379-393. <sup>†</sup> *Equal author contribution*.
30. Bao H., Daniels<sup>†</sup> R.W., Macleod<sup>†</sup> G.T., Charlton M.P., Atwood H.L. & Zhang B. (2005) AP180 maintains the distribution of synaptic and vesicle proteins in the nerve terminal and indirectly regulates the efficacy of Ca<sup>2+</sup>-triggered exocytosis. **Journal of Neurophysiology**. Vol.94, pp.1888-1903.
31. Babcock M., Macleod G.T., Leither J. & Pallanck L. (2004) Genetic analysis of soluble N-ethylmaleimide-sensitive factor attachment protein function in *Drosophila* reveals positive and negative secretory roles. **Journal of Neuroscience**. Vol.24, pp.3964-3973.
32. Macleod G.T., Marin L., Charlton M.P. & Atwood H.L. (2004) Synaptic vesicles: test for a role in presynaptic calcium regulation. **Journal of Neuroscience**. Vol.24, pp.2496-2505.
33. Macleod G.T., Suster M.L., Charlton M.P. & Atwood H.L. (2003) Single neuron activity in the *Drosophila* larval CNS detected with calcium indicators. **Journal of Neuroscience Methods**. Vol.127, pp.167-178.
34. Macleod G.T., Hegstöm-Wojtowicz M., Charlton M.P. & Atwood H.L. (2002) Fast calcium signals in *Drosophila* motor neuron terminals. **Journal of Neurophysiology**. Vol.88, pp.2659-2663.
35. Macleod G.T., Dickens P.A. & Bennett M.R. (2001) Formation and function of synapses with respect to Schwann cells at the end of motor-nerve terminal branches on mature amphibian (*Bufo marinus*) muscle. **Journal of Neuroscience**. Vol.21, pp.2380-92.
36. Bennett M.R., Farnell L., Gibson W.G., Macleod G.T. & Dickens P. (2000) Quantal potential fields around individual active zones of amphibian motor-nerve terminals. **Biophysical Journal**. Vol.78, pp.1106-1118.
37. Macleod G.T., Gan J.B. & Bennett M.R. (1999) Vesicle-associated proteins and quantal release at single active zones of amphibian (*Bufo marinus*) motor-nerve terminals. **Journal of Neurophysiology**. Vol.82, pp.1133-1146.
38. Macleod G.T., Farnell L., Gibson W.G. & Bennett M.R. (1999) Quantal secretion and nerve-terminal cable properties at neuromuscular junctions in an amphibian (*Bufo marinus*). **Journal of Neurophysiology**. Vol.81, pp.1135-1146.
39. Macleod G.T., Khurana V., Gibson W.G. & Bennett M.R. (1998) Probability of quantal secretion and the mobilization of vesicles at the active zones of endplates. **Journal of Theoretical Biology**. Vol.191, pp.323-324.
40. Macleod G.T., Lavidis N.A. & Bennett M.R. (1994) Calcium dependence of quantal secretion from visualized sympathetic nerve varicosities on the mouse vas deferens. **Journal of Physiology**. Vol.480, pp.61-70.

### Book Chapters

41. Macleod G.T. & Ivannikov M.V. (2017). Examining mitochondrial function at synapses *in situ*. In, Yuriy M. Usachev & Stefan Strack (Eds.), **Neuromethods: Techniques to investigate mitochondrial function in neurons**. Springer Science + Business Media. Vol.123, pp.279-297.

42. Macleod G.T. (2010) Calcium Imaging. In, M. Freeman, S. Waddell, & B. Zhang (Eds.), *Drosophila Neurobiology Methods: A Laboratory Manual*. Woodbury, NY. Cold Spring Harbor Laboratory Press, pp.315-341.

#### **Other (invited article previews)**

43. Ivannikov M.V., Harris K.M. & Macleod G.T. (2010) Mitochondria: enigmatic stewards of the synaptic vesicle reserve pool. *Frontiers in Synaptic Neuroscience*. 2, Article 145.
44. Macleod G.T. & Zinsmaier K.E. (2006) Synaptic homeostasis on the fast track. *Neuron*, Vol.52, pp.569-571.

#### **Non-Refereed Presentations and Proceedings. (last 3 years)**

##### **Invited National Presentations (no invitations accepted in the last 12 months due to Covid19)**

1. *Neuronal bioenergetics: Coordinating mitochondrial number and function with the energy requirements of nerve terminals.*  
Oct. 2018. The University of Pittsburgh School of Medicine. Host – Edwin Levitan
2. *Neuronal bioenergetics: Coordinating mitochondrial number and function with the energy requirements of nerve terminals.*  
Oct. 2018. The University of Texas Health Science Center at Houston, McGovern Medical School. Host – Kartik Venkatachalam
3. *Alkalinization of the synaptic cleft during burst firing; a phenomenon that ameliorates frequency depression.*  
Feb. 2018. The University of Miami, Miller School of Medicine. Host – Daniel Isom

#### **Grants**

##### **Extramural Research Funding**

###### **Pending Research Support** (pending review)

**Title:** Mitochondrial Interactions with the Plasmamembrane: Genetic Underpinnings and Functional Consequences at Drosophila Nerve Terminals.

**Reference:** NIH R01 NS123377

**Role:** PI (25% effort)

**Dates:** 07/01/21 – 06/30/26

**Total Funds Requested:** \$1,845,759

###### **Current Extramural Funding** (NIH)

**Title:** The Impact of Synaptic Cleft pH Fluctuations on Short-Term Synaptic Plasticity

**Reference:** NIH R01 NS103906 - awarded in the first year as an R56

**Role:** PI (25% effort)

**Dates:** 02/01/2018 – 01/31/2023

**Total Amount Awarded:** \$1,680,856

**Granting Agency:** National Institute of Neurological Disorders and Stroke (NINDS)

**Title:** Molecular mechanism of synapse assembly and function  
**Reference:** NIH R01 NS078179  
**Role:** Co-PI: Sub Awardee (8% effort) (The PI is Kate O'Connor-Giles at Brown University)  
**Dates:** 12/15/2018 – 11/30/2023  
**Total Amount Awarded:** \$1,795,860 (**\$155,786** to FAU)  
**Granting Agency:** National Institute of Neurological Disorders and Stroke (NINDS)

Previous Extramural Funding (last 5 years)

**Title:** Neuronal Mechanisms Controlling Number and Function of Presynaptic Mitochondria  
**Reference:** NIH R01 NS061914 – Competing Renewal  
**Role:** PI (30% effort)  
**Dates:** 11/01/2013-06/30/2018 (last year in NCE)  
**Total Amount Awarded:** Total **\$1,223,869** (includes a 1 year diversity supplement)  
**Granting Agency:** National Institute of Neurological Disorders and Stroke (NINDS)

**Title:** Probing the Synapse for pH Microdomains  
**Reference:** NIH R21 NS083031  
**Role:** PI (20% effort)  
**Dates:** 09/01/2013-08/31/2016 (last year in NCE)  
**Total Amount Awarded:** **\$392,810** – over 2 years  
**Granting Agency:** National Institute of Neurological Disorders and Stroke (NINDS)

Courses Taught at FAU

All courses taught at FAU

I teach, or mentor, in the following courses at the Wilkes Honors College on the MacArthur campus:

<b>Honors Cell Biology</b> (PCB4102)	4	credit hours	Spring semester	2014-21
<b>Honors Biology Research</b> (BSC4915)	1-3	credit hours	Spring, Summer & Fall	2014-21
<b>Honors Biology Thesis</b> (BSC4970)	3	credit hours	Spring, Summer & Fall	2014-21
<b>Honors Neuro Diseases</b> (BSC4905)	1-3	credit hours	Spring, Summer & Fall	2014-21
<b>Directed Ind. Res.</b> (CoS BSC4910)	1-3	credit hours	Spring, Summer & Fall	2014-21
<b>Internship</b> (ISC4947 / CoS IDS3941)	1-3	credit hours	Spring, Summer & Fall	2014-21

Supervision of Graduate Students at FAU (to Summer 2019 only)

1. Zhongmin Lu, PhD Feb. 2010 – Sep. 2015  
Title: *Presynaptic determinants of synaptic strength and energy efficiency at Drosophila neuromuscular junctions*  
My Role: **Chair** of dissertation committee and direct supervisor
2. Monica Risely, PhD May 2014 – Mar. 2018  
Title: *Characterizing electroconvulsive seizure recovery time using the invertebrate model systems Caenorhabditis elegans and Drosophila melanogaster*  
My Role: Regular member of dissertation committee
3. Priyanka Kakad, PhD Jun. 2014 – Jun. 2018  
Title: *Nuclear translocation and function of LICAM in vivo using Drosophila melanogaster*

My Role: Regular member of dissertation committee

4. Keith Murphy, PhD Jun. 2014 – Mar. 2018  
Title: *Genetic and neuronal integration of sleep and feeding*  
My Role: Regular member of dissertation committee
5. Tyrone Penserga (intended PhD) Sep. 2014 – present  
Title: Yet to be determined  
My Role: Regular member of dissertation committee
6. Kent Fairchild, MS Feb. 2014 – June 2016  
Title: *Developmental effects of DPP\_4 inhibition in D. melanogaster*  
My Role: Regular member of dissertation committee
7. Wesley Bollinger, PhD Fall 2015 – May 2018  
Title: *Protecting synaptic function from acute oxidative stress:  
A novel role for Big K<sup>+</sup> (BK) channels and resveratrol-like compounds*  
My Role: Regular member of dissertation committee
8. Karlis Justs, PhD Spring 2016 – July 2019  
Title: *A framework for understanding power supply and demand in presynaptic nerve terminals*  
My Role: **Chair** of dissertation committee and direct supervisor
9. Timothy Holford (intended PhD) Spring 2016 – present  
Title: *The contribution of SST interneurons to the PTEN model of autism spectrum disorder*  
My Role: Regular member of dissertation committee
10. Melissa Slocumb, MS Spring 2016 – Jul. 2017  
Title: *Circadian and neuronal regulation of sleep metabolic rate*  
My Role: Regular member of dissertation committee
11. Maria Yurgel, PhD Spring 2016 – Fall 2018  
Title: *The role of leucokinin neurons in the metabolic regulation of sleep.*  
My Role: Regular member of dissertation committee
12. James Jaggard (intended PhD) Spring 2016 – present  
Title: Yet to be determined  
My Role: Regular member of dissertation committee
13. Kaz Murakami (intended PhD) Spring 2016 – present  
Title: Yet to be determined  
My Role: Regular member of dissertation committee
14. Ingo Gotthard (intended PhD) Spring 2017 – present  
Title: Yet to be determined  
My Role: Regular member of dissertation committee
15. Roberto Hernandez (intended PhD) Spring 2018 – present  
Title: Yet to be determined  
My Role: **Chair** of dissertation committee and direct supervisor

16. Kerriann Badal (intended PhD)      Fall 2018 – present  
Title: Yet to be determined  
My Role: Regular member of dissertation committee
17. Danielle Riboul (intended PhD)      Spring 2019 – present  
Title: Yet to be determined  
My Role: **Chair** of dissertation committee and direct supervisor
18. Evan Lloyd (intended PhD)          Spring 2019 – present  
Title: Yet to be determined  
My Role: Regular member of dissertation committee

Supervision of Undergraduate Students at FAU (to Summer 2019 only)

1. Christina Collins - Spring '15  
Title: *A Novel Reporter: Construction of a Ratiometric Fluorescent Voltage-Sensitive Protein to Report Inner Mitochondrial Membrane Potential.*
2. Brandon Gilliland – Fall '15  
Title: *Nf1 Mutations Impair Memory-Related Plasticity in the Drosophila Melanogaster Mushroom Body.*
3. Kellie Konicki - Fall '15  
Title: *Investigating Intellectual Disability (ID) and Autism Spectrum Disorder (ASD) Characteristic Behaviors in the SYNGAP1 Mouse Model.*
4. Don Woody - Spring '16  
Title: *Developing Genetically Encoded Ratiometric Fluorescent Probes to Investigate Mitochondrial Voltage and pH in vivo.*
5. Gabrielle Fontinelle – Spring '16  
Title: *The application of opsins to control mitochondrial metabolism: Stage 1 – testing for the presence of opsins in the inner mitochondrial membranes of transgenic fruit flies.*
6. Roberto Hernandez – Spring '16  
Title: *Using Drosophila as a model in which to examine the cellular basis of a neurological deficit caused by a novel mutation in isocitrate dehydrogenase.*
7. Arthur Speziale – Spring '16  
Title: *Construction and Use of Subcellular Probes for Investigating the Influence of pH Homeostasis on Short Term Synaptic Plasticity and Neurotransmission.*
8. Vincenzo Giovinazzo – Fall '16  
Title: *Dissecting the Stability of Rhes; A striatal protein involved in Huntington Disease.*
9. Stacy Cabral – Spring '17  
Title: *Identifying a novel genetic modifier in a mouse model of macrocephaly and autism.*
10. Remikie Harris – Spring '17  
Title: *An Investigation into the Involvement of the Phosphagen System in Synaptic Vesicle Recycling.*

11. Viktoriya Kozlova – Spring '17  
Title: *The Phosphagen System's Role in Energy Supply to Synaptic Terminals.*
12. Farrah Tygar – Spring '17  
Title: *Environmental Enrichment and Social Recognition in PTEN<sup>+/-</sup> Mice.*
13. Erin Wade – Spring '17  
Title: *Flow cytometric assay to measure nucleotide excision repair capacity in cell lines and blood.*
14. Spencer Webb – Spring '17  
Title: *Neuron-Based Phenotypic Screening Assays for Therapeutic Discovery in Neuropsychiatric Disorders.*
15. Rachel Miller – Fall '17  
Title: *Inhibition of Dermatophilus congolensis using topical products.*
16. Heather Gilchrist – Spring '18  
Title: *In Search of Fear's Social Equilibrium: How Social Contagion and Social Buffering Compete in D. melanogaster.*
17. Regina Murthy – Spring '18  
Title: *Mapping Mitochondrial Number and Morphology in the Brains of Drosophila melanogaster Models of Parkinson's Disease.*
18. Rubens Tavora – Spring '18  
Title: *Analysis of expression and localization of OGT-1.*
19. Swathi Pisupati – Summer '18  
Title: *The basolateral amygdala is necessary for the effects of social stress on methamphetamine seeking.*
20. Mariah Frances Calubag – Fall '18  
Title: *Mapping Neurons within the CA1 Region of the Hippocampus Allocated to Context Memory.*
21. Sarah Soodeen – Spring '19  
Title: *Combination of sulindac and oxidizing agents enhance cell death in breast cancer cells.*
22. Christian Alvarado – Spring '19  
Title: *Apparatus for visual place learning through aversive conditioning in Drosophila melanogaster.*
23. Sarah Crill (CoS) – Spring '19  
Title: *Identifying the endogenous expression pattern and subcellular location of Arginine Kinase in D. melanogaster motor neurons.*
24. Maria Mourino (CoS) – Spring '19  
Title: *The mechanism of action underlying carbon dioxide anaesthesia in fruit flies.*
25. Benjamin LaFlamme – Summer '19  
Title: *Protein splicing factors regulate the expression of a novel isoform of the C. elegans daf-2 insulin receptor.*

26. Ian Gaudet (CoS) – Summer ‘19

Title: *Thermodrome: A Novel Assay for Visuospatial Learning in Drosophila*.

27. Carmen-Maria Garcia – Summer ‘19

Title: *Description of Phenotypic Grooming Behavior in Drosophila melanogaster Model of Type 1 Neurofibromatosis*.

### Advising of Undergraduate Students at FAU (to Summer 2019 only)

As a Wilkes Honors College faculty member I am expected to advise undergraduates 3 times a year, in early Fall, late Fall and late Spring. On each occasion I invite undergraduates to my office where I provide one-on-one advice on course selection and career objectives. I have been responsible for advising each of the 39 undergraduate students listed below, and have met with some of them up to 8 times. This advising is done in addition to advising undergraduates and graduate students doing research projects and theses (see 6g for further details).

<b>Advisee Name</b>	<b>Started Advising</b>
Tyler King	early Fall 2014
Courtney Hunt	early Fall 2014
Carmen-Maria Garcia	early Fall 2015
Maria Valdez-Palomino	early Fall 2015
Christian Alvarado	early Fall 2015
Arielle Schebovitz	early Fall 2015
Sarah Soodeen	early Fall 2015
Christopher Graham	early Fall 2015
Michael Chang	early Fall 2015
Frederick Brown	early Fall 2016
Camden Weist	early Fall 2016
Elizabeth Lanzon	early Fall 2016
Daniela Giachetti	early Fall 2016
Sanjay Venugopalan	early Fall 2016
Tasmiah Rahman	late Fall 2016
Haylee Trulson	late Fall 2016
Andrew Bryant	late Fall 2016
Vincenzo Giovinazzo	late Fall 2016
Rahat Verma	late Fall 2016
Tracey Tobkin	late Fall 2016
Michelle Nudel	late Spring 2017
Amado Vasquez	early Fall 2017
Zayne Orosz	early Fall 2017
Gillian Hebert	early Fall 2017
Abigail Parker	early Fall 2017
Yenia Guerrero	early Fall 2017
Luis Rivero	late Spring 2018
Milly Reyes Tarazona	early Fall 2018
Ewa Barnas-Lionarons	early Fall 2018
Alexandra Rosado Torres	early Fall 2018
Briana Magloire	early Fall 2018
Fredy Mendez	early Fall 2018

Shelly Davidashvilly	early Fall 2019
Bradley Drummond	early Fall 2019
Saul Vilchiz	early Fall 2019
Saadhana Sridharan	early Fall 2019
Rebecca Richar	early Fall 2019
Allyson Flores	early Fall 2019
Shivana Persaud	early Fall 2019

**Service and Professional Development** (to Summer 2019 only)

**Service to the Institution (FAU)**

**College service** (started in Oct 2013)

**2013-4**

WHC Ad-hoc Search Committee for a biology faculty hire (regular member)

**2014-5**

WHC Academic Affairs Committee (regular member)

WHC Promotion & Tenure Committee (regular member)

**2015**

WHC Dean Search Committee (regular member)

WHC Promotion & Tenure Committee (regular member)

WHC Ad-hoc Committee making recommendations regarding a BS for the WHC (regular member)

**2016**

WHC Dean Search Committee (continued) (regular member)

WHC Business Manager Search Committee (regular member)

WHC Cell Biology Faculty Search Committee (co-chair)

WHC Genetics Faculty Search Committee (co-chair)

WHC Physics Faculty Search Committee (regular member)

WHC Academic Affairs Committee (regular member)

WHC Promotion & Tenure Committee (regular member)

**2017**

WHC Business Manager Search Committee (continued) (regular member)

WHC Physics Faculty Search Committee (continued) (regular member)

WHC Cell Biology Faculty Search Committee (continued) (co-chair)

WHC Genetics Faculty Search Committee (continued) (co-chair)

WHC Cell Biology Faculty Search Committee (to fill a 2<sup>nd</sup> position) (co-chair)

WHC Academic Affairs Committee (regular member)

WHC Curriculum Committee (regular member)

WHC Promotion & Tenure Committee (regular member)

**2018**

WHC Cell Biology Faculty Search Committee (continued) (co-chair)

WHC Curriculum Committee (regular member)

WHC Promotion & Tenure Committee (regular member)

Development Activity – presentation at a social event at the First Republic Bank

**2019**

WHC Curriculum Committee (regular member)

WHC Promotion & Tenure Committee (regular member)

**University service** (started in Oct 2013)

**2014-5**



Jupiter Life Sciences Initiative (JLSI) Faculty Search Committee (regular member)  
Osher Lifelong Learning Institute (OLLI) Awards Committee (regular member)  
Hosted seminars by out-of-state scientists on two separate occasions  
URI: Undergraduate Research Curriculum Committee (regular member)

**2015**

Jupiter Life Sciences Initiative (JLSI) Faculty Search Committee (regular member)  
Hosted seminars by an out-of-state scientist and an overseas (UK) scientist  
URI: Undergraduate Research Curriculum Committee (regular member)

**2016**

Hosted seminars by out-of-state scientists on two separate occasions  
URI: Undergraduate Research Curriculum Committee (regular member)

**2017**

Brain Institute Faculty Search Committee (regular member)  
Hosted a seminar by an out-of-state scientist  
URI: Undergraduate Research Curriculum Committee (regular member)

**2018**

Jupiter campus postdoctoral fellow representative  
University Research Leadership Retreat (ad hoc member)  
Hosted seminars by an out-of-state scientist and an overseas (UK) scientist  
URI: Undergraduate Research Curriculum Committee (regular member)  
URI: Ad-hoc OURI Committee (regular member)

**2019**

Jupiter campus postdoctoral fellow representative  
International Max Planck Research School (IMPRS) recruiting retreat – 3 days (regular member)  
FAU Research Development Committee (regular member)  
Hosted seminar by an out-of-state scientist  
URI: Undergraduate Research Curriculum Committee (regular member)

**Service to the Discipline/Profession** (since arriving at FAU in Oct 2013; to Summer 2019 only)

**2013-14**

Co-Director of the Drosophila Neurobiology course at Cold Spring Harbor Laboratory: 2012-14.

**2014-15**

Journal reviewer (1 journal: JoVE)  
PhD dissertation reviewer for University of Queensland (UQ) PhD candidate (Kirat Chand)

**2015**

Journal review (3 journals: Journal of Neuroscience, European Journal of Neuroscience, PLoS One)  
Professional/technical training of two visiting scholars from the University of Wisconsin Madison

**2016**

Journal reviewer (3 journals: eLife, Molecular Biology of the Cell, Synapse)  
Reviewer for the National Institutes of Health (NIH) Special Emphasis Panel; ZRG1 MDCN-F  
Reviewer for the National Institutes of Health (NIH) Fellowship Study Section F03A (Bethesda)

**2017**

Journal reviewer (1 journal: Proceedings of the National Academy of Sciences)  
Professional/technical training of two visiting scholars from the National Institutes of Health  
Reviewer for the National Institutes of Health (NIH) Fellowship Study Section F03A (Bethesda)  
Reviewer for the National Institutes of Health (NIH) Special Emphasis Panel; ZRG1 MDCN-T(03)  
Reviewer for the National Institutes of Health (NIH) Biophysics Panel (BPNS) (Wash., DC)  
Reviewer for the National Institutes of Health (NIH) Special Emphasis Panel; ZRG1 MDCN-T(02)  
Professional/technical training of a visiting scholar from the University of Queensland

**2018**

Journal reviewer (3 journals: Frontiers in Synaptic Neuroscience, Journal of Neurogenetics, eNeuro)  
Mentor: Institutional Dev. Award (IDeA) Networks of Biomed. Research Excellence (INBRE)  
Reviewer for the Deutsche Forschungsgemeinschaft (DFG) (German Research Foundation - GRF)  
PhD dissertation reviewer for a University of Queensland (UQ) PhD candidate (Dendyun Ge)

**2019**

Journal reviewer (2 journals: Aging Cell, Nature Protocols)  
Reviewer for the Deutsche Forschungsgemeinschaft (DFG) (German Research Foundation - GRF)  
Mentor: Institutional Dev. Award (IDeA) Networks of Biomed. Research Excellence (INBRE)  
Reviewer for the National Institutes of Health (NIH) Fellowship Study Section F03A (Wash., DC)  
Reviewer for the National Institutes of Health (NIH) Synapses (SYN) Study Section at (San Diego)

**Service to the Community/Public** (since arriving at FAU in Oct 2013; to Summer 2019 only)**2015**

Max Planck Florida Institute Institution Animal Care & Use Committee (IACUC) (regular member)  
Coordinating the GrantSuccess program, providing ad-hoc feedback on grant funding proposals

**2016**

Coordinating the GrantSuccess program, providing ad-hoc feedback on grant funding proposals

**2017**

Coordinating the GrantSuccess program, providing ad-hoc feedback on grant funding proposals  
Initiated a program to provide research opportunities in biomedical sciences to OLLI members

**2018**

Coordinating the GrantSuccess program, providing ad-hoc feedback on grant funding proposals

**2019**

Coordinating the GrantSuccess program, providing ad-hoc feedback on grant funding proposals

**Professional Development** (since arriving at FAU in Oct 2013; to Summer 2019 only)**2014-15**

Writing Across Curriculum (WAC) program training

**2018**

An interactive workshop on engaged and active learning in STEM  
Course-based Undergraduate Research Experiences (CUREs) training  
Active Learning Classroom Training

**2019**

Active Learning Workshop (the SCALE-UP pedagogy)

**MICHAEL R. MANIACI**  
Curriculum Vitae (February 2021)

1

**Address:** Florida Atlantic University, Department of Psychology  
777 Glades Road  
Boca Raton, FL 33431

**Phone:** (561) 297-3305

**Email:** mmaniaci@fau.edu

## **EMPLOYMENT**

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Associate Professor, Dept. of Psychology, Florida Atlantic University	Aug 2020 – Present
Assistant Professor, Dept. of Psychology, Florida Atlantic University	Feb 2015 – Aug 2020
Instructor, Dept. of Psychology, Florida Atlantic University	Aug 2014 – Feb 2015
Lecturer, Dept. of Psychology, Brock University	Aug 2013 – Jul 2014

## **EDUCATION**

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Ph.D in Social-Personality Psychology with Certificate in Quantitative Methods University of Rochester, Rochester, NY	2015
M.A. in Social-Personality Psychology with Honors/Distinction University of Rochester, Rochester, NY	2009
B.A. in Psychology with Honors/Distinction, Summa cum laude Albright College, Reading, PA	2004

## **SCHOLARSHIP/RESEARCH: PUBLICATIONS IN PRINT**

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### **REFEREED JOURNAL ARTICLES**

- Crasta, D., Rogge, R. D., **Maniaci, M. R.**, & Reis, H. T. (in press). Toward an optimized measure of perceived partner responsiveness: Development and validation of the Perceived Responsiveness and Insensitivity Scale (PRI). *Psychological Assessment*.
- Joel, S., Eastwick, P. W., Allison, C. J., Arriaga, X. B., Baker, Z. G., Bar-Kalifa, E., Bergeron, S., Birnbaum, G., Brock, R. L., Brumbaugh, C. C., Carmichael, C. L., Chen, S., Clarke, J., Cobb, R. J., Coolsen, M. K., Davis, J., de Jong, D. C., Debrot, A., DeHaas, E. C., ... Wolf, S. (2020). Machine learning uncovers the most robust self-report predictors of relationship quality across 43 longitudinal couples studies. *Proceedings of the National Academy of Sciences*, *117*(32), 19061-19071.
- Mizrahi, M., Reis, H. T., **Maniaci, M. R.**, & Birnbaum, G. E. (2019). When insecurity dampens desire: Attachment anxiety in men amplifies the decline in sexual desire during the early years of romantic relationships. *European Journal of Social Psychology*, *49*, 1223-1236.
- Girme, Y. U., **Maniaci, M. R.**, Reis, H. T., McNulty, J. K., Carmichael, C. L., Gable, S. L., Baker, L. R., & Overall, N. C. (2018). Does support need to be seen? Daily invisible support promotes next day relationship well-being. *Journal of Family Psychology*, *32*, 882-893.

- Reis, H. T., **Maniaci, M. R.**, & Rogge, R. D. (2017). Compassionate acts and everyday emotional well-being among newlyweds. *Emotion, 17*, 751-763.
- Rogge, R. D., Fincham, F. D., Crasta, D., & **Maniaci, M. R.** (2017). Positive and negative evaluation of relationships: Development and validation of the Positive-Negative Relationship Quality (PN-RQ) scale. *Psychological Assessment, 29*, 1028-1043.
- Finkel, E. J., Norton, M. I., Reis, H. T., Ariely, D., Caprariello, P. A., Eastwick, P. W., Frost, J. H., & **Maniaci, M. R.** (2015). When does familiarity promote versus undermine interpersonal attraction? A proposed integrative model from erstwhile adversaries. *Perspectives on Psychological Science, 10*, 3-19.
- Maniaci, M. R.** & Rogge, R. D. (2014a). Caring about carelessness: Participant inattention and its effects on research. *Journal of Research in Personality, 48*, 61-83.
- Reis, H. T., **Maniaci, M. R.**, & Rogge, R. D. (2014). The expression of compassionate love in everyday compassionate acts. *Journal of Social and Personal Relationships, 31*, 651-676.
- Reis, H. T., **Maniaci, M. R.**, Caprariello, P. A., Eastwick, P. W., & Finkel, E. J. (2011a). Familiarity does indeed promote attraction in live interaction. *Journal of Personality and Social Psychology, 101*, 557-570.
- Reis, H. T., **Maniaci, M. R.**, Caprariello, P. A., Eastwick, P. W., & Finkel, E. J. (2011b). In live interaction, does familiarity promote attraction or contempt?: A reply to Norton. *Journal of Personality and Social Psychology, 101*, 575-578.
- Reis, H. T., Smith, S. M., Carmichael, C. L., Caprariello, P. A., Tsai, F. F., Rodrigues, A., & **Maniaci, M. R.** (2010). Are you happy for me? How sharing positive events with others provides personal and interpersonal benefits. *Journal of Personality and Social Psychology, 99*, 311-329.
- Maniaci, M. R.**, & Reis, H. T. (2010). The marriage of positive psychology and relationship science: A reply to Fincham and Beach. *Journal of Family Theory and Review, 2*, 47-53.

### **BOOK CHAPTERS**

- Reis, H. T., Crasta, D., Rogge, R. D., **Maniaci, M. R.**, & Carmichael, C. L. (2017). Perceived partner responsiveness scale. In D. L. Worthington & G. D. Bodie (Eds.), *The sourcebook of listening research: Methodology and measures* (pp. 516-521). Hoboken, NJ: Wiley.
- Maniaci, M. R.** & Rogge, R. D. (2014b). Conducting research on the Internet. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (2<sup>nd</sup> edition, pp. 443-470). New York: Cambridge University Press.
- Reis, H. T., Gable, S. L., & **Maniaci, M. R.** (2014). Methods for studying everyday experience in its natural context. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (2<sup>nd</sup> edition, pp. 373-403). New York: Cambridge University Press.

### **OTHER PUBLICATIONS**

- Maniaci, M. R.** (2009a). Couple identity. In H. T. Reis & S. Sprecher (Eds.) *Encyclopedia of human relationships* (pp. 335-337). Thousand Oaks, CA: Sage.

**Maniaci, M. R.** (2009b). Need for belonging. In H. T. Reis & S. Sprecher (Eds.), *Encyclopedia of human relationships* (pp. 165-168). Thousand Oaks, CA: Sage.

## **REFEREED CONFERENCE PRESENTATIONS**

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(Underlined name indicates a supervised student co-author.)

Cope, M. A., & **Maniaci, M. R.** (2021, February). *Emergence of close relationship construals: An Action Identification approach*. Poster to be presented at the Society for Personality and Social Psychology annual conference, online.

Legate, N., Nguyen, T., Moller, A., Legault, L., **Maniaci, M. R.**, Weinstein, N., Ebersole, C., & Chartier, C. (2020, September). *PSACR003: Motivating social distancing*. Paper presented at the Psychological Science Accelerator 2020 Conference, online.

**Maniaci, M. R.**, & Haas, J. (2020, February). *Interest in personality feedback and inattentive responding*. Poster presented at the Society for Personality and Social Psychology annual conference, New Orleans, LO.

Szabolcsi, V. & **Maniaci, M. R.**, (2020, February). *Self-regulatory orientations and relationship quality*. Poster presented at the Society for Personality and Social Psychology annual conference, New Orleans, LO.

Colom Cruz, A. & **Maniaci, M. R.**, (2019, February). *Should chivalry be dead? Benevolent sexism, gender, and competence in close romantic relationships*. Poster presented at the Society for Personality and Social Psychology annual conference, Portland, OR.

Gilad, C., & **Maniaci, M. R.**, (2019, February). *The interplay of dominance, power, and prosociality in interpersonal relationships*. Poster presented at the Society for Personality and Social Psychology annual conference, Portland, OR.

**Maniaci, M. R.**, & Colom Cruz, A. (2019, February). *Locomotion and assessment orientations influence relational catalyst support*. Poster presented at the Society for Personality and Social Psychology annual conference, Portland, OR.

**Maniaci, M. R.**, Colom Cruz, A., & Sachs, E. (2018, July). *Self-regulatory orientations and support for a partner's exploration*. Paper presented at the International Association for Relationship Research conference, Fort Collins, CO.

Mizrahi, M., Reis, H. T., **Maniaci, M. R.**, & Birnbaum, G. E. (2018, July). *When insecurity dampens desire: Attachment anxiety in men amplifies the decline in sexual desire during the early years of romantic relationships*. Paper presented at the International Association for Relationship Research conference, Fort Collins, CO.

Colom Cruz, A. & **Maniaci, M. R.**, (2018, March). *Should chivalry be dead? Provision of dependency-oriented help towards women*. Poster presented at the Society for Personality and Social Psychology annual conference, Atlanta, GA.

Colom Cruz, A., & **Maniaci, M. R.** (2017, November). *Provision of dependency oriented help*. Paper presented at the annual conference of the Society of Southeastern Social Psychologists, Atlantic Beach, FL.

- Colom Cruz, A., & **Maniaci, M. R.** (2017, May). *Benevolent sexism, gender, and dependency-oriented helping*. Poster presented at the Association for Psychological Science Annual Convention, Boston, MA.
- Colom Cruz, A., & **Maniaci, M. R.** (2017, January). *Benevolent sexism and type of support provided in online dyadic interactions*. Poster presented at the Society for Personality and Social Psychology Attitudes and Social Influence Preconference, San Antonio, TX.
- Crasta, D., **Maniaci, M. R.**, Rogge, R. D., & Reis, H. T. (2017, January). *Do you need validation from your landlord? Perceived partner responsiveness across relationship types*. Poster presented at the Society for Personality and Social Psychology annual conference, San Antonio, TX.
- Maniaci, M. R.**, & Reis, H. T. (2017, January). *Regulatory mode and social motivation: Locomotion orientations influence interpersonal goal pursuit and relationship quality*. Poster presented at the Society for Personality and Social Psychology annual conference, San Antonio, TX.
- Maniaci, M. R.**, & Reis, H. T. (2016, November). *Locomotion and assessment orientations, interpersonal goal pursuit, and relationship functioning among college roommates*. Presented at the annual conference of the Society of Southeastern Social Psychologists, Asheville, NC.
- Maniaci, M. R.**, & Reis, H. T. (2016, July). *Implicit ambivalence in romantic relationships*. Presented at the bi-annual conference of the International Association for Relationship Research, Toronto, Canada.
- Rogge, R. D., Fincham, F., Crasta, D., & **Maniaci, M. R.** (2016, July). *Positive and negative evaluation of relationships: Development and validation of the Positive-Negative Relationship Quality (PN-RQ) scale*. Presented at the bi-annual conference of the International Association for Relationship Research, Toronto, Canada.
- Crasta, D., Rogge, R. D., & **Maniaci, M. R.** (2016, July). *Clarifying the structure of perceived partner responsiveness: Organizing relationship science's favorite organizing construct*. Presented at the bi-annual conference of the International Association for Relationship Research, Toronto, Canada.
- Maniaci, M. R.**, & Rogge, R. D. (2016, April). *Comparing insufficient effort responding across recruitment sources and settings*. Presented at the annual conference of the Society for Industrial and Organizational Psychology, Anaheim, CA.
- Maniaci, M. R.**, & Reis, H. T. (2016, January). *Discrepancies between implicit and explicit evaluations predict change over time in newlyweds' relationship satisfaction*. Presented at Society for Personality and Social Psychology annual conference, San Diego, CA.
- Girme, Y., Overall, N., **Maniaci, M. R.**, Reis, H. T., McNulty, J., Hammond, M., & Carmichael, C. (2016, January). *Balancing relatedness and autonomy: When and for whom invisible support fosters autonomy versus nurtures relatedness over time*. Presented at Society for Personality and Social Psychology annual conference, San Diego, CA.
- Girme, Y., Overall, N., **Maniaci, M. R.**, McNulty, J., & Reis, H. T. (2015, May). *Subtle and unnoticed, but strengthening and nurturing: Invisible support fosters greater personal*

- achievements and relationship satisfaction over time*. Presented at the annual conference of the Association for Psychological Science, New York, NY.
- Reis, H. T., & **Maniaci, M. R.** (2015, March). *How compassionate love benefits relationships*. Presented at the annual conference of the International Convention of Psychological Science, Amsterdam, Netherlands.
- Maniaci, M. R.** (2015, February). *Congruence between implicit and explicit evaluations predicts newlyweds' reactivity to daily relationship events*. Presented at Society for Personality and Social Psychology annual conference, Long Beach, CA.
- Maniaci, M. R.** (2015, February). *Adult attachment and the congruence between implicit and explicit evaluations in newlywed marriage*. Presented at the Close Relationships Preconference at the annual conference of the Society for Personality and Social Psychology, Long Beach, CA.
- Maniaci, M. R.**, & Reis, H. T. (2014, April). *Positive emotions and the expression of compassionate love in newlyweds' daily interaction*. Presented at the Society for Affective Science Positive Emotions Preconference, Washington, DC.
- Reis, H. T., **Maniaci, M. R.**, & Kumashiro, M. (2014, February). *Responsiveness helps explain why visible support is good for your relationship*. Presented at Society for Personality and Social Psychology annual conference, Austin, TX.
- Maniaci, M. R.**, & Rogge, R. D. (2014, February). *Evaluating the quality of data collected from crowdsourcing, Internet forums, and undergraduate participant pools*. Poster presented at Society for Personality and Social Psychology annual conference, Austin, TX.
- Rogge, R. D., **Maniaci, M. R.**, & Marin, S. D. (2014, February). *The joke's on you: Positive and negative uses of humor moderate its impact on relationship satisfaction over 6 months*. Poster presented at Society for Personality and Social Psychology annual conference, Austin, TX.
- Rodgin, S. L., **Maniaci, M. R.**, Lee, K., & Reis, H. (2014, February). *Self-regulation and first impressions: The influence of regulatory mode on liking and willingness to disclose*. Poster presented at Society for Personality and Social Psychology annual conference, Austin, TX.
- Rogge, R. D., Marin, S. D., & **Maniaci, M. R.** (2013, January). *Exploring the roles of humor in romantic relationships: Development and validation of the Laughter in Marriage – A Functional Assessment of Objectives (LMFAO) Scale*. Poster presented at Society for Personality and Social Psychology annual conference, New Orleans, LA.
- Maniaci, M. R.**, & Reis, H. T. (2013, January). *Interaction goals moderate the association between familiarity and attraction*. Poster presented at Society for Personality and Social Psychology annual conference, New Orleans, LA.
- Crasta, D. J., **Maniaci, M. R.**, & Rogge, R. D. (2013, January). *Clarifying the measurement of perceived partner responsiveness*. Poster presented at Society for Personality and Social Psychology annual conference, New Orleans, LA.

- Reis, H. T., & **Maniaci, M. R.** (2012, October). *Familiarity breeds liking*. Presented at the Attraction and Relationships Preconference, Society of Experimental Social Psychology annual meeting, Austin, TX.
- Maniaci, M. R.**, Reis, H. T., & Tomlinson, J. M. (2012, July). *Beyond a static view of loneliness: Daily experiences of loneliness, social interaction, and well-being*. Presented at the biennial conference of the International Association for Relationship Research, Chicago, IL. [Symposium co-chaired with L. C. Hawkey]
- Maniaci, M. R.**, Reis, H. T., Caprariello, P. A., Eastwick, P. W., & Finkel, E. J. (2012, July). *Reconsidering the role of familiarity in interpersonal attraction*. Presented at the biennial conference of the International Association for Relationship Research, Chicago, IL.
- Reis, H. T., **Maniaci, M. R.**, & Rogge, R. D. (2012, July). *The expression of compassionate love in newlyweds' everyday interaction*. Presented at the biennial conference of the International Association for Relationship Research, Chicago, IL.
- Law, W., **Maniaci, M. R.**, & Reis, H. T. (2012, January). *Food sharing increases trust*. Poster presented at Society for Personality and Social Psychology annual conference, San Diego, CA.
- Maniaci, M. R.** & Rogge, R. D. (2012, January). *Caring about carelessness: Measuring participant inattention using the Attentive Responding Scale*. Poster presented at Society for Personality and Social Psychology annual conference, San Diego, CA.
- Reis, H. T., Rogge, R. D., **Maniaci, M. R.**, & Lee, S. (2012, January). *Implicit and explicit predictors of relationship development and deterioration*. Presented at Society for Personality and Social Psychology annual conference, San Diego, CA.
- Maniaci, M. R.**, Reis, H. T., & Tomlinson, J. M. (2011, January). *Daily fluctuations in loneliness, social interaction, and well-being*. Poster presented at Society for Personality and Social Psychology annual conference, San Antonio, TX.
- Reis, H. T., **Maniaci, M. R.**, Caprariello, P. A., Eastwick, P. W., & Finkel, E. J. (2010, October). *Familiarity does indeed lead to attraction*. Presented at the annual meeting of the Society for Experimental Social Psychology (SESP), Minneapolis, MN.
- Maniaci, M. R.**, & Reis, H. T. (2010, July). *Perceived and actual similarity of sense of humor in relationships*. Presented at the bi-annual conference of the International Association for Relationship Research, Herzliya, Israel.
- Maniaci, M. R.**, & Reis, H. T. (2010, January). *Laughing together: The role of perceived and actual similarity of sense of humor in relationships*. Poster presented at Society for Personality and Social Psychology annual conference, Las Vegas, NV.
- Maniaci, M. R.**, & Reis, H. T. (2009, February). *Are you lonesome tonight? Daily experiences of loneliness*. Poster presented at Society for Personality and Social Psychology annual conference, Tampa, FL.
- Maniaci, M. R.**, Rashid, T., & Anjum, A. (2005, October). *Predictors of dyadic adjustment in love and arranged marriages*. Poster presented at the 4<sup>th</sup> International Positive Psychology Summit, Washington, DC.



## **GRANT APPLICATIONS**

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### **EXTERNAL (FUNDED)**

NASA, Minority University Research and Education Project (MUREP). \$323,681. 2019-2021  
*MUREP Aerospace Academy for engaging future explorers in south Florida with grades 6-12 NASA STEM education.*  
 Role: Independent Evaluator (PI: M. Arockiasamy).

### **EXTERNAL (PENDING REVIEW)**

National Science Foundation, ECR. \$497,743 (pending review). *Modeling in-the-moment fluctuations in student learning experiences throughout the semester and their impact on course outcomes in Statics.* 2020  
 Role: Co-PI (PI: K. Sobhan).

### **INTERNAL (FUNDED)**

Brock University, CRISS Internal Research Grant. \$1,800 (funded). *Implicit partner evaluations and maintenance in close relationships.* Role: PI. 2013

## **TEACHING AND MENTORING**

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### **Undergraduate Courses Taught at FAU**

Experimental Design and Statistical Inference (PSY 3234) – Fall 2014, Spring 2016, Summer 2017, Fall 2017, & Summer 2019

Social Psychology (SOP 3004) – Spring 2019, Spring 2020, & Spring 2021

### **Graduate Courses Taught at FAU**

Advanced Social Behavior Seminar (SOP 6079) – Fall 2017

Close Relationships Seminar (PSY/PPE 6930) – Spring 2015, Spring 2017, & Spring 2019  
*Developed this course to provide graduate training in close relationships research.*

Experimental Design 1 (PSY 6206) – Fall 2015, Fall 2016, Fall 2018, Fall 2019, & Fall 2020

Experimental Design 2 (PSY 6207) – Spring 2021

Multilevel Modeling and Longitudinal Methods (PSY 6930) – Spring 2018, Spring 2020  
*Developed this course as a new advanced quantitative graduate seminar.*

### **Supervision of Graduate Students**

#### *Doctoral Dissertation Committee Chair*

Adriana Colom Cruz, Ph.D. candidate in Experimental Psychology (FAU) 2018  
 Title: *Benevolent Sexism and Support Provision in Close Relationships.*

Currently a Visiting Assistant Professor at University of Puerto Rico at Mayaguez  
 Corinne Gilad, Ph.D. candidate in Experimental Psychology (FAU) 2019

Title: *The Interplay of Dominance, Power, and Prosociality in Interpersonal Relationships.*

Currently a Postdoctoral Research with the U.S. Army Research Institute

*Master's Thesis Committee Chair*

Jeffrey Hanrahan, M.A. in Psychology (FAU); Entered Ph.D. program (U.Conn.) Title: <i>Social Interaction on Facebook.</i>	2016
Corinne Gilad, M.A. in Psychology (FAU); Entered Ph.D. program (FAU) Title: <i>The Effects of Competition on Empathy and Prosociality.</i>	2017
Justin Haas, M.A. in Psychology (FAU) Title: <i>Reducing Inattentive Responding by Promoting Autonomous Motivation.</i>	2018
Joshua Sheppard, M.A. in Psychology (FAU) Title: <i>Building a Profile of Inattentive Participants: Attachment Theory and Inattentive Responding.</i>	2018
Liliya Yurchyshyn, M.A. in Psychology (FAU) Title: <i>Attachment Security and Perceptions of Support Receipt.</i>	In Progress
Angalee Wilson, M.A. in Psychology (FAU) Title: <i>Daily Loneliness in Young and Older Adults.</i>	In Progress
Morgan Cope, M.A. in Psychology (FAU) Title: <i>The Emergence of Close Relationship Construals: An Action Identification Approach.</i>	In Progress
Richard Matic, M.A. in Psychology (FAU)	In Progress

*Doctoral Dissertation Committee Member*

Karin Machluf, Chair: David Bjorklund (FAU)	2015
Nicholas Brown, Chair: Ryne Sherman (FAU)	2016
Cody Hiatt, Chair: Brett Laursen (FAU)	2016
Shrija Dirghangi, Chair: Brett Laursen (FAU)	2016
Alex Wong, Chair: Robin Vallacher (FAU)	2016
Amy Hartl, Chair: Brett Laursen (FAU)	2016
Ashley Jones, Chair: Ryne Sherman (FAU)	2017
Daniel Dickson, Chair: Brett Laursen (FAU)	2017
Stephanie Welsh, Chair: Erika Hoff (FAU)	2017
Melannie Platt, Chair: Nancy Jones (FAU)	2017
Idaly Velez Uribe, Chair: Monica Rosselli (FAU)	2018
Melissa Huey, Chair: Brett Laursen (FAU)	2018
Anne Fennimore, Chair: Arthur Sementelli (FAU; School of Public Admin.)	2018
David Goldsztajn, Chair: Andrzej Nowak (FAU)	2019
Nathanial Shanok, Chair: Nancy Jones (FAU)	2020

*Master's Thesis Committee Member*

Sammy Penalozza, Chair: David Bjorklund (FAU)	2016
Michele Stoehr, Chair: Robin Vallacher (FAU)	2017
Kim Hojecki, Chair: Ryne Sherman (FAU)	2017

Nathaniel Shanok, Chair: Nancy Jones (FAU)	2017
Alexandra Montena, Chair: Nancy Jones (FAU)	2017
C. William Blackmon, Chair: Robin Vallacher (FAU)	2017
Steven Bell, Chair: Ryne Sherman (FAU)	2017
Forrest (Marvin) Norman, Chair: Monica Rosselli (FAU)	2018
Valeria Torres, Chair: Monica Rosselli (FAU)	2018
Merike Lang, Chair: Monica Rosselli (FAU)	2018
Fernanda Arruda, Chair: Monica Rosselli (FAU)	2018
Joseph Williams, Chair: Robin Vallacher (FAU)	2018
Jamayne Potts, Chair: Nancy Jones (FAU)	2019

### Supervision of Undergraduate Students

#### *Undergraduate Honors Theses and Research Grants*

Vanessa Szabolcsi, Undergraduate Research Grant, \$600 (FAU) <i>Self-regulatory orientations and relationship quality.</i> Poster presented at FAU Undergraduate Research Symposium (April, 2019) and at the SPSP national conference (February, 2020)	2018 – 2019
Vanessa Szabolcsi, Honors Thesis, Department of Psychology (FAU) Title: <i>The influence of dark triad traits on interpersonal relationships and transactive goal pursuit.</i> Poster presented at FAU Undergraduate Research Symposium (April, 2020)	2020

#### *Undergraduate Independent Study/Research*

I have supervised research training for more than 100 undergraduate students through the Directed Independent Study/Research (DIS/DIR) course, along with additional volunteers.

## **SERVICE AND PROFESSIONAL DEVELOPMENT**

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### **SERVICE TO THE INSTITUTION**

Institutional Review Board (IRB) Member	2020 - 2021
Department of Psychology Social/Personality Area Coordinator	2020 - 2021
Department of Psychology Participant Pool Director	2019 - 2021
Department of Psychology Website Committee Member/Chair	2018 - 2020
Undergraduate Research Symposium, Poster Judge	2018
Department of Psychology Search Committee Member (Assistant Professor)	2019 - 2020
Department of Psychology Search Committee Member (Quantitative Instructor)	2018 - 2019
Department of Psychology Search Committee Member (Quantitative Instructor)	2017 - 2018
Department of Psychology Search Committee Member (Assistant Professor)	2017 - 2018
Frontiers in Science Committee Member	2016 - 2017
Department of Psychology Undergraduate Committee Member	2015 - 2017
Department of Psychology Assessment Committee Member	2015 - 2020
Graduate Research & Inquiry Program Grant Reviewer	2015
Graduate & Professional Research Day, Poster Reviewer/Judge	2015 - 2018
Panelist at “Meeting of the Minds” event promoting undergraduate research	2015 - 2017

Coordinating participant pool (SONA) and Qualtrics Internet research platform	2015 - 2019
Psychology Honors Seminar, Guest Lecturer	2014 - 2019
Departmental Colloquium Committee Member/Chair	2014 - 2019

### **SERVICE TO THE DISCIPLINE**

Ad hoc reviewing for: <i>Applied Psychology: International Review</i> ; <i>CyberPsychology &amp; Behavior</i> ; <i>European Journal of Social Psychology</i> ; <i>Journal of Experimental Child Psychology</i> ; <i>Journal of Family Psychology</i> ; <i>Journal of Positive Psychology</i> ; <i>Journal of Research in Personality</i> (“Outstanding Reviewer Status” in 2016); <i>Journal of Social and Personal Relationships</i> ; <i>Motivation and Emotion</i> ; <i>Personal Relationships</i> ; <i>Personality and Social Psychology Bulletin</i> ; <i>Social Psychological and Personality Science</i>	Ongoing
National Science Foundation (NSF) Reviewer	2019 - 2020
International Association for Relationship Research (IARR) Conference Reviewer	2019 - 2020
SSHRC Doctoral Award Departmental Appraisal Committee (Brock University)	2013
Summer teaching training workshop, discussion leader	2013
SPSP 2012 Humor Preconference Poster Reviewer	2011
SPSP 2011 Conference Poster Review Committee	2010
Teaching assistant training workshop, discussion leader	2010

### **HONORS AND AWARDS**

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Emory Cowen Award for Best First-Authored Article, University of Rochester	2013
Alfred Baldwin Award for Excellence in Research, University of Rochester	2012
Nowlis Award for Excellence in Teaching and Mentoring, University of Rochester	2012
Student Poster Award Winner, Society for Personality and Social Psychology	2012
Student Travel Award, Society for Personality and Social Psychology	2012
Student Conference Award, International Association for Relationship Research	2012
Graduate Organizing Group Conference Award, University of Rochester	2012
Jacob K. Javits Commended Scholar, U.S. Department of Education	2007
Robert L. and Mary L. Sproull University Fellowship, University of Rochester	2006
Outstanding Individual Contribution to Psychology Award, Albright College	2005
Psychology Department Award for merit and service, Albright College	2005
The Muhlenberg Goodwill Prize for service, Albright College	2005
James Walker and Dr. Edward Gilbert Scholarship for Altruism, Albright College	2004
Eugene L. Shirk Memorial Scholarship for merit and service, Albright College	2001
Broadbent Scholarship for merit and service, Broadbent Foundation	2001

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### Contact information

Florida Atlantic University (FAU)  
College of Engineering & Computer Science  
Department of Computer and Electrical Engineering and Computer Science (CEECS)  
777 Glades Road, Boca Raton, FL - 33431 USA  
Phone: +1 (561) 297-3857  
Email: [omarques@fau.edu](mailto:omarques@fau.edu)  
Web: <http://www.eng.fau.edu/directory/faculty/marques/>

### Education

- Ph.D. in Computer Engineering, Florida Atlantic University, Boca Raton, FL (USA), Aug. 2001.  
Dissertation: “Content-Based Image Retrieval Using Relevance Feedback”. Advisor: Prof. Borko Furht.
- Master’s in Electronic Engineering, Philips International Institute / Eindhoven University of Technology, Eindhoven (the Netherlands), May 1989.
- B.Sc. in Electrical Engineering, *Centro Federal de Educação Tecnológica do Paraná* (CEFET-PR) (now *Universidade Tecnológica Federal do Paraná - UTFPR*) Curitiba-PR (Brazil), Feb. 1987.
- Licentiate degree in Electronic Engineering Education, UTFPR, Curitiba-PR (Brazil), Feb. 1987.

### Current and past positions (selected)

- Professor, Department of Computer and Electrical Engineering and Computer Science (CEECS), College of Engineering & Computer Science, FAU (2014 – Present)
  - Professor (by courtesy), Department of Information Technology and Operations Management (ITOM), College of Business, FAU (2015 – Present)
  - Associate Director, NSF Industry/University Cooperative Research Center (I/U CRC) for Advanced Knowledge Enablement (CAKE), FAU (2016 – Present)
  - Associate Professor, CEECS Department, FAU (2007–2014)
  - Assistant Professor, Department of Computer Science and Engineering, FAU (2001–2007)
  - Instructor, Department of Computer Science and Engineering, FAU (1999–2001)
  - Assistant/Associate Professor, Dept. of Electronic Engineering, CEFET-PR, Curitiba (Brazil) (1989–1997)
  - Lecturer and Chair, Dept. of Computer Science, FESP, Curitiba (Brazil) (1992–1997)
  - Assistant Professor, Dept. of Computer Science and Engineering, PUC-PR, Curitiba (Brazil) (1991–1994)
  - Research Assistant, Computer Vision & Graphics Group, Philips Research Laboratories, Eindhoven (Netherlands) (1988–1989)
  - High-school Teacher, Department of Electronics, CEFET-PR, Curitiba (Brazil) (1983–1989)
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## Professional Recognition, Honors, and Awards (selected)

- Outstanding Engineering Achievement Merit Award, The Engineers' Council, West Palm Beach, FL (2021).
  - Sigma Xi Distinguished Lecturer (2020 - present).
  - College of Engineering and Computer Science *Senior Faculty Teaching Award*, Florida Atlantic University (2020).
  - Leshner Leadership Institute Public Engagement Fellow, AAAS (American Association for the Advancement of Science) (2019 - present).
  - John J. Guarrera Engineering Educator of the Year Award, The Engineers' Council, West Palm Beach, FL (2019).
  - Excellence and Innovation in Undergraduate Teaching Award, Florida Atlantic University (2018).
  - ACM Distinguished Speaker (2014 - 2020).
  - *Outstanding Mid-Career Teaching Award*, American Society for Engineering Education - Southeastern Section (ASEE-SE) (2011).
  - Excellence and Innovation in Undergraduate Teaching Award, Florida Atlantic University (2011).
  - Member of the Eindhoven University of Technology Alumni Association (2010 - present).
  - *Senior Member* of the IEEE (Institute of Electrical and Electronics Engineers) (2009 - present).
  - *Senior Member* of the ACM (Association for Computing Machinery) (2009 - present).
  - Member of Tau Beta Pi, the oldest engineering honor society, inducted as *Eminent Engineer* (2009 - present).
  - Member of Sigma Xi, the honor society of research scientists and engineers (2009 - present).
  - College of Engineering and Computer Science *Dean's Faculty Award*, Florida Atlantic University (2004-05).
  - Excellence and Innovation in Undergraduate Teaching Award, Florida Atlantic University (2004).
  - Member of Upsilon Pi Epsilon, the first honor society dedicated to the discipline of the computing and information disciplines (2004 - present).
  - *Excellence in Teaching and Superb Student Evaluation Award* – Department of Computer Science and Engineering, Florida Atlantic University (2002).
  - *Honorable Mention (Top 10 worldwide)* in the IEEE CSIDC 2002 competition, as the mentor of the FAU "CodeBlue" Team, Washington, D.C., (2002).
  - Dr. Daniel B. Newell and Aurel B. Newell Doctoral Fellowship, Florida Atlantic University (1999-2000).
  - *Graduate Scholarship*, FAU Chapter of Phi Kappa Phi (1999).
  - Member of Phi Kappa Phi, the oldest all-discipline honor society (1999 - present).
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## Membership in Professional Associations and Societies

- Senior Member, Association for Computing Machinery (ACM)
- Senior Member, Institute of Electrical and Electronics Engineers (IEEE)
- Member, American Association for the Advancement of Science (AAAS)
- Member, American Society for Engineering Education (ASEE)
- Member, European Society of Medical Imaging Informatics (EuSoMII)
- Corresponding Member, European Society of Radiology (ESR)
- Associate Member, Radiological Society of North America (RSNA)
- Member, Society for Imaging Informatics in Medicine (SIIM)

## Language skills

- *Portuguese:* native language
- *English:* fluent (speaking, reading, writing)
- *Spanish:* fluent (speaking, reading); intermediate (writing)
- *French:* intermediate (speaking, reading); basic (writing)

## Research Summary

- ***My research focus is the intelligent processing of visual information***, a combination of artificial intelligence, image processing, computer vision, human vision, and machine learning, **with emphasis on medical applications**.
  - In addition to applying artificial intelligence to image analysis and computer vision problems, my research has been inspired by the **human factors** associated with visual perception, object recognition, image retrieval, and other intelligent visual processing tasks.
  - My research has been funded by the National Science Foundation (NSF), Office of Naval Research (ONR), and the Department of Defense (DoD), among others.
  - Since 1998, I have published 11 books, 10+ invited book chapters/sections, 20+ refereed international journal publications, 80+ refereed papers and abstracts in scientific conferences, and several invited papers and other publications. A list of these appears at the end of this CV.
  - I currently supervise 3 PhD Dissertations at FAU.
  - I have previously (co-) supervised to completion 6 PhD students and 16 Master's students, listed next.
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## Supervised PhD Dissertations (6)

- Mario Taschwer, "Concept-Based and Multimodal Methods for Medical Case Retrieval," *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, 2017. (co-advisor with Prof. Laszlo Böszörményi)
  - Mario Taschwer is currently Postdoc and System Administrator at *Alpen-Adria Universität Klagenfurt* (Austria)
- Aleksandar Čolić, "Design and Implementation of Driver Drowsiness Detection System", Florida Atlantic University, 2014. (*advisor*)
  - Aleksandar Čolić is currently Software Engineer at Graphic Security Systems Corp. (Lake Worth, FL)
- Joel Gibson, "Sparse and Low Rank Constraints on Optical Flow and Trajectories", Florida Atlantic University, 2014. (*advisor*)
  - Joel Gibson is currently Senior Principal Engineer with Blackmagic Design (Colorado Springs, CO)
- Gustavo B. Borba, "Automatic Extraction of Regions of Interest from Images Based on Visual Attention Models", *Universidade Tecnológica Federal do Paraná (UTFPR)* (Curitiba-PR, Brazil), 2010. (co-advisor with Dr. Humberto R. Gamba)
  - Gustavo B. Borba is currently Associate Professor at UTFPR (Curitiba-PR, Brazil)
- Liam M. Mayron, "Image retrieval using visual attention", Florida Atlantic University, 2008. (*advisor*)
  - Liam M. Mayron is currently Senior Product Manager at Fastly (Denver, CO)
- Dubravko Culibrk, "Neural Network Approach to Bayesian Background Modeling for Video Object Segmentation", Florida Atlantic University, 2006. (co-advisor with Dr. Borko Furht)
  - Dubravko Culibrk is currently Professor at the University of Novi Sad (Novi Sad, Serbia) and Senior Research Scientist at TandemLaunch Inc. (Montreal, Canada)

## Supervised Master's Theses (16)

- [1] Christian Garbin, "Assessing methods and tools to improve reporting, increase transparency, and reduce failures in machine learning applications in healthcare," Florida Atlantic University, 2020. (*advisor*)
  - [2] Jack Burdick, "Skin lesion segmentation and classification using deep learning", Florida Atlantic University, 2018. (*advisor*)
  - [3] Maryam Eneim, "An intelligent method for violence detection in live video feeds", Florida Atlantic University, 2016. (*advisor*)
  - [4] Jhanon James, "Face processing using mobile devices", Florida Atlantic University, 2016. (*advisor*)
  - [5] Rafael Giusti Urbina, "A systematic evaluation of object detection and recognition approaches with context capabilities", Florida Atlantic University, 2011. (*advisor*)
  - [6] Christoph Kofler, "User Intent Classification for Digital Photo Retrieval", *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, 2010. (*co-advisor with Prof. Laszlo Böszörményi*)
  - [7] Joel Gibson, "FuzzyCUDA: Interactive Matte Extraction on a GPU", Florida Atlantic University, 2008. (*advisor*)
  - [8] Carlos Pertuz, "Methods and Algorithms for Human Detection in Video Sequences", Florida Atlantic University, 2007. (*advisor*)
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- [9] Alvaro Fonseca, “A Study on Implementing Autonomous Video Surveillance Systems Based on Optical Flow Concept”, Florida Atlantic University, 2007. (*co-advisor with Dr. Hanqi Zhuang*)
- [10] Pierre Baillargeon, “A Method for Adding Multimedia Knowledge For Improving Intrusion Detection Systems”, Florida Atlantic University, 2005. (*advisor*)
- [11] Xundong Ding, “Web-Based Academic Advising System”, Florida Atlantic University, 2002. (*co-advisor with Dr. Sam Hsu*)
- [12] Fabio Costa, “Using Color Image Processing Techniques to Improve the Performance of Content-Based Image Retrieval Systems”, Florida Atlantic University, 2001. (*co-advisor with Dr. Borko Furht*)
- [13] Alex Holztratner, “Automatic Routing of Facsimile Messages”, CEFET-PR (Curitiba-PR, Brazil), 1993. (*co-advisor with Dr. Walter Godoy Junior*)
- [14] Marcos Alberto Lopes, “Development of an Optical Character Recognition (OCR) System with Learning Capabilities”, CEFET-PR (Curitiba-PR, Brazil), 1992. (*advisor*)
- [15] Carlos Alberto Jayme, “Image Compression Method for Signatures”, CEFET-PR (Curitiba-PR, Brazil), 1992. (*co-advisor with Dr. Walter Godoy Junior*)
- [16] Cion Cassiano Basso, “Computerized Numerical Control (CNC) for Printed Circuit Board (PCB) Drilling Machines”, CEFET-PR (Curitiba-PR, Brazil), 1992. (*co-advisor with Dr. Altamiro Amadeu Suzim*)

## Industry collaboration and partnerships (selected)


- *NSF Industry/University Cooperative Research Center (I/U CRC) for Advanced Knowledge Enablement (CAKE)* (<http://cake.fau.edu/>), FAU (2016 – Present): in my capacity as Associate Director, developed strong ties and frequent interactions with 30+ companies (CAKE members) and associated joint research projects.
  - *Vlatacom Research and Development Institute* (Belgrade, Serbia) (CAKE Member) (<http://www.vlatacominstitute.com/>) (2015 – 2019): PI and leading researcher in collaborative research projects on Fingerprint Verification (2015-2017) and Multi-channel Real-time Video Enhancement (2017-2019).
  - *FlexReceipts* (Orlando, FL) (<http://www.flexreceipts.com/>) (2014): engaged in a technology transfer process (licensing agreement of our US patent 7,933,452, “System and Methods of Image Retrieval”).
  - *Unify* (Boca Raton, FL) (<http://www.unify.com>) (then called *Siemens Enterprise Communications*) (2011): prepared and taught (with Jeremy Jacob) a customized training program on iOS Programming.
  - *LexisNexis* (Boca Raton, FL) (<http://www.lexisnexis.com>) (2011): prepared and taught (with Jeremy Jacob) a customized training program on iOS Programming.
  - *Pace Micro Technology Americas* (Boca Raton, FL) (now part of *Arris*) (<http://www.arris.com>) (2005): prepared and taught a customized training program on Advanced C++ Programming.
  - *Siemens* (Curitiba, Brazil) (then called *Equitel*) (1992-1993): researcher in collaborative research projects on Document Image Analysis.
  - *CINQ Technologies* (Curitiba, Brazil) (<https://www.cinq.com.br/en/>) (then called *Qualipro*) (1991-1992): researcher in collaborative research projects on Document Image Analysis.
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**Research funding (selected, 2005 – present)**






<b>Date</b>	<b>Project Title</b>	<b>Sponsor</b>	<b>Role</b>	<b>Total amount</b>
2020-2025	<i>NRT-HDR: Graduate Traineeship in Data Science Technologies and Applications</i>	NSF	Senior Researcher	US\$ 2,400,000.00
2020-2021	<i>Systematic Study of Robustness of Deep Learning Models for Skin Lesion Classification and Melanoma Detection</i>	FAU Office of Undergraduate Research and Inquiry (OURI)	PI	US\$ 600.00
2019-2020	<i>Image Processing and Analysis Using Deep Learning</i>	MathWorks	PI	US\$ 12,000.00
2017-2019	<i>Cross Disciplinary/Inter-Generational "Technology Translation Teams (T3's)"</i>	Farris Foundation	Co-PI	US\$ 200,000.00
2017-2018	<i>Multi-channel real-time video enhancement</i>	NSF Industry / University Cooperative Research Center for Advanced Knowledge Enablement (CAKE)	Co-PI	US\$ 30,000.00
2016-2017	<i>Medical image analysis using deep learning techniques</i>	NSF CAKE	PI	US\$ 59,734.00
2015-2020	<i>NSF Industry/University Cooperative Research Center for Advanced Knowledge Enablement (CAKE) – Phase II</i>	NSF	Co-PI	US\$ 225,000.00
2015-2016	<i>Fast Violence Detection in Surveillance Scenes</i>	NSF CAKE	Co-PI	US\$ 86,840.00
2015-2016	<i>Multimedia – Image Analysis and Processing</i>	NSF CAKE	Co-PI	US\$ 25,000.00
2013	<i>Algorithms for Identifying Abnormal Behavior of Drivers</i>	NSF CAKE	PI	US\$ 12,627.22
2010-2011	<i>Target identification and image analysis techniques for detecting large sea animals from aerial surveys</i>	FAU's Southeast National Marine Renewable Energy Center (SNMREC)	Senior Researcher	US\$ 158,676.94
2006-2007	<i>Coastline Security Technologies</i>	U.S. Office of Naval Research (ONR)	Co-PI	US\$ 232,552.00
2005-2006	<i>Coastline Security Technologies</i>	U.S. Office of Naval Research (ONR)	Co-PI	US\$ 276,022.00
2005-2006	<i>Intrusion Detection Systems and Secure Multimedia Communications</i>	U.S. Department of Defense (DoD)	Co-PI	US\$ 60,414.00

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## Instructional Experience (selected courses at FAU, 1999-present)

New courses, developed by Dr. Marques, are marked with an (\*).  
Courses indicated with  are also available *fully online*.

### Graduate-Level Courses

- Artificial Intelligence
- Artificial Intelligence for Medicine and Healthcare (\*) (*upcoming*)
- Deep Learning 
- Foundations of Vision (\*)
- Information Security Management 
- Introduction to Data Science
- Machine Learning for Computer Vision (\*) 
- Mobile App Development (\*)
- Mobile Apps for Business (\*)
- Video Processing
- Visual Information Retrieval (\*)

### Undergraduate-Level Courses

- Cutting-Edge Web Technologies (\*) [*Quality Matters (QM) Certified*]
  - Data Structures & Algorithms
  - Digital Image Processing (\*)
  - Foundations of Computer Science
  - Introduction to Artificial Intelligence  [*Quality Matters (QM) Certified*]
  - Introduction to Data Communications
  - Introduction to Internet Computing  [*Quality Matters (QM) Certified*]
  - Introduction to Microprocessor-Based Systems
  - Introduction to Programming in 'C'
  - Introduction to the Internet (\*)
  - iOS Programming (\*)
  - Leadership Development Workshop (\*) (co-developed with Edgar An)
  - Logic Design
  - Principles of Software Engineering
  - Python Programming (*upcoming*)
  - Senior Seminar
  - Web Services (\*) [*Quality Matters (QM) Certified*]
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## Academic visits (selected, 2008 – present)

- *Technische Universität Wien*, Vienna, Austria, December 2018, Host: Prof. Dr. Horst Eidenberger
- Johns Hopkins University, Baltimore, MD, November 2018, Host: Prof. Dr. Haider Ali
- Lister Hill National Center for Biomedical Communications, National Library of Medicine (NLM), National Institutes of Health (NIH), Bethesda, MD, October-November 2018, Host: Dr. Sameer Antani
- ENSEEIHT Engineering School, University of Toulouse, France, September 2018, Host: Prof. Dr. Vincent Charvillat
- *Université d'Orléans*, Orléans, France, September 2018, Host: Prof. Dr. Rachid Jennane
- *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, May 2017, Host: Prof. Dr. Laszlo Böszörményi
- *Technische Universität Wien*, Vienna, Austria, April-May 2017, Host: Prof. Dr. Christian Breiteneder
- *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, May 2016, Host: Prof. Dr. Laszlo Böszörményi
- *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, May 2013, Host: Prof. Dr. Laszlo Böszörményi
- UTFPR, Curitiba-PR, Brazil, May/June 2012, Host: Prof. Dr. Humberto R. Gamba
- *Universitat Politècnica de Catalunya (UPC)*, Barcelona, Spain, March 2012, Host: Prof. Dr. Ferran Marqués
- ENSEEIHT Engineering School, University of Toulouse, France, February/March 2012, Host: Prof. Dr. Vincent Charvillat
- *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, January 2012, Host: Prof. Dr. Laszlo Böszörményi
- *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, June 2010, Host: Prof. Dr. Laszlo Böszörményi
- ENSEEIHT Engineering School, University of Toulouse, France, May 2010, Host: Prof. Dr. Vincent Charvillat
- *Universidade Federal de Goiás (UFG)*, Goiania, Brazil, March 2010, Host: Prof. Dr. Leandro Luis Galdino de Oliveira
- *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, June 2009, Host: Prof. Dr. Laszlo Böszörményi
- UTFPR, Curitiba-PR, Brazil, July 2008, Host: Prof. Dr. Humberto R. Gamba
- *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, May/June 2008, Host: Prof. Dr. Laszlo Böszörményi

## Keynotes / Plenary Talks (selected, 2012 – present)

- Keynote speech: "Artificial Intelligence (AI): what is it, should you be scared of it, how can you adapt?", Medtronic Annual Science & Technology Conference, Minneapolis, MN, October 2019.
  - Keynote speech: "Using games to solve challenging multimedia problems," SBGames (*XVI Simpósio Brasileiro de Jogos e Entretenimento Digital*) 2017, Curitiba, Brazil, November 2017.
  - Plenary talk: "Inspiring Actions for Successful Engineering Education", Fourth IEEE International Conference on MOOCs, Innovation and Technology in Education (MITE 2016), Madurai, India, December 2016.
  - Overview talk: "Using Games to Solve Challenging Multimedia Problems", ACM Multimedia Systems 2016 Conference – Klagenfurt am Wörthersee, Austria, May 2016.
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- Keynote speech: “Visual Information Retrieval: Advances, Challenges and Opportunities”, 4<sup>th</sup> International Conference on Advances in Computing, Communications and Informatics (ICACCI) – Kochi, India, August 2015.
- Keynote speech: “Advances and Challenges in Visual Information Search and Retrieval”, 8<sup>th</sup> Brazilian Computer Vision Workshop (WVC 2012) – Goiania-GO, Brazil, May 2012.

## Tutorials, seminars, and short courses (selected, 2003 – present)

- Tutorial: “Deep learning for medical image analysis: latest advances and recipes for success,” *IEEE 10th International Conference on Image Processing Theory, Tools and Applications (IPTA 2020)*, Paris, France (virtual), November 2020.
  - Tutorial: "The Data Science landscape: foundations, tools, and practical applications," 18<sup>th</sup> IEEE International Conference on Machine Learning and Applications - ICMLA 2019, Boca Raton, Florida, USA, December 2019.
  - Tutorial: “Deep Learning for Computer Vision Using MATLAB,” ENSEEIHT Engineering School, University of Toulouse, France, September 2018.
  - Seminar: “Machine Learning and Applications”, *Université d’Orléans*, Orléans, France, September 2018.
  - Tutorial: “Medical image analysis using deep learning”, *IEEE 7th International Conference on Image Processing Theory, Tools and Applications (IPTA 2017)*, Montreal, Canada, Nov 28 – Dec 1, 2017.
  - Invited guest graduate-level course: “Medical Image Analysis Using Deep Learning”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, May 2017.
  - Invited guest graduate-level course: “Advances and Challenges in Vision Science”, *Technische Universität Wien*, Vienna, Austria, April-May 2017.
  - Tutorial: “Medical image analysis using deep learning”, *IASTED International Conference on Biomedical Engineering*, Innsbruck, Austria, February 2017.
  - Workshop: "Image processing using MATLAB", Thiagarajar College of Engineering (TCE), Madurai, India, December 2016.
  - 4-lecture series: “Innovative Technologies for Everyday Life”, Lifelong Learning Society (LLS), Florida Atlantic University, Jan-Feb 2016.
  - 4-lecture series: “Social Media and Smartphones”, Lifelong Learning Society (LLS), Florida Atlantic University, October 2014.
  - Invited guest graduate-level course: “Machine Learning for Computer Vision”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, May 2013.
  - Invited guest graduate-level course: “Machine Learning for Computer Vision”, UTFPR, Curitiba-PR, Brazil, May/June 2012.
  - Invited guest graduate-level course: “Digital Image Processing Using MATLAB”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, January 2012.
  - Mini-course: “Image Processing and Computer Vision in iPhone and iPad”, 7<sup>th</sup> Brazilian Computer Vision Workshop (WVC 2011), Curitiba-PR, Brazil, May 2011.
  - Tutorial: “Advances in Image Search and Retrieval”, *IASTED International Conference on Internet and Multimedia Systems and Applications (IMSA) 2011*, Washington, DC, May 2011.
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- Invited guest graduate-level course: “Digital Image Processing Using MATLAB”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, June 2010.
- Invited guest graduate-level course: “Digital Image Processing Using Java and ImageJ”, *Universidade Federal de Goiás (UFG)*, Goiania, Brazil, March 2010.
- Invited guest graduate-level course: “Visual Information Retrieval”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, June 2009.
- Invited guest graduate-level course: “Visual Information Retrieval”, UTFPR, Curitiba-PR, Brazil, July 2008.
- Invited guest graduate-level course: “Visual Information Retrieval”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, May/June 2008.
- Tutorial: “Visual Information Retrieval”, IASTED International Conference on Internet and Multimedia Systems and Applications (EuroIMSA) 2008, March 2008, Innsbruck, Austria.
- Short course: “Visual Information Retrieval”, CEFET-PR, Curitiba-PR, Brazil, July 2003.
- Tutorial: “Video Databases: design and applications”, *IASTED International Conference on Databases and Applications*, Innsbruck, Austria, February 2003.

## Other Invited Lectures, Panels and Presentations (selected, 2008 – present)

- Sigma Xi Distinguished Lecture: “The Artificial Intelligence Revolution in Medicine”, University of Michigan, April 2021. (*virtual*) (*upcoming*)
  - Sigma Xi Distinguished Lecture: “The Artificial Intelligence Revolution in Medicine”, West Virginia School of Osteopathic Medicine, April 2021. (*virtual*) (*upcoming*)
  - Sigma Xi Distinguished Lecture: “Can You Trust What You See? The Magic of Visual Perception”, Jackson River Governor’s School for Science, Mathematics, and Technology, April 2021. (*virtual*) (*upcoming*)
  - Invited talk: “Assessing methods and tools to improve reporting, increase transparency, and reduce failures in machine learning applications in radiology”, Machine Learning Lab, Data Science Center in Health (DASH), University Medical Center Groningen, the Netherlands, April 2021. (*virtual*) (*upcoming*)
  - Lecture: “*The Social Dilemma* and beyond: how to stay sane in the age of social media, big data, and Artificial Intelligence”, St. Andrews Country Club, Boca Raton, FL, February 2021. (*virtual*)
  - Panel presentation: “Promises & Pitfalls of Online Learning”, FAU Research Café, FAU Division of Research, Boca Raton, FL, January 2021. (*virtual*)
  - Lecture: “Artificial Intelligence in Medicine”, Cascade Lakes Computer and Technology Club, Delray Beach, FL, January 2021. (*virtual*)
  - Sigma Xi Distinguished Lecture: “Can You Trust What You See? The Magic of Visual Perception”, Iowa State University, November 2020. (*virtual*)
  - Lecture: “Advancements in artificial intelligence: technology, risks, applications and implications”, St. Andrews Country Club, Boca Raton, FL, November 2020. (*virtual*)
  - Invited talk: “Artificial Intelligence in Radiology (and beyond): outlook and research opportunities”, FAU CEECS Research Seminar Series, October 2020. (*virtual*)
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- Sigma Xi Distinguished Lecture: “Artificial Intelligence in Medicine”, Purchase College, SUNY, October 2020. (*virtual*)
  - Invited talk: “AI in Radiology (and beyond): outlook and research opportunities”, FAU USDOE Title III HSI STEM Initiative, October 2020. (*virtual*)
  - Lecture: “Can You Trust What You See?”, Osher Lifelong Learning Institute (OLLI), Florida Atlantic University, Jupiter, October 2020. (*virtual*)
  - Panel presentation: “Use of AI for Future Physicians: Practical Cases & Uses of AI for Different Careers in Medicine”, *FAU College of Medicine*, Boca Raton, FL, September 2020. (*virtual*)
  - Panel presentation: “Como será o future da assistência médica usando IA?” (*in Portuguese*), Health Tech Conference online 2020, University of Campinas (Unicamp), Brazil, August 2020. (*virtual*)
  - Panel presentation: “A nova Medicina com uso da IA” (*in Portuguese*), SUCESU INFORUSO 2020, Brazil, August 2020. (*virtual*)
  - Invited talk: “Artificial Intelligence in Medicine: Promises, Perils, and a Pathway to Improving Patient Outcomes”, 13th Annual *Future of Medicine Summit*, West Palm Beach, August 2020. (*cancelled due to COVID-19*)
  - Invited talk: “Artificial Intelligence in Medicine: an Engineering perspective”, IEEE Palm Beach Section, July 2020. (*virtual*)
  - Expert Panel presentation: “Explainable Artificial Intelligence (XAI): Rigor and Trust”, MathWorks Research Summit, June 2020. (*virtual*)
  - Panel presentation: “Inteligência Artificial e a Medicina da Precisão e Preditiva” (*in Portuguese*), University of São Paulo (USP), Brazil, May 2020. (*virtual*)
  - Invited talk: “An Artificial Intelligence Curriculum for Radiologists”, 50<sup>th</sup> São Paulo Radiological Meeting (JPR 2020), São Paulo, Brazil, May 2020. (*cancelled due to COVID-19*)
  - Lecture: “The Artificial Intelligence Revolution in Medicine: Technology, Risks, Applications, and Implications”, Osher Lifelong Learning Institute (OLLI), Florida Atlantic University, Boca Raton, March 2020. (*virtual*)
  - Invited talk: “LSTMs (and friends) in Computer Vision: Deep Learning Architectures for Video Applications”, Medtronic, Israel, March 2020. (*virtual*)
  - Lecture: “The Artificial Intelligence Revolution in Medicine: Technology, Risks, Applications, and Implications”, Osher Lifelong Learning Institute (OLLI), Broward Center for the Performing Arts, Fort Lauderdale, March 2020. (*virtual*)
  - Invited talk: “Artificial Intelligence in Healthcare: promises, perils, and a pathway to improving patient outcomes”, *FAU College of Medicine*, Boca Raton, FL, January 2020.
  - Lecture: “Artificial Intelligence and the Future of Society: Technological and Ethical Concerns”, Osher Lifelong Learning Institute (OLLI), Florida Atlantic University, Boca Raton, January 2020.
  - Lecture: “Human Augmentation: technology, applications and implications”, Osher Lifelong Learning Institute (OLLI), Florida Atlantic University, November 2019.
  - Invited talk: “Human Augmentation”, part of the *FAU Division of Research “Research in Action” Series*, Boca Raton Public Library, November 2019.
  - Lecture: “Advancements in artificial intelligence: technology, risks, applications and implications”, St. Andrews Estates, Boca Raton, November 2019.
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- Invited talk: “Advancements in Artificial Intelligence (AI) in Healthcare”, Florida State University, Tallahassee, FL, October 2019.
  - Invited talk: “ACR AI-Lab for radiology: an overview”, European Society of Medical Imaging Informatics (EuSoMII) Annual Meeting, Valencia, Spain, October 2019.
  - Lecture: “Advancements in artificial intelligence: technology, risks, applications and implications”, Bellaggio, Lake Worth, October 2019.
  - Lecture: “Advancements in artificial intelligence: technology, risks, applications and implications”, Lifelong Learning Society (LLS), Florida Atlantic University, March 2019.
  - Lecture: “Face recognition by humans and computers”, St. Andrews Estates, Boca Raton, January 2019.
  - Lecture: “Self-driving cars, robot radiologists, and more: how artificial intelligence is changing the world forever”, Delaire Country Club, Delray Beach, January 2019.
  - Invited talk: “Using games to solve challenging multimedia problems”, St. Pölten University of Applied Sciences, St. Pölten, Austria, December 2018.
  - Invited talk: “Medical image analysis using deep learning”, *Technische Universität Wien*, Vienna, Austria, December 2018.
  - Guest lecture: “Machine Learning and Applications”, *FH Campus Wien*, University of Applied Sciences, Vienna, Austria, December 2018.
  - Invited talk: “Medical image analysis using deep learning”, Johns Hopkins University, Baltimore, MD, November 2018.
  - Guest lecture: “Introduction to medical image analysis using deep learning”, Johns Hopkins University, Baltimore, MD, November 2018.
  - Invited talk: “Medical image analysis and medical information retrieval, with and without deep learning”, Lister Hill National Center for Biomedical Communications, National Library of Medicine (NLM), National Institutes of Health (NIH), Bethesda, MD, October 2018.
  - Invited talk: “The Artificial Intelligence revolution in Medicine: technology, risks, applications and implications”, *Université d’Orléans*, Orléans, France, September 2018.
  - Invited talk: “Machine Learning and its applications”, Vlatacom Institute, Belgrade, Serbia, August 2018.
  - Invited talk: " Can you trust what you see? The magic of visual perception", University of Belgrade, Serbia, August 2018.
  - Panel presentation: “Challenges and Opportunities in Deep Learning”, Deep Learning Mini-Symposium, part of the 2018 MathWorks Research Summit, Newton, MA, June 2018.
  - Panel presentation: “Explainable AI and the Future of Medicine”, 2018 MathWorks Research Summit, Newton, MA, June 2018.
  - Invited talk: “Adventures in Image Processing, Machine Learning and Deep Learning using MATLAB”, MathWorks’ Development Knowledge Forum (DKF) seminar series, MathWorks headquarters, Natick, MA, June 2018.
  - Invited talk: "Using games to solve challenging multimedia problems," Wichita State University, Wichita, KS, April 2018.
  - Lecture: “Self-driving cars, robot radiologists, and more: how artificial intelligence is changing the world forever”, Lifelong Learning Society (LLS), Florida Atlantic University, March 2018.
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- Lecture: “Looking through the artist's eyes”, Lifelong Learning Society (LLS), Florida Atlantic University, March 2018.
  - Lecture: “Visual intelligence: learning how to sharpen our perception of the world”, Lifelong Learning Society (LLS), Florida Atlantic University, December 2017.
  - Lecture: “Face recognition by humans and computers”, St. Andrews Estates, Boca Raton, October 2017.
  - Invited talk: "Using games to solve challenging multimedia problems," U.S. Army Corps of Engineers Engineering Research and Development Center (ERDC), Vicksburg, MS, June 2017.
  - Colloquium: “Advances and Challenges in Vision Science”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, May 2017.
  - Public lecture: “Can you trust what you see? The magic of visual perception”, *Technische Universität Wien*, Vienna, Austria, May 2017.
  - Invited talk: "Machine Learning and Applications", Indian Institute of Information Technology and Management, Kerala (IIITM-K), Trivandrum, India, December 2016.
  - Lecture: “Face recognition by humans and computers”, Lifelong Learning Society (LLS), Florida Atlantic University, November 2016.
  - Lecture: “Visual intelligence: learning how to sharpen our perception of the world”, St. Andrews Estates, Boca Raton, October 2016.
  - Lecture: “Can you trust what you see? The magic of visual perception”, St. Andrews Estates, Boca Raton, August 2016.
  - Invited talk: “Intelligence Processing of Visual Information: Research Overview”, University of North Carolina, Charlotte-NC, August 2016.
  - Lecture: “Can you trust what you see? The magic of visual perception”, Edgewater Pointe Estates, Boca Raton, July 2016.
  - Colloquium: “Can you trust what you see? The magic of visual perception”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, May 2016.
  - Lecture: “Can you trust what you see? The magic of visual perception”, West Boca Medical Center Annual Staff Meeting, Boca Raton, May 2016.
  - Lecture: “Can you believe your eyes? What visual illusions can teach us about our brains”, Lifelong Learning Society (LLS), Florida Atlantic University, March 2016.
  - Lecture: “Can you trust what you see? The magic of visual perception”, Lifelong Learning Society (LLS), Florida Atlantic University, December 2015.
  - Invited talk: “Promoting Digital Fluency on Campus”, *Teaching with Technology Showcase*, Florida Atlantic University, Jupiter-FL, April 2015.
  - Invited talk: “Image Processing and Computer Vision in iOS”, iOS Day, *Universidade Federal do Triângulo Mineiro (UFTM)*, Uberaba, Brazil, December 2013.
  - Colloquium: “Using games to improve computer vision solutions”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, May 2013.
  - Invited talk: “Image retrieval: challenges and opportunities”, UTFPR, Curitiba-PR, Brazil, June 2012.
  - Invited talk: “Mobile Visual Search”, *Universitat Politècnica de Catalunya (UPC)*, Barcelona, Spain, March 2012.
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- Colloquium: “Mobile Visual Search”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, January 2012.
- Invited talk: “Image search and retrieval: where are we now?”, Delft University of Technology, Delft, the Netherlands, October 2010.
- Invited talk: “20 years of adventure in image processing: it all started here!”, PEIAA "Sharing Experiences" @ 50+ Years of PII Conference, Eindhoven University of Technology, Eindhoven, the Netherlands, September 2010.
- Colloquium: “Recent Advances in Visual Information Retrieval”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, June 2010.
- Invited talk: “State of the art in image search and retrieval”, *WISMA 2010*, Barcelona, May 2010.
- Invited talk: “Promising avenues for interdisciplinary research in vision”, *Universidade Estadual de Campinas (UNICAMP)*, Campinas, Brazil, March 2010.
- Invited talk: “Promising avenues for interdisciplinary research in vision”, *Universidade Federal de Goiás (UFG)*, Goiania, Brazil, March 2010.
- Colloquium: “Promising avenues for interdisciplinary research in vision”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, June 2009.
- Invited talk: “Visual Information Retrieval”, UTFPR, Curitiba-PR, Brazil, July 2008.
- Invited talk: “Image organization, annotation, and retrieval from a human-centered perspective”, MIMOS, Kuala Lumpur, Malaysia, July 2008.
- Invited talk: “The role of semantics in multimedia information retrieval”, MIMOS, Kuala Lumpur, Malaysia, July 2008.
- Invited talk: “Visual Information Retrieval: challenges and opportunities”, MIMOS, Kuala Lumpur, Malaysia, July 2008.
- Invited talk: “Image organization, annotation, and retrieval from a human-centered perspective”, TU Graz, Graz, Austria, May 2008.
- Colloquium: “Image retrieval using computational models of visual attention”, *Alpen-Adria Universität Klagenfurt*, Klagenfurt, Austria, May 2008.

## Professional Service (selected)

- Member / Panelist of the *MIT Technology Review* Global Panel (2019 – present)
  - Reviewer for scientific journals, including:
    - ACM Transactions on Multimedia Computing Communications and Applications
    - Artificial Intelligence in Medicine (*Elsevier*)
    - Computer Methods and Programs in Biomedicine
    - EURASIP Journal on Image and Video Processing
    - IEEE Journal of Biomedical and Health Informatics
    - IEEE Transactions on Circuits and Systems for Video Technology
    - IEEE Transactions on Image Processing
    - IEEE Transactions on Learning Technologies
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- IEEE Transactions on Multimedia
  - IEEE Transactions on Cybernetics
  - IET Computer Vision
  - Journal of Digital Imaging (*Springer*)
  - Medical & Biological Engineering & Computing (*Springer*)
  - Multimedia Tools and Applications (*Springer*)
  - Pattern Recognition
  - PLOS ONE
  - SPIE Journal of Medical Imaging
- Reviewer for science and technology funding agencies, including Austrian Science Fund (FWF), Hong Kong's Innovation and Technology Commission, and the Netherlands Organisation for Scientific Research (NWO)

## Conference / Workshop Organization (selected, 2003 – present)

- PC Member and Reviewer, *IEEE International Conference on Image Processing Theory, Tools and Applications (IPTA 2020)*, Paris, France, November 2020.
- Program Chair and Editor for the proceedings of the Fifth International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS'19), Trivandrum, India, December 18-21, 2019.
- General Chair, Fourth International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS'18), Bangalore, India, September 19-22, 2018.
- Organizer and Co-chair of the Special Track on “Medical Image and Video Analysis Using Deep Learning,” 31<sup>st</sup> IEEE CBMS International Symposium on Computer-Based Medical Systems (CBMS), Karlstad, Sweden, June 18-21, 2018.
- General Chair, Fourth International Symposium on Computer Vision and the Internet (VisionNet'17), Manipal University, Karnataka, India, September 13-16, 2017.
- Program Chair, Third International Symposium on Computer Vision and the Internet (VisionNet'16), Jaipur, India, September 2016.
- Co-chair for the Doctoral Symposium, ACM International Conference on Multimedia 2014 (Orlando, FL, November 2014).
- Co-chair, Workshop on Wireless Multimedia, part of the IEEE Sixth International Symposium on Multimedia Software Engineering (Miami, FL, December 2004).
- Organizer and co-chair of a special track on *Image and Video Databases* for the ACM SAC 2003 (Melbourne, FL, March 2003).

## PhD committees (selected, 2006 – present)

- PhD committee member for Mr. Kuumba Adesunloye, “*Statistical Learning Approaches for Modeling Spatial Distributions of Genomic Variation to Elucidate Evolutionary History*”, Advisor: Dr. Michael DeGiorgio, CEECS Department, FAU (*in progress*).
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- PhD committee member for Ms. Magdalyn Elkin, “*Data Analytics and Modeling for Infectious Disease Biomedical Research*”, Advisor: Dr. Xingquan (Hill) Zhu, CEECS Department, FAU (*in progress*).
  - PhD committee member for Ms. Maryam Eneim, “*Internet of Battlefield Things*”, Advisor: Dr. Imad Mahgoub, CEECS Department, FAU (*in progress*).
  - PhD committee member for Mr. Arash Golchubian, “*Machine Learning Techniques for Autonomous Systems*”, Advisor: Dr. Mehrdad Nojournian, CEECS Department, FAU (*in progress*).
  - PhD committee member for Mr. José Garcia, “*Deep Learning Techniques for Educational Systems*”, Advisor: Dr. Maria Petrie, CEECS Department, FAU (*in progress*).
  - PhD committee member for Mr. Stepan Mazokha, “*Smart sensors*”, Advisor: Dr. Jason Hallstrom, CEECS Department, FAU (*in progress*).
  - PhD committee member for Mr. Robert Fennell, “*Biological imaging, detection and processing*”, Advisor: Dr. Waseem Ashgar, CEECS Department, FAU (*in progress*).
  - External reviewer and PhD committee member for Mr. Felipe Kitamura, “*Construção de Algoritmos de Machine Learning na Radiologia*”, Advisor: Dr. Nitamar Abdala, Universidade Federal de São Paulo (Unifesp), Brazil (2020).
  - External reviewer and PhD committee member for Mr. Matthieu Pizenberg, “*Interactive Computer Vision through the Web*”, Advisors: Dr. Vincent Charvillat and Dr. Axel Carlier, ENSEEIHT Engineering School, University of Toulouse, France (2020).
  - External reviewer and PhD committee member for the PhD thesis of Mr. Alexander Pacha, “*Optical Music Recognition*”, Advisor: Dr. Horst Eidenberger, Technische Universität Wien, Vienna, Austria (2019).
  - PhD committee member for Ms. Deepti Pappusetty, “*Human visual perception and video processing*”, Advisor: Dr. Hari Kalva, CEECS Department, FAU (2017).
  - External reviewer and PhD committee member for Mr. Derrick Schlangen, “*The role of peripheral vision in building scene representations*”, Advisor: Dr. Elan Barenholtz, Department of Psychology, FAU (2016).
  - External reviewer for the PhD thesis of Mr. Nouman Ali, “*Image Retrieval Using Visual Image Features and Automatic Image Annotation*”, Advisor: Dr. Khalid Bashir Bajwa, University of Engineering and Technology Taxila, Pakistan (2016).
  - External reviewer and PhD committee member for Mr. Nicolas Bertrand, “*Content Delivery Network for Digital Cinema*”, Advisor: Dr. Jean-Denis Durou, ENSEEIHT Engineering School, University of Toulouse, France (2015).
  - PhD committee member for Mr. Diego Pava, “*Transmitter-receiver system for time average Fourier telescope*”, Advisor: Dr. William T. Rhodes, CEECS Department, FAU (2014).
  - President of the jury and external reviewer for Mr. Axel Carlier, “*Combining content analysis with usage analysis to better understand visual contents*”, Advisor: Dr. Vincent Charvillat, ENSEEIHT Engineering School, University of Toulouse, France (2014).
  - PhD committee member for Mr. Branko Petljanski, “*Image Improvement Using Dynamic Optical Low-Pass Filter*”, Advisors: Dr. Borko Furht and Dr. William T. Rhodes, CEECS Department, FAU (2010).
  - External reviewer and PhD committee member for Mr. Klaus Schöffmann, “*Immediate Video Exploration: Enabling Explorative Search in Videos for Instantaneous Use by Fast Content Analysis and Integration of Users’ Expertise*”, Advisor: Dr. Laszlo Böszörményi, ITEC, Klagenfurt University, Klagenfurt, Austria (2009).
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- External reviewer and PhD committee member for Ms. Milica Milosavljevic, “*The effects of preattention in an online advertising context: a neuroscience perspective*”, Advisor: Dr. Eric H. Shaw, Department of Marketing, FAU (2007).
- External reviewer and PhD committee member for Mr. David Nichols, “*Interaction between surface-based and edge-based motion mechanisms in the perception of apparent motion*”, Advisor: Dr. Howard Hock, Department of Psychology, FAU (2006).
- PhD committee member for Mr. Daniel Socek, “*Permutation-Based Transformations for Digital Multimedia Encryption and Steganography*”, Advisor: Dr. Borko Furht, Department of Computer Science and Engineering, FAU (2006).

## Service to the Institution (selected, 1999 – present)

### Department of Computer and Electrical Engineering and Computer Science

- Curriculum Reform Committee (2021 – present)
- Library Liaison (2007-2011, 2012-2017, and 2019 – present)
- Executive Committee (2003-2005 and 2009-2018)
- Undergraduate CS Program Committee (2008-2009, 2013-2018 (*Chair*))
- Instructor Search Committee (2017)
- Personnel Committee (2009-2010 and 2013-2016)
- Undergraduate CE Program Committee (2001-2002 and 2013-2015)
- Associate Chair (2009-2014)
- ABET Coordinator for Computer Engineering (2012-2014)
- Class Scheduling Committee (2009-2014)
- TA/GA Committee (2002-2008 and 2009-2011 and 2012-2013)
- Research Committee (2009-2011)
- Student Affairs Committee (2009-2010)
- Coordinator of the CSE PhD Qualifying Exam (2006-2009)
- Academic advisor for CSE graduate students with minor in Business (2006-2009)
- Graduate Programs Committee (2002-2009)
- Internet Technology MS Committee (2001-2002)

### College of Engineering and Computer Science

- Undergraduate Program Committee (2012-2013, 2014-2015, and 2016-2018)
  - CP&D Committee (2015-2017)
  - Petitions Committee (2012-2015)
  - Innovation Leadership Program Committee (2012-2014)
  - Research Committee (2008-2011)
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- Faculty co-advisor for the FAU Beta Chapter of the *Upsilon Pi Epsilon* (UPE) (2004 – 2011)
- Personnel Committee (2009-2010)
- Faculty advisor for the FAU Chapter of the *Society of Hispanic Professional Engineers* (SHPE) (2001-2008)

## Florida Atlantic University

- Newell Doctoral Fellowship Committee (2020 – present)
- University Faculty Senate (UFS) Library Advisory Committee (2012-2017 and 2019-present)
- OIT (Office of Information Technology) Advisory Committee (2009-2011, 2015-2018, and 2019-present)
- Center for Online and Continuing Education (COCE) Advisory Board Committee (2011-present)
- Mindfulness Working Group (under the *Peace, Justice, and Human Rights* initiative – Office of the Provost) (2017-present)
- Hispanic-serving Institutions (HSI) Research Interest Group (under the *Division of Research*) (2017-present)
- Canvas Governance Committee (under the *Office of Information Technology*) (2016–2017)
- Academic Committee of the *Judaica Sound Archives* at Florida Atlantic University Libraries (2004 – 2011)
- President's Office eLearning Committee and Taskforce (2010)
- OIT (Office of Information Technology), Instructional Designer Search Committee (2010)
- College of Arts & Letters, School of Communication and Multimedia Studies, Faculty Search Committee (2008-2009 and 2009-2010)
- University Faculty Senate (UFS) Distance Education Committee (2009-2010)
- University Faculty Senate: Senator (*elected*) (2006-2008)
- Coordinator of the International Cooperation Agreement between FAU and UTFPR (Brazil) (1999 – 2008)

## Editorial Activities

- Editorial Board member of the journal *Multimedia Tools and Applications*, Springer.
  - Associate Editor, *SET International Journal of Broadcast Engineering*, Brazilian Society of Television Engineering.
  - Guest Co-Editor, Special issue on Wireless Multimedia, *Multimedia Tools and Applications*, Springer, Volume 28, Number 1, February 2006.
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## Publications (selected, 1998 - present)

**Summary:** one patent, 10+ books, 20+ refereed international journal publications, 80+ refereed papers and abstracts in scientific conferences, and several book chapters, invited papers, and other publications.

Publications reflect collaborations with different teams of authors/editors and have led to

**3178 citations**, an **h-index of 29**, and an **i10-index of 56**

(source: *Google Scholar*, last update: Feb 23, 2021).

## Patent (issued)

- **O. Marques**, L.M. Mayron, and G.B. Borba, "System and Methods of Image Retrieval", Apr. 26 2011. US Patent 7,933,452.

## Books (13)

1. **O. Marques** and H. Vieira Neto, "Processamento Digital de Imagens" ("Digital Image Processing") (*in Portuguese*), *Editora Brasport*, Rio de Janeiro, Brazil, 1999.
2. **O. Marques** and B. Furht, "Content-Based Image and Video Retrieval", *Kluwer Academic Publishers*, Norwell, MA, 2002.
3. B. Furht and **O. Marques** (editors), "Handbook of Video Databases", *CRC Press*, Boca Raton, FL, 2004.
4. **O. Marques**, "Practical Image and Video Processing Using MATLAB®", *Wiley-IEEE Press*, New York, NY, 2011.
5. M. Lux and **O. Marques**, "Visual Information Retrieval Using Java and LIRE", *Morgan & Claypool*, 2013.
6. **O. Marques**, "Practical Image and Video Processing Using MATLAB" (*in Chinese*), *Tsinghua University Press / John Wiley & Sons*, 2013.
7. A. Colic, **O. Marques**, and B. Furht, "Driver Drowsiness Detection Systems and Solutions", Springer, 2014.
8. J. Gibson and **O. Marques**, "Optical Flow and Trajectory Estimation Methods", Springer, 2016.
9. **O. Marques**, "Innovative Technologies in Everyday Life", Springer, 2016.
10. B. Stojanović, **O. Marques** and A. Nešković, "Segmentation and separation of overlapped latent fingerprints: algorithms, techniques, and datasets", Springer, 2019.
11. **O. Marques**, "Image Processing and Computer Vision for iOS", Springer, 2021.
12. **O. Marques**, "AI for Radiology", CRC Press, 2021 (*to appear*).
13. **O. Marques** and G. B. Borba, "Image Processing Recipes Using MATLAB®", CRC Press, 2021 (*to appear*).

## Refereed Journal Papers (33)

1. S. Hsu, **O. Marques**, M.K. Hamza, and B. Alhalabi, "How to Design a Virtual Classroom: 10 Easy Steps to Follow!", *Technological Horizons in Education (T.H.E.) Journal*, Vol. 27, No. 2, pp. 96-109, September 1999.
  2. **O. Marques** and B. Furht, "MUSE: A Content-Based Image Search and Retrieval System Using Relevance Feedback," *Multimedia Tools and Applications*, Kluwer Academic Publishers, Vol. 17, No. 1, pp. 21-50, May 2002.
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3. B. Satterwhite and **O. Marques**, "Automatic Detection of Television Commercials", *IEEE Potentials*, Vol. 23, No. 2, pp. 9-12, April/May 2004.
  4. **O. Marques** and L.M. Mayron, "How Can the Semantic Web Improve the Acquisition and Sharing of Knowledge?", *International Journal of Technology, Knowledge and Society*, Vol. 2, Issue 3, pp. 129-142, 2006.
  5. **O. Marques**, L.M. Mayron, G.B. Borba, and H.R. Gamba, "An attention-driven model for grouping similar images with image retrieval applications", *EURASIP Journal on Advances in Signal Processing*, Special Issue on Image Perception, Vol. 2007, Article ID 43450, 17 pages, 2007.
  6. **O. Marques** and P. Baillargeon, "Design of a multimedia traffic classifier for Snort", *Information Management & Computer Security*, Vol. 15, issue 3, pp. 241-256, 2007.
  7. D. Socek, H. Kalva, S.S. Magliveras, **O. Marques**, D. Culibrk, and B. Furht, "New Approaches to Encryption and Steganography for Digital Videos", *Springer ACM Multimedia Systems Journal*, Vol. 13, No. 3, pp. 191-204, 2007.
  8. D. Culibrk, **O. Marques**, D. Socek, H. Kalva, and B. Furht, "Neural Network Approach to Background Modeling for Video Object Segmentation", *IEEE Transactions on Neural Networks*, Vol. 18, No. 6, pp. 1614-1627, November 2007.
  9. D. Socek, S.S. Magliveras, D. Culibrk, **O. Marques**, H. Kalva and B. Furht, "Digital Video Encryption Algorithms Based on Correlation-Preserving Permutations", *EURASIP Journal on Information Security*, Volume 2007, Article ID 52965, 15 pages, DOI:10.1155/2007/52965.
  10. M. Lux, **O. Marques**, K. Schöffmann, L. Böszörményi, G. Lajtai, "A Novel Tool for Summarization of Arthroscopic Videos", *Multimedia Tools and Applications*, 2009, DOI: 10.1007/s11042-009-0353-1.
  11. K. Schöffmann, F. Hopfgartner, **O. Marques**, L. Böszörményi, and J.M. Jose, "Video Browsing Interfaces and Applications: a Review", *SPIE Reviews* 1, 018004 (2010), DOI: 10.1117/6.0000005.
  12. M. Lux, A. Pitman, and **O. Marques**, "Can Global Visual Features Improve Tag Recommendation for Image Annotation?", *Future Internet Journal* 2010, 2(3), 341-362; DOI:10.3390/fi2030341
  13. L. Böszörményi, M. del Fabro, M. Kogler, M. Lux, **O. Marques**, and A. Sobe, "Innovative directions in self-organized distributed multimedia systems", *Multimedia Tools and Applications*, 2010, DOI: 10.1007/s11042-010-0622-z.
  14. **O. Marques**, E. Barenholtz, and V. Charvillat, "Context modeling in computer vision: techniques, implications, and applications", *Multimedia Tools and Applications*, 2010, DOI: 10.1007/s11042-010-0631-y.
  15. A. Marcus and **O. Marques**, "An Eye on Visual Sensor Networks", *IEEE Potentials*, April 2012, 31(2), 38-43, DOI: 10.1109/MPOT.2011.2178279.
  16. S. Chatzichristofis, C. Iakovidou, Y. Boutalis, and **O. Marques**, "Co.Vi.Wo.: Color Visual Words Based on Nonpredefined Size Codebooks", *IEEE Transactions on Systems, Man, and Cybernetics. Part B, Cybernetics*, July 2012, DOI: 10.1109/TSMCB.2012.2203300
  17. S. Chatzichristofis, L. Bampis, **O. Marques**, M. Lux, and Y. Boutalis. "Image Encryption using the Recursive Attributes of the eXclusive-OR Filter", *Journal of Cellular Automata*, Volume 9, Issue 2-3, 2014, pp 125-137.
  18. A. Carlier, A. Salvador, X. Giro-i-Nieto, V. Charvillat, and **O. Marques**, "Assessment of Crowdsourcing and Gamification Loss in User-Assisted Object Segmentation". *Multimedia Tools and Applications*, September 2015, DOI: 10.1007/s11042-015-2897-6.
  19. J. Gibson and **O. Marques**, "Sparsity in Optical Flow and Trajectories", *Signal, Image and Video Processing*, March 2016, Volume 10, Issue 3, pp 487-494.
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20. B. Stojanović, A. Nešković and **O. Marques**, “A novel neural network based approach to latent overlapped fingerprints separation”. *Multimedia Tools and Applications*, June 2016, DOI: 10.1007/s11042-016-3696-4
21. B. Stojanović, **O. Marques** and A. Nešković, “Latent overlapped fingerprint separation: a review”. *Multimedia Tools and Applications* (2016). DOI:10.1007/s11042-016-3908-y
22. M. Taschwer and **O. Marques**, “Automatic Separation of Compound Figures in Scientific Articles”. *Multimedia Tools and Applications* (2016). DOI: 10.1007/s11042-016-4237-x
23. C. Lagger, M. Lux, and **O. Marques**. "What Makes People Watch Online Videos: An Exploratory Study". *ACM Comput. Entertain.* 15, 2, Article 6 (2017), 31 pages. <https://doi.org/10.1145/3034706>.
24. S. S. Barpanda, P.K. Sa, **O. Marques**, B. Majhi, and S. Bakshi, "Iris Recognition with Tunable Filter Bank Based Feature", *Multimedia Tools and Applications* (2017). DOI: 10.1007/s11042-017-4668-z
25. J. Burdick, **O. Marques**, J. Weinthal, and B. Furht, "Rethinking Skin Lesion Segmentation in a Convolutional Classifier", *Journal of Digital Imaging* (2017) <https://doi.org/10.1007/s10278-017-0026-y>
26. B. Stojanović, **O. Marques**, and A. Nešković, “Deep learning-based approach to latent overlapped fingerprints mask segmentation”, *IET Image Processing Journal* (2018). DOI: 10.1049/iet-ipr.2017.1227
27. C. Garbin, X. Zhu, and **O. Marques**, “Dropout vs. Batch Normalization: An Empirical Study of Their Impact to Deep Learning” *Multimedia Tools and Applications* (2020). DOI: 10.1007/s11042-019-08453-9
28. L. Zaniolo and **O. Marques**, “On the Use of Variable Stride in Convolutional Neural Networks” *Multimedia Tools and Applications* (2020). <https://doi.org/10.1007/s11042-019-08385-4>
29. A.S. Ahuja, V.P Reddy, and **O. Marques**, “Artificial intelligence and COVID-19: A multidisciplinary approach”, *Integrative Medicine Research*, Volume 9, Issue 3, 2020, 100434, ISSN 2213-4220, <https://doi.org/10.1016/j.imr.2020.100434>.
30. F. Kitamura and **O. Marques**, “Trustworthiness of AI Models in Radiology and the Role of Explainability,” *Journal of the American College of Radiology (JACR)* 2021 (*accepted*)
31. A. Golchubian, **O. Marques**, and M. Nojournian, “Photo Quality Classification Using Deep Learning” (*under review*)
32. L. Zaniolo and **O. Marques**, “On the Use of Convolutional Neural Networks with Patterned Stride for Medical Image Analysis” (*under review*)
33. C. Garbin and **O. Marques**, “Assessing methods and tools to improve reporting, increase transparency, and reduce failures in machine learning applications in healthcare” (*under review*)

## Refereed Conference Proceedings (80)

1. **O. Marques**, J. Woodbury, S. Hsu, and S. Charitos, "Design and Development of a Hybrid Instruction Model for a New Teaching Paradigm", Proc. of the 1998 ASEE/IEEE Frontiers in Education Conference (FIE '98), November 4-7, 1998, Tempe, Arizona.
  2. **O. Marques**, S. Hsu, and N. Sharda, "Virtual Office Hours Using Microsoft® NetMeeting™", Proc. of the World Multiconference on Systems, Cybernetics and Informatics (SCI'99 / ISAS'99), July 17-21, 1999, Orlando, Florida.
  3. **O. Marques** and S. Hsu, "Assessing the Feasibility of Using Microsoft® NetMeeting™ in Distance Education", Proc. of the International Conference on Engineering and Computer Education (ICECE'99), August 11-14, 1999, Rio de Janeiro, Brazil.
  4. **O. Marques** and B. Furht, "Issues in Designing Contemporary Video Database Systems", Proc. of the Third IASTED Conference on Internet and Multimedia Systems and Applications (IMSA), October 18-21, 1999, Nassau, Bahamas.
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5. **O. Marques**, F.M. Costa, and B. Furht, "Content-Based Image Search and Retrieval Using Relevance Feedback: the MUSE Project", Proc. of the Fourth IASTED Conference on Internet and Multimedia Systems and Applications (IMSA), November 19-23, 2000, Las Vegas, Nevada.
  6. **O. Marques**, S. Hsu, and X. Ding, "Design and Development of a Web-based System for Academic Advising", Proc. of the 2001 ASEE/IEEE Frontiers in Education Conference (FIE '2001), October 10-13, 2001, Reno, Nevada.
  7. **O. Marques** and B. Furht, "Combining Clustering and Relevance Feedback Techniques in Content-Based Image Retrieval", Proc. of the IASTED International Conference on Internet and Multimedia Systems and Applications (IMSA 2002), August 12-14, 2002, Kauai, Hawaii.
  8. F.M. Costa, **O. Marques**, and B. Furht, "Improving the Performance of Content-Based Image Retrieval Systems with Color Image Processing Tools", Proc. of the IASTED International Conference on Signal and Image Processing (SIP 2002), August 12-14, 2002, Kauai, Hawaii.
  9. S. Hsu, **O. Marques**, M. Ilyas, and X. Ding, "Web-Based Undergraduate Academic Advising System", Proc. of the International Conference on Engineering Education 2002, August 18 - 22, 2002, Manchester, UK.
  10. B. Furht, K. Gustafson, H. Huang, and **O. Marques**, "An Adaptive Three-Dimensional DCT Compression Based on Motion Analysis", ACM SAC 2003, March 9-12, 2003, Melbourne, FL.
  11. V. Nedovic, C. Nelson, S. Bowser, and **O. Marques**, "Delivery of near real-time soccer match highlights to wireless PDA devices", IASTED International Conference on Visualization, Imaging, and Image Processing, September 8-10, 2003, Benalmádena, Spain.
  12. **O. Marques** and N. Barman, "Semi-automatic semantic annotation of images using machine learning techniques", International Semantic Web Conference (ISWC) 2003, October 20-23, 2003, Sanibel Island, FL.
  13. **O. Marques**, P. Chilamakuri, S. Bowser, and J. Woodworth, "Wireless Multimedia Technologies for Assisted Living", Second LACCEI International Latin American and Caribbean Conference for Engineering and Technology (LACCEI'2004), June 2-4, 2004, Miami, FL.
  14. V. Nedovic and **O. Marques**, "A collaborative, long-term learning approach to using relevance feedback in content-based image retrieval systems", 47th International Symposium ELMAR-2005, 8-10 June 2005, Zadar, Croatia.
  15. **O. Marques** and P. Baillargeon, "A Multimedia Traffic Classification Scheme for Intrusion Detection Systems", IEEE International Conference on Information Technology and Applications (ICITA'2005), 4-7 July, 2005, Sydney, Australia.
  16. B. Petljanski and **O. Marques**, "A Novel Approach for Video Quantization Using the Spatiotemporal Frequency Characteristics of the Human Visual System", British Machine Vision Conference (BMVC'2005), 5-8 September 2005, Oxford, UK.
  17. D. Socek, D. Culibrk, **O. Marques**, H. Kalva, and B. Furht, "A Hybrid Color-Based Foreground Object Detection Method for Automated Marine Surveillance", Acivs 2005 (Advanced Concepts for Intelligent Vision Systems) Conference, 20-23 Sept, 2005, Antwerp, Belgium.
  18. D. Culibrk, **O. Marques**, D. Socek, H. Kalva, and B. Furht, "A Neural Network Approach to Bayesian Background Modeling for Video Object Segmentation", Visapp 2006 (International Conference on Computer Vision Theory and Applications), 25-28 Feb, 2006, Setubal, Portugal.
  19. **O. Marques**, L.M. Mayron, H.R. Gamba, and G.B. Borba, "Using visual attention to extract regions of interest in the context of image retrieval", 44th ACM Southeast Conference (ACMSE2006), Melbourne, FL, USA, March 10-12, 2006.
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20. L. Christodoulou, L.M. Mayron, H. Kalva, **O. Marques**, and B. Furht, "Design and Evaluation of 3D Video System Based on H.264 View Coding", International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2006), Newport, Rhode Island, May 22–23, 2006.
  21. D. Socek, D. Culibrk, H. Kalva, **O. Marques**, and B. Furht, "Permutation-Based Low-Complexity Alternate Coding in Multi-View H.264/AVC", IEEE International Conference on Multimedia & Expo (ICME) 2006, July 9-12, 2006, Toronto, Canada.
  22. **O. Marques**, L. Mayron, G. Borba, and H. Gamba, "On the potential of incorporating knowledge of human visual attention into CBIR systems", Special Session on Perceptual Visual Processing, IEEE International Conference on Multimedia & Expo (ICME) 2006, July 9-12, 2006, Toronto, Canada.
  23. H. Kalva, L. Christodoulou, L. Mayron, **O. Marques**, and B. Furht, "Challenges and opportunities in video coding for 3D TV ", Special Session on "3-D TV: Primed for Success?", IEEE International Conference on Multimedia & Expo (ICME) 2006, July 9-12, 2006, Toronto, Canada.
  24. D. Socek, H. Kalva, S. S. Magliveras, **O. Marques**, D. Culibrk, and B. Furht, "A permutation-based correlation-preserving encryption method for digital videos ", ICIAR 2006 – International Conference on Image Analysis and Recognition, September 18-20, 2006, Póvoa de Varzim, Portugal.
  25. D. Socek, M. Sramka, **O. Marques** and D. Culibrk, "An Improvement to a Biometric-Based Multimedia Content Protection Scheme", 8th ACM Multimedia and Security Workshop, September 26-27, 2006, Geneva, Switzerland.
  26. L. Christodoulou, L.M. Mayron, H. Kalva, **O. Marques**, and B. Furht, "3D TV Using MPEG-2 and H.264 View Coding and Autostereoscopic Displays", The 2006 ACM Multimedia Conference, October 22-27, 2006, Santa Barbara, CA.
  27. G.B. Borba, H.R. Gamba, **O. Marques**, and L.M. Mayron, "An unsupervised method for clustering images based on their salient regions of interest", The 2006 ACM Multimedia Conference, October 22-27, 2006, Santa Barbara, CA.
  28. **O. Marques**, P. Auger, and L.M. Mayron, "Assessing contemporary issues in secure video communication systems", International Symposium on System and Information Security (SSI) 2006, November 8-10, 2006, Sao Jose dos Campos, Sao Paulo, Brazil.
  29. **O. Marques**, P. Auger, and L.M. Mayron, "SimViKi: a tool for the simulation of secure video communication systems", IASTED International Conference on Communications, Internet, and Information Technology (CIIT) 2006, November 29 - December 1, 2006, St Thomas, US Virgin Islands.
  30. L.M. Mayron, G.B. Borba, V. Nedovic, **O. Marques** and H.R. Gamba, "A forward-looking user interface for CBIR and CFIR systems", IEEE International Symposium on Multimedia (ISM2006), December 11-13, 2006, San Diego, CA.
  31. L.M. Mayron and **O. Marques**, "Design of a web-based interface for image retrieval", International Conference on Web Information Systems and Technologies (WEBIST), March 3-6, 2007, Barcelona, Spain.
  32. D. Culibrk, D. Socek, **O. Marques**, and B. Furht, "Automatic Kernel Width Selection for Neural Network Based Video Object Segmentation", International Conference on Computer Vision Theory and Applications (VISAPP), March 8-11, 2007, Barcelona, Spain.
  33. G.B. Borba, H.R. Gamba, L.M. Mayron and **O. Marques** "Integrated global and object-based image retrieval using a multiple examples query schema", International Conference on Computer Vision Theory and Applications (VISAPP), March 8-11, 2007, Barcelona, Spain.
  34. **O. Marques**, L.M. Mayron, D. Socek, G.B. Borba and H.R. Gamba, "An attention-based method for extracting salient regions of interest from stereo images", International Conference on Computer Vision Theory and Applications (VISAPP), March 8-11, 2007, Barcelona, Spain.
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35. **O. Marques**, A. Fonseca and L.M. Mayron, "An Intelligent Multimedia Traffic Classifier with Security Applications", IEEE SoutheastCon 2007, March 22-25, 2007, Richmond, VA.
  36. A. Fonseca, L. Mayron, D. Socek, and **O. Marques**, "Design and implementation of an optical flow-based autonomous video surveillance system", The IASTED International Conference on Internet and Multimedia Systems and Applications (EuroIMSA) 2008, March 17-19, 2008, Innsbruck, Austria.
  37. C. Pertuz, L. Mayron, D. Socek, and **O. Marques**, "A model for detecting and tracking humans using appearance, shape, and motion", The IASTED International Conference on Internet and Multimedia Systems and Applications (EuroIMSA) 2008, March 17-19, 2008, Innsbruck, Austria.
  38. J. Gibson and **O. Marques**, "Stereo Depth with a Unified Architecture GPU", Workshop on "Computer Vision on GPUs", co-located with IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR) 2008, June 24-26, 2008, Anchorage, Alaska.
  39. M. Lux, **O. Marques**, and A. Pitman, "Using Visual Features to Improve Tag Suggestions in Image Sharing Sites", International Workshop on Knowledge Acquisition from the Social Web (KASW'08), co-located with Triple-I 2008, September 3, 2008, Graz, Austria.
  40. L. Mayron and **O. Marques**, "Using a game to evaluate image retrieval, organization, and annotation", First ICIP Workshop on "Multimedia Information Retrieval: New Trends and Challenges", co-located with IEEE International Conference on Image Processing (ICIP) 2008, San Diego, California, October 12-15, 2008.
  41. **O. Marques** and M. Lux, "An Exploratory Study on Joint Analysis of Visual Classification in Narrow Domains and the Discriminative Power of Tags", Workshop on the Many Faces of Multimedia Semantics, co-located with ACM Multimedia, Vancouver, Canada, 2008.
  42. G.B. Borba, H.R. Gamba, L.M. Mayron and **O. Marques**, "Extraction of Salient Regions of Interest Using Visual Attention Models", SPIE Electronic Imaging, San Jose, California, January 2009.
  43. M. Lux, K. Schöffmann, **O. Marques**, and L. Böszörményi, "A Novel Tool for Quick Video Summarization using Keyframe Extraction Techniques", 9th Workshop of the Multimedia Metadata Community, co-located with CORESA'09, Toulouse, France, March 2009.
  44. **O. Marques**, "A comparative review of contemporary e-learning solutions", International Conference on Education and New Learning Technologies (EDULEARN), Barcelona, Spain, July 2009.
  45. **O. Marques**, "Teaching image and video processing with MATLAB", International Conference on Education and New Learning Technologies (EDULEARN), Barcelona, Spain, July 2009.
  46. B. Chaudhury, **O. Marques**, G.B. Borba, and H.R. Gamba, "Unsupervised regions of interest extraction based on visual attention and SIFT", The IASTED International Conference on Signal Processing, Pattern Recognition and Applications (SPPRA) 2010, February 17-19, 2010, Innsbruck, Austria.
  47. G.B. Borba, H.R. Gamba, **O. Marques**, A. Colic, and V. Adzic, "Comparing figures of merit and image datasets for evaluation of salient region detection algorithms", The IASTED International Conference on Signal Processing, Pattern Recognition and Applications (SPPRA) 2010, February 17-19, 2010, Innsbruck, Austria.
  48. M. Lux, C. Kofler, and **O. Marques**, "A Classification Scheme for User Intentions in Image Search", ACM Conference on Human Factors in Computing Systems CHI 2010, April 10-15, 2010, Atlanta, GA.
  49. M. Lux, A. Pitman, and **O. Marques**, "Callisto: Tag Recommendations by Image Content", Workshop on Interoperable Social Media Applications (WISMA 2010), 11th International Workshop of the Multimedia Metadata Community, Barcelona (Spain), May 19-21, 2010.
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50. R. Castellanos, H. Kalva, **O. Marques**, and B. Furht, “Event Detection in Video using Motion Analysis”, ACM Multimedia 2010 Workshop - 1st ACM ARTEMIS2010 International Workshop on Analysis and Retrieval of Tracked Events and Motion in Imagery Streams, Florence (Italy), October 25-29, 2010.
  51. A. Rahman and **O. Marques**, “A web-based video library and annotation framework for marine biology survey”, IASTED International Conference on Internet and Multimedia Systems and Applications (IMSA 2011), May 16-18, 2011, Washington DC.
  52. L. Christodoulou, T. Kasparis, and **O. Marques**, “Advanced statistical and adaptive threshold techniques for moving object detection and segmentation”, 17th International Conference on Digital Signal Processing (DSP2011), July 6-8, 2011, Corfu, Greece.
  53. H. Kalva, **O. Marques**, S. Aghera, W. Reza, R. Giusti, and A. Rahman “Design and Development of a System for Aerial Video Survey of Large Marine Animals”, LACCEI 2011, August 3-5, 2011, Medellín, Colombia.
  54. C. Lagger, M. Lux, and **O. Marques**, “Which video do you want to watch now?”, Workshop on Multimedia on the Web 2011 (MMWeb 2011), Graz, Austria, September 8, 2011.
  55. M. Kogler, M. Lux, and **O. Marques**, “Adaptive Visual Information Retrieval by changing visual vocabulary sizes in context of user intentions”, Workshop on Multimedia on the Web 2011 (MMWeb 2011), Graz, Austria, September 8, 2011.
  56. S. Chatzichristofis, **O. Marques**, M. Lux, and Y. Boutalis. “Image Encryption using the Recursive Attributes of the eXclusive-OR Filter on Cellular Automata”, ACRI 2012, Santorini, Greece, 24-27 September 2012.
  57. A. Carlier, **O. Marques**, and V. Charvillat. “Ask'nSeek: A New Game for Object Detection and Labeling”, Workshop on Web-Scale Vision and Social Media, co-located with ECCV 2012, Florence, Italy, October 2012.
  58. M. Lux, M. Taschwer, and **O. Marques**, “Classification of Photos based on Good Feelings”, Multimedia Grand Challenge Solution paper, ACM Multimedia Conference, Nara (Japan), October 2012.
  59. M. Lux, M. Taschwer, and **O. Marques**, “A Closer Look at Photographers’ Intentions: a Test Dataset”, International ACM Workshop on Crowdsourcing for Multimedia (CrowdMM 2012), co-located with the ACM Multimedia Conference, Nara (Japan), October 2012.
  60. **O. Marques**, J. Snyder, and M. Lux, “How Well Do You Know Tom Hanks? Using a Game to Learn About Face Recognition” CHI 2013, April 27 – May 2, 2013, Paris.
  61. R. Sousa, **O. Marques**, F.A. Soares, I.I.G. Sene Jr, and L.L.G. de Oliveira, “Comparative performance analysis of machine learning classifiers in detection of childhood pneumonia using chest radiographs”, International Conference on Computational Science (ICCS) 2013, Barcelona, June 2013.
  62. A. Salvador, A. Carlier, X. Giro-i-Nieto, **O. Marques**, and V. Charvillat, “Crowdsourced Object Segmentation with a Game”, International ACM Workshop on Crowdsourcing for Multimedia (CrowdMM 2013), co-located with the ACM Multimedia Conference, Barcelona (Spain), October 2013.
  63. B. Furht, V. Aalo, A. Agarwal, I. Cardei, M. Cardei, N. Erdol, S. Huang, H. Kalva, T. Khoshgoftaar, I. Mahgoub, **O. Marques**, M. Petrie, D. Raviv, V. Ungvichian, and H. Zhu, “Creating an Entrepreneurial University”, ICERI2013, the 6th International Conference of Education, Research and Innovation, Nov 18-20, 2013, Seville (Spain)
  64. R. Sousa, **O. Marques**, G. Curado, R.M. Da Costa, A.S. Soares, F. Soares, and L.L.G. de Oliveira, “Evaluation of Classifiers Applied to a Childhood Pneumonia Computer-Aided Diagnosis System”, 27<sup>th</sup> IEEE International Symposium on Computer-Based Medical Systems (CBMS 2014), New York, May 2014.
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65. J. Gibson and **O. Marques**, “Sparse Regularization of TV-L1 Optical Flow”, International Conference on Image and Signal Processing (ICISP) 2014, France, June 2014.
  66. A. Colic, **O. Marques**, and B. Furht, “Design and implementation of a driver drowsiness detection system: a practical approach”, International Conference on Signal Processing and Multimedia Applications (SIGMAP 2014), Vienna, Austria, August 2014.
  67. A. Carlier, A. Salvador, X. Giro-i-Nieto, **O. Marques**, and V. Charvillat, “Click’n’Cut: Crowdsourced Interactive Segmentation with Object Candidates”, International ACM Workshop on Crowdsourcing for Multimedia (CrowdMM 2014), co-located with the ACM Multimedia Conference, Orlando-FL, November 2014.
  68. G. Croucher and **O. Marques**, “Visual Information Retrieval Techniques Applied to Veterinary Radiology”, IEEE SoutheastCon 2015 Conference, Ft. Lauderdale-FL, April 2015.
  69. M. Taschwer and **O. Marques**, “AAUITEC at ImageCLEF 2015: Compound Figure Separation”, Conference and Labs of the Evaluation Forum (CLEF) 2015, Toulouse, France, September 2015.
  70. B. Stojanović, A. Nešković and **O. Marques**, “Fingerprint ROI Segmentation Using Fourier Coefficients and Neural Networks”, 23rd Telecommunications Forum (TELFOR 2015), Belgrade, Serbia, November 2015.
  71. M. Taschwer and **O. Marques**, “Compound Figure Separation Combining Edge and Band Separator Detection”, The 22<sup>nd</sup> International Conference on Multimedia Modeling (MMM 2016), Miami-FL, January, 2016.
  72. B. Stojanović, **O. Marques**, A. Nešković and S. Puzović, “Fingerprint ROI Segmentation Based on Deep Learning”, 24<sup>th</sup> Telecommunications Forum (TELFOR 2016), Belgrade, Serbia, November 2016.
  73. A. Romero Lopez, X. Giro-i-Nieto, J. Burdick, and **O. Marques**, "Skin lesion classification from dermoscopic images using deep learning techniques", *IASTED International Conference on Biomedical Engineering*, Innsbruck, Austria, February 2017. DOI: 10.2316/P.2017.852-053
  74. B. Stojanović, A. Nešković, and **O. Marques**, “A novel dataset for research in overlapped fingerprint separation”, *IEEE 7th International Conference on Image Processing Theory, Tools and Applications (IPTA 2017)*, Montreal, Canada, Nov 28 – Dec 1, 2017.
  75. **O. Marques**, J. James, and E. Barcelos, “Face-It-Up — a scientific app for face processing using mobile devices and machine learning APIs”. SPIE Conference on Mobile Multimedia/Image Processing, Security, and Applications, Orlando, FL, April 2018.
  76. A. Ishay and **O. Marques**, “ImageCLEF 2018 Tuberculosis Task: Ensemble of 3D CNNs with Multiple Inputs for Tuberculosis Type Classification”, Conference and Labs of the Evaluation Forum (CLEF) 2018, Avignon, France, September 2018.
  77. M. Taschwer, M.J. Primus, K. Schöffmann, and **O. Marques**, “Early and Late Fusion of Classifiers for the MediaEval Medico Task”, MediaEval'18 (Multimedia Evaluation Workshop), Sophia Antipolis, France, 29-31 October 2018.
  78. B. Stojanović, **O. Marques**, and A. Nešković, “Machine Learning Based Overlapped Latent Fingerprints Segmentation and Separation”, 26<sup>th</sup> Telecommunications Forum (TELFOR 2018), Belgrade, Serbia, November 2018.
  79. E. Akar, **O. Marques**, W.A. Andrews, and B. Furht, “Cloud-based Skin Lesion Diagnosis System Using Convolutional Neural Networks”, *Computing Conference 2019*, London, United Kingdom, 16-17 July 2019.
  80. B. Furht, R. Williams, and **O. Marques**, "Radical university arrangements to create entrepreneurial university", EDULEARN19 (July 2019, Palma de Mallorca, Spain) Proceedings, Pages: 8494-8501, ISBN: 978-84-09-12031-4, ISSN: 2340-1117, doi: 10.21125/edulearn.2019.2110
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## Refereed Abstracts (6)

1. J. Burdick, **O. Marques**, A. Romero Lopez, X. Giro-i-Nieto, and J. Weinthal, "The impact of segmentation on the accuracy and sensitivity of a melanoma classifier based on skin lesion images," *SIIM Annual Meeting*, Pittsburgh, PA, June 2017.
2. L.S. Folio, M.P. Lungren, **O. Marques**, S. Antani, and H.M. Do, "Proposed Launchpad of Publicly Available Diagnostic Imaging Databases," *SIIM Annual Meeting*, Denver, CO, June 2019.
3. H.M. Do, F. Farhadi, D. Jin, L. Machado, **O. Marques**, J. Yao, G. Cohen, Z. Xu, and L.R. Folio, "Optimal Radiologist Annotations and Extraction for Accelerating Deep Learning Training," *SIIM Annual Meeting*, Denver, CO, June 2019.
4. **O. Marques** and L. Zaniolo, "Evaluation of the Use of Convolutional Neural Networks with Variable Stride for Skin Lesion Classification", European Society of Medical Imaging Informatics (EuSoMII) Annual Meeting, Valencia, Spain, October 2019.
5. **O. Marques**, A. Ishay, A. Elshaikh, W.A. Andrews, A. Bulatovic, and H.M. Do, "Assessing the impact of image quality on brain MRI diagnosis using deep learning", European Society of Medical Imaging Informatics (EuSoMII) Annual Meeting, Valencia, Spain, October 2019.
6. A. Castelblanco, A. Semin, H.M. Do, **O. Marques**, and L.R. Folio, "Medical Imaging Annotation Game as a Dataset Crowdsourcing Incentive: Initial Development at the SIIM19 Hackathon", *SIIM Annual Meeting*, Austin, TX, June 2020.

## Book Chapters (12)

1. **O. Marques**, "QoS Guarantees for Multimedia Traffic in Wireless Systems", a chapter in *Handbook of Internet and Multimedia Systems and Applications*, Editor-in-Chief: Borko Furht, CRC Press, 1999.
  2. **O. Marques**, S. Fallon, and B. Furht, "Content-Based Multimedia Retrieval on the Internet", a chapter in *Handbook of Internet Computing*, Editor-in-Chief: Borko Furht, CRC Press, 2000.
  3. S. Hsu, N. Sharda, and **O. Marques**, "Case Studies in Internet-based Distance Learning", a chapter in *Handbook of Internet Computing*, Editor-in-Chief: Borko Furht, CRC Press, 2000.
  4. **O. Marques** and B. Furht, "Content-Based Visual Information Retrieval," a chapter in *Distributed Multimedia Databases: Techniques and Applications*, edited by. T.K. Shih, Idea Group Publishing, 2002.
  5. **O. Marques** and N. Barman, "Wireless Communication Using Bluetooth", a chapter in *Handbook of Wireless Internet*, Editors-in-Chief: Mohammad Ilyas and Borko Furht, CRC Press, 2003.
  6. **O. Marques** and B. Furht, "Introduction to Video Databases", a chapter in *Handbook of Video Databases*, Editors-in-Chief: Borko Furht and Oge Marques, CRC Press, 2004.
  7. B. Furht and **O. Marques**, "Interactive Multimedia on the Web", a chapter in *The Internet Encyclopedia*, Editor-in-Chief: Hossein Bidgoli, Wiley, 2004.
  8. **O. Marques**, "Image Compression and Coding", in *Encyclopedia of Multimedia*, 2<sup>nd</sup> ed., Editor-in-Chief: Borko Furht, Springer 2008.
  9. **O. Marques**, "Image Data Representations", in *Encyclopedia of Multimedia*, 2<sup>nd</sup> ed., Editor-in-Chief: Borko Furht, Springer 2008.
  10. **O. Marques**, "Content Extraction and Metadata", in *Encyclopedia of Multimedia*, 2<sup>nd</sup> ed., Editor-in-Chief: Borko Furht, Springer 2008.
  11. H. Kalva, L. Christodoulou, L. Mayron, **O. Marques**, and B. Furht, "Three Dimensional Television Services", in *Encyclopedia of Multimedia*, 2<sup>nd</sup> ed., Editor-in-Chief: Borko Furht, Springer 2008.
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12. **O. Marques**, "Image Processing and Computer Vision in iPhone and iPad", a chapter in: *Minicursos do VII Workshop de Visão Computacional*, Luiz Antônio Pereira Neves and Edson José Rodrigues Justino (eds), Curitiba, 2011. ISSN 2175-6120

## Invited Papers, Edited Proceedings, and Other Publications (12)

1. W-T. Ooi, **O. Marques**, V. Charvillat, and A. Carlier, "Pushing the Envelope: Solving Hard Multimedia Problems with Crowdsourcing", *IEEE COMSOC MMTC E-Letter*, Vol 8, N° 1, January 2013, pp. 37-40. (*invited paper*)
  2. **O. Marques**, "Integrating contemporary technologies with Ayurveda: examples, challenges, and opportunities", *4th International Conference on Advances in Computing, Communications and Informatics (ICACCI)*, August 2015. (*invited paper*)
  3. J.L. Mauri, S.M Thampi, M. Wozniak, **O. Marques**, D. Krishnaswamy, S. Sahni, C. Callegari, H. Takagi, Z.S. Bojkovic, Vinod M, N.R. Prasad, J.M.A. Calero, J. Rodrigues, X. Que, N. Meghanathan, R. Sandhu, and E. Au (eds.), *Proceedings of the 4th International Conference on Advances in Computing, Communications and Informatics (ICACCI)*, August 2015.
  4. **O. Marques**, "Visual Information Retrieval: the state of the art", *IEEE IT Professional*, vol. 18, no. 4, pp. 7-9, July-Aug. 2016. doi: 10.1109/MITP.2016.70 (*invited paper*)
  5. **O. Marques**, "Using games to solve challenging multimedia problems", *4th International Conference on Advanced Computing, Networking, and Informatics (ICACNI)*, Rourkela, Odisha, India, September 2016. (*invited paper*)
  6. **O. Marques** and J. Carson, "Selfie Search: Image Retrieval and Face Recognition in iOS". In *Proceedings of the Third International Symposium on Computer Vision and the Internet (VisionNet'16)*. ACM, New York, 48-53. DOI: <http://dx.doi.org/10.1145/2983402.2983420> (*invited paper*)
  7. Z. Bojkovic, S. Bourennane, **O. Marques**, H. Zhou, N. Chaki, A. El Rhalibi, and S.M. Thampi (eds.), *Proceedings of the Third International Symposium on Computer Vision and the Internet (VisionNet'16)*, September 21-24, 2016, Jaipur, India. ISBN: 978-1-4503-4301-5.
  8. Thampi, S.M., **Marques, O.**, Krishnan, S., Li, K.-C., Ciuonzo, D., Kolekar, M. (Eds.), *Advances in Signal Processing and Intelligent Recognition Systems -- Proceedings of the 4th International Symposium SIRS 2018*, Bangalore, India, September 19–22, 2018. ISBN: 978-981-13-5758-9.
  9. **O. Marques** (2019). Image classification using data augmentation (<https://www.mathworks.com/matlabcentral/fileexchange/68728-image-classification-using-data-augmentation>), MATLAB Central File Exchange. August 2019. ([code contribution](#))
  10. **O. Marques** (2019). Data Augmentation for Image Classification Applications Using Deep Learning (<https://blogs.mathworks.com/deep-learning/2019/08/22/data-augmentation-for-image-classification-applications-using-deep-learning/>), MATLAB Deep Learning Blog. August 2019. ([blog post](#))
  11. **O. Marques** (2019). Scene Classification Using Deep Learning (<https://www.mathworks.com/matlabcentral/fileexchange/73333-scene-classification-using-deep-learning>), MATLAB Central File Exchange. November 2019. ([code contribution](#))
  12. **O. Marques** (2019). Scene Classification Using Deep Learning (<https://blogs.mathworks.com/deep-learning/2019/11/25/scene-classification-using-deep-learning>), MATLAB Deep Learning Blog. November 2019. ([blog post](#))
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## CURRICULUM VITAE FOR SARAH SHAW MILTON

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### **Current position:**

Interim Chair, Department of Biological Sciences, Florida Atlantic University  
Full Professor, Tenured, Department of Biological Sciences, Florida Atlantic University.

### **Affiliations:**

2016 – present Member, FAU Brain Institute  
2016 – present Member, FAU pillar: Healthy Aging  
2016 – present Member, FAU pillar: Marine and Environmental Science (Harbor Branch)  
2008 – present Member, FAU Center for Molecular Biology and Biotechnology (CMBB)

### **Higher Education**

Ph.D. (1994), University of Miami Rosenstiel School of Marine and Atmospheric Science, Miami, Florida; Marine Biology and Fisheries (Biological Oceanography). Academic Supervisor: Dr. Peter Lutz. Dissertation Title: The Physiology of Hypoxia and Anoxia Tolerance in Three Species of Turtle: The Loggerhead Sea Turtle (*Caretta caretta*), Green Sea Turtle (*Chelonia mydas*), and freshwater *Trachemys scripta*.

B.A. Biology (1988), magna cum laude, Cornell University, Ithaca, New York; Honors: With Distinction in all Subjects. Honors Supervisor: Dr. Rodney Diert. Induction of the Transferrin Receptor in Inflammatory Chicken Peritoneal Macrophages.

### **Appointments/Employment**

2019- Professor and Interim Chair, Biological Sciences, Florida Atlantic University  
2015 - Co-director: Program for Master of Science in Marine Science and Oceanography  
2016- 2019 Associate Director of the Integrative Biology PhD Program  
2012-2019 Associate Professor, Biological Sciences, Tenured, Florida Atlantic University  
2006- 2011 Assistant Professor, Biological Sciences, Florida Atlantic University  
2005- 2011 Joint appointment, Assistant Professor, Dept of Biomedical Science, Florida Atlantic University  
2005-2006 Visiting Assistant Professor, Biological Sciences, Florida Atlantic University  
1996-2005 Research Assistant Professor and Adjunct Lecturer, Florida Atlantic University  
1996-1997 Adjunct Lecturer, Palm Beach Community College  
1995-1996 Postdoctoral Fellow, Florida Atlantic University  
1994-1995 Senior Biologist, Evans Environmental and Geological Science and Management, Inc, Miami FL

1992 – 1996 Adjunct Lecturer, Florida Atlantic University

### Scholarship/Research/Creative Activity

#### **Summary of Research**

My research is broadly described as Environmental Physiology, investigating the effects of environmental stressors on animal physiology and adaptive mechanisms of survival. I currently have two main branches of research: (1) survival of the brain in the absence of oxygen, using whole animal and cell cultures to examine the physiological, cellular, and molecular adaptations that allow anoxia-tolerant organisms to survive without oxygen, using the model organisms *Trachemys scripta* (turtle) and *Drosophila melanogaster* (fruit fly) to look for new therapeutic targets for stroke, aging, and other diseases of ischemia, anoxia, and oxidative stress, and (2) Sea turtle physiology and conservation, with a variety of projects ranging from the energetics of hatchling disorientation, the impacts of climate change on turtles (nest success, hatchling physiology, erosion and flooding) to developing therapeutic treatments for sea turtles exposed to toxic red tides.

#### **Peer Reviewed Publications (Refereed Works)**

Google Scholar (as of 10/1/19): Total citations 1342, h-index 21, i10-index 29

**Refereed Journal Publications in Print:** (\* graduate student author, \*\* undergraduate student author, † post-doc author)

- Tezak\* B, Sifuentes-Romero† I, **Milton S**, Wyneken J. 2020. Identifying Sex of Neonate Turtles with Temperature-dependent Sex Determination via Small Blood Samples. *Sci Rep*. 2020 Mar 19;10(1):5012.
- Mahneva\* O, Risley\* MG, John C, **Milton SL**, Dawson-Scully K, Ja WW. In vivo expression of peptidylarginine deiminase in *Drosophila melanogaster*. *PLoS One*. 2020 Jan 15;15(1)
- Reiterer, Melissa\* and **Milton, Sarah**. 2020. Induction of foxo3a protects turtle neurons against oxidative stress. *Comp. Biochem. Physiol. A* May 2020 243.
- Mahneva\* O, Caplan\* SL, Ivko\*\* P, Dawson-Scully K, **Milton SL**. 2019. NO/cGMP/PKG activation protects *Drosophila* cells subjected to hypoxic stress. *Comp Biochem Physiol C Toxicol Pharmacol*. 223:106-114.
- Reiterer, Melissa\*; Schmidt-Kaster, Rainald and **Milton, Sarah**. 2019. Methionine Sulfoxide Reductase (Msr) Dysfunction in Human Brain Disease. *Free Radical Research*. 11 pp.
- Walsh CJ, Cocilova C\*, Restivo J, Flewelling L, **Milton S**. 2019. Immune function in *Trachemys scripta* following exposure to a predominant brevetoxin congener, PbTx-3, as a model for potential health impacts for sea turtles naturally exposed to brevetoxins. *Ecotoxicology*. In press.
- Milton, Sarah**. 2019. Constitutive preconditioning: the anoxia tolerant freshwater turtle as a model organism of the preconditioned phenotype. *Conditioning Medicine*. In press. Review.

- Bladow, Rachel\* and **Milton, Sarah**. 2019. Embryonic mortality in green (*Chelonia mydas*) and loggerhead (*Caretta caretta*) sea turtle nests increases with cumulative exposure to elevated temperatures. J. Expt. Mar. Biol. Ecol. In press.
- Mahneva, Olena\*; Caplan, Stacey\*; Ivko, Paulina\*\*; Dawson-Scully, Ken; **Milton Sarah L**. 2019. NO/cGMP/PKG activation protects Drosophila cells subjected to hypoxic stress. Comp Biochem Physiol C Toxicol Pharmacol. 223:106-114.
- Courtney C. Cocilova\*, Leanne J. Flewelling, April A. Granholm, Charles A. Manire, and **Sarah L. Milton**. 2019. Intravenous lipid emulsion treatment reduces symptoms of brevetoxicosis in turtles (*Trachemys scripta*). Journal of Zoo and Wildlife Medicine, 50(1):33-44.
- Couturier, Christinel Stecyk, Jonathon, Ellefsen, Stian; Sandvik, Guro; **Milton, Sarah**; Prentice, Howard; and Nilsson, Goran. Transcriptional responses contribute to synaptic arrest in the anoxic turtle (*Trachemys scripta*) brain. Comp Biochem Physiol Part D Genomics Proteomics. 2019 Feb 13;30:55-70.
- Riggs CL, Summers A, Warren DE, Nilsson GE, Lefevre S, Dowd WW, **Milton S**, Podrabsky JE. 2018. Small Non-coding RNA Expression and Vertebrate Anoxia Tolerance. Front Genet. 2018 Jul 10;9:230.
- Itzel Sifuentes-Romero†, Boris M. Tezak\* **Sarah Milton**, Jeanette Wyneken. 2018. Hydric environmental effects on turtle development and sex ratio. Zoology, 126: 89-97.
- Pankaew, Karen\* and **Milton, Sarah**. 2018. The Effects of Extended Crawling on the Physiology and Swim Performance of Loggerhead and Green Sea Turtle Hatchlings. Journal of Experimental Biology. 221(1). 10pp.
- Cocilova, Courtney\*; Bossart, Gregory; Flewelling, Leanne; Granholm, April; and **Milton, Sarah**. 2017. Tissue uptake, distribution and excretion of brevetoxin-3 in the freshwater turtle *Trachemys scripta* and the diamondback terrapin *Malaclemys terrapin*. Aquatic Toxicology Mar 7;187:29-37.
- Wood, Lawrence D\*, Barbara Brunnick, and **Sarah L. Milton**. 2017. Home Range and Movement Patterns of Subadult Hawksbill Sea Turtles in Southeast Florida. Journal of Herpetology: March 2017, Vol. 51, No. 1, pp. 58-67.
- Wood,\* Lawrence D., **Sarah L. Milton**, and Terry L. Maple. 2017. Foraging Behavior of Wild Hawksbill Turtles (*Eretmochelys imbricata*) in Palm Beach County Florida, USA. Chelonian Conservation and Biology, 16(1):70-75.
- Cocilova, Courtney\* and **Milton, Sarah**. 2016. Characterization of brevetoxin (PbTx-3) exposure in neurons of the anoxia-tolerant freshwater turtle (*Trachemys scripta*). Aquatic Toxicology 180:115-122.
- Nayak, Gauri\*, Howard Prentice, and **Sarah Milton**. 2016. Lessons from Nature: signaling cascades associated with vertebrate brain anoxic survival. Experimental Physiology, 101(9): 1185–1190.
- Ahles, Natasha\* and **Milton, Sarah**. 2015. Mid-Incubation Relocation and Embryonic Survival in Loggerhead Sea Turtle Eggs. Journal of Wildlife Management. 80(3): 430-437.
- Sanchez, Jamila R; **Sarah L Milton**, Kevin C Corbit, and Rochelle Buffenstein. 2015. Multifactorial Processes to Slowing the Biological Clock: Insights from a Comparative Approach. Experimental Gerontology 71: 27-37.

- Kesaraju, Shailaja\*, Nayak Gauri\*; Prentice, Howard M; **Milton, Sarah L.** 2014. Upregulation of Hsp72 mediates anoxia/reoxygenation neuroprotection in the freshwater turtle via modulation of ROS. *Brain Research* 1582:247-256.
- Larson, John; Drew, Kelly; Folkow, Lars; **Milton, Sarah**; Park Thomas. 2014. No oxygen? No problem! Intrinsic brain tolerance to hypoxia in vertebrates. *Journal of Experimental Biology*, 217(Pt 7):1024-1039.
- Sifuentes-Romero\*, Itzel; Merchant-Larios, Horacio; **Milton, Sarah**; Moreno-Mendoza, Norma; Díaz-Hernández, Veronica; and García-Gasca, Alejandra. 2013. RNAi-mediated gene silencing in a gonad organ culture to study sex determination mechanisms in sea turtle. *Genes*, 4(2): 293 - 305.
- Caplan\* Stacey; **Milton, Sarah**; and Dawson-Scully, Ken. 2013. A cGMP-dependent protein kinase (PKG) controls synaptic transmission tolerance to acute oxidative stress at the *Drosophila* larval neuromuscular junction. *Journal of Neurophysiology*. 2013 Feb;109(3):649-658.
- Milton, Sarah**, and Dawson-Scully, Ken. 2013. Alleviating brain stress: what alternative animal models have revealed about therapeutic targets for hypoxia and anoxia. *Future Neurology*, 8(3):287-301.
- Sifuentes-Romero\*, Itzel; **Milton, Sarah**; García-Gasca, Alejandra. 2011. Post-transcriptional gene silencing by RNA interference in non-mammalian vertebrate systems: Where do we stand? *Mutation Research*. 2011 Nov-Dec;728(3):158-171.
- Nayak\* Gauri; Prentice, Howard; and **Milton Sarah**. 2011. Neuroprotective signaling pathways are modulated by adenosine in the anoxia tolerant turtle. *Journal of Cerebral Blood Flow and Metabolism*. Feb;31(2):467-475.
- Dawson-Scully, Ken; Bukvic, D, Chatterjee-Chakraborty, M, Ferreira, R, **Milton, Sarah**; and Sokolowski, Marla. 2010. Function vs. Survival: Controlling Anoxia Tolerance in Adult *Drosophila*. *Journal of Experimental Biology*. 213 (Pt 14): 2410-2416.
- Nayak\* Gauri; Prentice, Howard; and **Milton Sarah**. 2009. Role of Neuroglobin in Regulating Reactive Oxygen Species in the Brain of the Anoxia-Tolerant Turtle *Trachemys scripta*. *Journal of Neurochemistry*. 110:603-612.
- Kesaraju\*, Shailaja; Schmidt-Kastner, Rainald; Prentice, Howard; and **Milton, Sarah**. 2009. Modulation of stress proteins and apoptotic regulators in the anoxia tolerant turtle brain. *Journal of Neurochemistry*. 109:1413-1426.
- Kesaraju\*, Shailaja and **Milton, Sarah**. Preliminary evidence of neuronal regeneration in the anoxia tolerant vertebrate brain. *Experimental Neurology*. 2009 215(2):401-403.
- Milton, Sarah**; Dirk\*, Linda J.; Kara\*, Laura; and Prentice, Howard. 2008. Adenosine modulates ERK1/2, PI3K/Akt, and p38MAPK activation in the brain of the anoxia-tolerant turtle *Trachemys scripta*. *Journal of Cerebral Blood Flow and Metabolism*. 28(8):1469-1477.
- Stenslokken\* Kare-Olav, **Milton, Sarah**; Lutz, Peter; Sundin, Lena; Renshaw, Gillian; Stecyk, Jonathon; Nilsson, Goran. 2008. Effect of anoxia on the electroretinogram of three anoxia-tolerant vertebrates. *Comparative Biochemistry and Physiology A: Molecular and Integrative Physiology*. 150(4): 395-403.
- Milton, Sarah** and Howard Prentice. 2007. Beyond anoxia: the physiology of metabolic

- downregulation and recovery in the anoxia-tolerant turtle. *Journal of Comparative Biochemistry and Physiology*. 147(2):277-290.
- Milton, Sarah** and Howard Prentice. 2007. Memorial symposium in honor of Peter Lutz - Florida Atlantic University. *Journal of Comparative Biochemistry and Physiology*. Jun;147(2):261-262.
- Milton, Sarah**; Gauri Nayak\*, Shailaja Kesaraju\*, Laura Kara\*, and Howard Prentice. 2007. Suppression of reactive oxygen species production in the anoxia-tolerant turtle *Trachemys scripta*. *Journal of Neurochemistry*, 101(4):993-1001.
- Milton, Sarah**; Nayak\*, Gaurie; Lutz, Peter, and Prentice Howard. 2006. Gene transcription of neuroglobin is upregulated by hypoxia and anoxia in the brain of the anoxia-tolerant turtle *Trachemys scripta*. *Journal of Biomedical Science*. Jul;13(4):509-514.
- Milton, Sarah** and Lutz Peter. 2005. Adenosine and ATP sensitive potassium channels modulate dopamine release in the anoxic turtle (*Trachemys scripta*) striatum. *American Journal of Physiology*. 289: R77-R83.
- Lutz, Peter and **Milton, Sarah**. 2004. Negotiating brain anoxia survival in the turtle. *Journal of Experimental Biology* 207(18): 3141-3147.
- Prentice, Howard; **Milton, Sarah**; Scheurle, Danielle; and Lutz, Peter. The upregulation of cognate and inducible heat shock proteins in the anoxic turtle brain. *Journal of Cerebral Blood Flow and Metabolism*. 24(7): 826-828, 2004.
- Prentice, Howard; **Milton, Sarah**; Scheurle, Danielle; and Lutz, Peter. Gene transcription of brain voltage-gated potassium channels is reversibly regulated by oxygen supply. *American Journal of Physiology: Regulatory Integrative and Comparative Physiology*. 285(6): R1317-R1321, 2003.
- Milton, Sarah**; Manuel, Liscia; and Lutz Peter. 2003. Slow death in the leopard frog *Rana pipiens*: neurotransmitters and anoxia tolerance. *Journal of Experimental Biology*. 206(22): 4021-4028.
- Lutz, Peter; Prentice, Howard; and **Milton, Sarah**. 2003. Is turtle longevity linked to enhanced mechanisms for surviving brain anoxia and reoxygenation? *Experimental Gerontology* 38:797-800.
- Milton, Sarah**; John W. Thompson\*; and Peter L. Lutz. 2002. Mechanisms for maintaining extracellular glutamate in the anoxic turtle striatum. *American Journal of Physiology* 282: R1317 – R1323.
- Milton, Sarah** and Peter Lutz. 1998. Low extracellular dopamine levels are maintained in the anoxic turtle brain. *Journal of Cerebral Blood Flow and Metabolism* 18: 803-807.
- Milton, Sarah**; Schulman, Alexa; and Peter L. Lutz. 1997. The effects of aragonite sand on the nesting and hatching success of loggerhead sea turtles. *Journal of Coastal Research*. 13:904-913.
- Hylland, Patrick; **Sarah Milton**, Marta Pek, Goran E. Nilsson and Peter L. Lutz. 1997. Na<sup>+</sup>/K<sup>+</sup> ATPase activity in the brain of anoxia tolerant crucian carp and freshwater turtle. *Neuroscience Letters*. 235: 89-92.
- Milton, Sarah**; Schulman, Alexis; and Lutz, Peter. 1994. The effects of Hurricane Andrew on sea turtle nesting beaches of South Florida. *Bulletin of Marine Science*. 54: 974-981.

### Journal Publications – submitted, in review: (\* student author, † post-doc)

- Reiterer\*, Melissa and **Milton, Sarah**. Mechanisms of oxidative stress protection in turtle neurons: methionine sulfoxide reductase and *foxo3a*. *Comp. Biochem. Physiol. A.*, submitted by invitation for special issue.
- Mahneva, Olena\*; Monica G. Risley; **Sarah L. Milton**; Ken Dawson-Scully; William Wei-Hua Ja. In vivo expression of peptidylarginine deiminase in *Drosophila melanogaster*. *PLoS I*, in revision.
- Tezak, Boris\*; Sifuentes, Itzel†; **Milton, Sarah**; Wyneken, Jeanette. 2019. Identifying Sex of Loggerhead Sea Turtle Hatchlings via Small Blood Samples. *Scientific Reports*. Accepted with revision.

### Journal Publications – in preparation

- Milton, Sarah** and Henaghan\*, Christopher. Incubation temperature effects on loggerhead sea turtle (*Caretta caretta*) hatchling vigor. *J. Exp. Mar. Biol. Ecol.*
- Sposato, Patricia\*, and **Milton, S.** Ecosystem health and environmental influences on innate immune function in the loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle. *J. Wildl. Dis.*

### Book Chapters:

- Milton, Sarah**. 2008. The Physiology and Anatomy of Anoxia Tolerance in the Freshwater Turtle Brain. Pp. 301-344, IN *Biology of Turtles*. J. Wyneken, M.H. Godfrey, and V. Bels, Eds. CRC Press, Boca Raton, FL
- Milton Sarah** and P.L. Lutz. Environmental and Physiological Stress. Pp. 163-198. IN: The Biology of Sea Turtles, Volume 2. : Lutz, P. L., J. Musick. and J. Wyneken C.R.C. Press, Boca Raton. 2003.
- Milton S.L.** and P.L. Lutz. Sea Turtle Taxonomy and Distribution. pp. 9-20 In: Oil Spills and Sea Turtles: Biology, Planning and Response. National Oceanic and Atmospheric Administration, 2003.
- Milton S.L.** and P.L. Lutz. Life History and Physiology. pp. 21-26 In: Oil Spills and Sea Turtles: Biology, Planning and Response. National Oceanic and Atmospheric Administration, 2003.
- Milton S.L.** and P.L. Lutz. Natural and Anthropogenic Impacts. pp. 27-34 In: Oil Spills and Sea Turtles: Biology, Planning and Response. National Oceanic and Atmospheric Administration, 2003.
- Milton S.L.**, P.L. Lutz and G. Shigenaka. Oil Toxicity and Impacts on Sea Turtles. pp. 35-48 In: Oil Spills and Sea Turtles: Biology, Planning and Response. National Oceanic and Atmospheric Administration, 2003.

**Refereed Presentations at International Meetings: (\* student author, † post-doc, ‡ presentation resulted in a publication)**

- Milton, Sarah** and Henaghan\*, Christopher. Incubation temperature effects on loggerhead sea turtle (*Caretta caretta*) hatchling vigor. International Congress on Comparative Physiology and Biochemistry, Ottawa, August 2019.
- Milton, Sarah** ‡ and Reiterer\*, Melissa. Mechanisms of neuroprotection against oxidative stress in the anoxia tolerant turtle. International Congress on Comparative Physiology and Biochemistry, Ottawa, August 2019.
- Milton, Sarah**; Reiterer, Melissa\*; and Sifuentes, Itzel†. Molecular manipulations: the power of cell culture for defining mechanisms of hypoxia tolerance. American Physiological Society Intersociety Meeting. New Orleans, LA, October 25-28, 2018.
- Milton, Sarah L.**, ‡ Courtney Cocilova\*, Gregory Bossart, Leanne Flewelling. Treatment protocols for endangered sea turtles exposed to brevetoxin during harmful algal blooms. 37th Annual International Symposium on Sea Turtle Biology and Conservation (Las Vegas, NV; April, 2017). Oral.
- Milton, Sarah**‡. Lessons from nature; brain tolerance to hypoxia in vertebrates IN The brain in hypoxia; curiosity, cause and consequence; Physiology 2015, Cardiff, Wales, July 2015. Oral, Invited speaker.
- Milton, Sarah**‡. Cocilova, Courtney\*, Bossart, Gregory; Flewelling, Leanne; and Walsh, Catherine. Brevetoxin metabolism and physiology – a freshwater model of morbidity in endangered sea turtles. 2014 APS Intersociety Meeting: Comparative Approaches to Grand Challenges in Physiology, San Diego, CA. October, 2014 [oral].
- Milton, Sarah**‡ and Sposato, Patricia\*. Ecosystem health and environmental influences on innate immune function in the loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle. 2014 APS Intersociety Meeting: Comparative Approaches to Grand Challenges in Physiology, San Diego, CA. October, 2014 [poster]. (‡ in prep)
- Milton**‡, Sarah. Modulation of reactive oxygen species in the anoxia tolerant turtle. Gordon Research Congress: Brain Energy Metabolism and Blood Flow, Colby College, ME (August 2012). [Oral]
- Milton, Sarah**‡. Adaptations for long term anoxia tolerance reduce oxidative stress in the freshwater turtle. Tenth International Congress of Neuroethology, U. Maryland (August 2012). *Trachemys scripta*. [Oral]
- Milton, Sarah**. Neuroprotection by cGMP/PKG mechanisms in two anoxia tolerant animal models: fruit fly and freshwater turtle. Society for Experimental Biology 2010, Prague, Czech Republic(July 10). [Oral]
- Milton, Sarah**; Prentice, Howard P, and Kesaraju, Shailaja. Differential regulation of HIF-1alpha and VEGF in and anoxia tolerant brain. Experimental Biology 2010, Anaheim, CA (April 10). [Poster]
- Milton, Sarah**‡. Neuroprotective pathways are modulated by adenosine in the evolutionarily adapted anoxia tolerant neuron. International Stroke Conference, 2008, New Orleans, LA (Feb 08) [Poster]
- Milton, Sarah**‡. Suppression of reactive oxygen species production in the anoxia-tolerant turtle

- Trachemys scripta*. Experimental Biology 2007, Washington, D.C. (May 07). [Oral]
- Milton, Sarah.** The turtle brain in anoxia. Society for Experimental Biology 2006, Canterbury, England (April 06) [Oral]
- Milton, Sarah.** “Recent advances in anoxia tolerance and recovery”. FAU Memorial Symposium for Dr. Peter Lutz, 2005, Boca Raton, FL. [Oral]
- Prentice, Howard, and Sarah **Milton.** Strategies to survive brain anoxia. Society for Experimental Biology 2005, Barcelona, Spain. [Oral - Prentice]
- Milton, Sarah**‡ and Howard Prentice. Molecular mechanisms of ROS defense in the turtle *Trachemys scripta*. Society for Experimental Biology 2005, Barcelona, Spain. [Oral]
- Milton, Sarah**‡ and Howard M Prentice. Differential upregulation of heat shock proteins in the anoxic turtle brain. Society for Experimental Biology 2004, Edinburgh, Scotland. [Oral]
- Milton,** Sarah L; Howard M. Prentice, and Peter L. Lutz. 2004. Differential upregulation of heat shock proteins in the anoxic turtle brain. Society for Experimental Biology Annual meeting, Washington, D.C. April 17-21, 2004. [Oral].
- Prentice, Howard‡ M., **Milton** Sarah L., Scheurle Danielle; and Lutz Peter L. 2003. Gene transcription of brain voltage-gated potassium channels is reversibly regulated by oxygen supply. Society for Experimental Biologists, San Diego April 11 - 15. 2003. [Poster, by Prentice]
- Milton, Sarah**‡ and Peter L. Lutz. “Activation of K<sub>ATP</sub> channels depresses dopamine release in the turtle striatum”. Experimental Biology 2001, Orlando, FL [Poster]
- Milton, Sarah** ATP-sensitive potassium channels modulate dopamine release in the anoxic turtle striatum. The 29<sup>th</sup> Meeting of the Society for Neuroscience (1999), Miami Beach, FL. [Poster]
- Milton, Sarah**‡, and Lutz, Peter L. Low extracellular dopamine levels are maintained in the anoxic turtle (*Trachemys scripta*) brain. The 27<sup>th</sup> Meeting of the Society for Neuroscience (1997), New Orleans, LA. [Poster]
- Milton, Sarah,** and Lutz, Peter L. "Effect of anoxia on adenosine and amino acid release in muscle and liver of the freshwater turtle". The 1993 International Congress of Physiological Sciences (1993), Glasgow, Scotland. [Poster]
- Milton, Sarah**‡, **Alfaro, Alexis,** and Lutz, Peter L. "Isoflurane: A safe and effective anesthetic for marine and freshwater turtles". The 1992 International Wildlife Rehabilitation Council Conference, Naples, FL. [Oral]

### **Refereed Presentations at National Meetings**

- Milton**‡, Sarah. Insights into Aging from Turtles, Animals that Show Extremely Slow Aging. The Gerontological Society of America's 68th Annual Scientific Meeting, November 2015, Orlando, FL. Oral. **Invited speaker, Symposium chair.**
- Milton,** Sarah. Oxidative Stress Resistance in an Animal Model of Aging without Senescence. Gerontological Society of America Annual Meeting 2011, Boston, MA. [Oral]
- Milton, Sarah.** Methionine sulfoxide reductase A and resistance to oxidative damage in an animal model of aging without senescence. American Federation of Aging Research, Santa Barbara, CA (Sept. 09). [Poster]
- Milton**‡, **Sarah,** Alfaro, Alexis; and Lutz, Peter L. "The effect of beach nourishment with aragonite versus silicate sand on beach temperature and loggerhead sea turtle nesting



- success". The 1995 National Conference on Beach Preservation Technology, St. Petersburg, FL. [Oral]
- Milton‡, Sarah;** Alafaro, Alexis; Leone-Kabler, Sandra; and Lutz, Peter L. "The effects of Hurricane Andrew on the sea turtle nesting beaches of South Florida". The XIV Annual NOAA Workshop on Sea Turtle Conservation and Biology (1994), Hilton Head, SC. [Oral]
- Leone-Kabler, Sandra, **Sarah Milton**, and Peter Lutz. "The effect of Hurricane Andrew on a monitored *Caretta caretta* nesting beach. The XIII Annual NOAA Workshop on Sea Turtle Conservation and Biology (1993), Jekyll Island, GA. [Oral – Leone-Kabler]
- Shaw, Sarah L;** Alfaro, Alexis; and Lutz, Peter L. "A safe and effective anesthetic for marine and freshwater turtles". The XII Annual NOAA Workshop on Sea Turtle Conservation and Biology (1992), Jekyll Island, GA [Oral]
- Shaw‡,** Sarah L., Alexis Schulman, and Peter L. Lutz. 1992. The suitability of aragonite as a nesting substrate for sea turtles. Twelfth Annual Workshop on Sea Turtle Biology and Conservation. Jekyll Island, GA, February, 1992. [Oral]

### Scientific Presentations at Local/Regional Meetings

- Milton, Sarah;** Patricia Keating, and Patricia Sposato\*. Ecosystem Health and Environmental Influences on Innate Immune Function in the Green Sea Turtle (*Chelonia mydas*). Indian River Lagoon Symposium 2017. Poster.
- Milton,** Sarah; Courtney Cocilova\*, Gregory Bossart, Leanne Flewelling. Treatment protocols for endangered sea turtles exposed to brevetoxin during harmful algal blooms. Florida Keys Sea Turtle Workshop, Dec. 2016. Oral
- Milton, Sarah‡;** Courtney Cocilova\*, Gregory Bossart, Leanne Flewelling. Brevetoxin metabolism and physiology – a freshwater model of morbidity in endangered sea turtles. Florida Keys Sea Turtle Workshop, Dec. 2015. Oral
- Shaw,** Sarah L., Ross Witham, Peter Lutz, and Gregory Bossart. 1989. Possible effects of artificial foods on sea turtle health. Ninth Annual Workshop on Sea Turtle Biology and Conservation. Jekyll Island, GA, February 1992. [Oral]
- Alfaro, Alexis, Gregory Bossart, Thomas. Jackson, Peter Lutz, and **Sarah Shaw**. 1990. Physiological and morphological measurements on a leatherback turtle. Tenth Annual Workshop on Sea Turtle Biology and Conservation [Oral, by Alfaro]

### Invited talks:

- 2018** American Physiological Society Intersociety Meeting. New Orleans, LA, October 25-28, 2018. Molecular manipulations: the power of cell culture for defining mechanisms of hypoxia tolerance.
- 2018** Florida Sea Turtle Permit Holders Meeting, St. Augustine, FL, February 3, 2018. Incubation temperature effects on sea turtle hatchling vigor.
- 2015** Physiology 2015‡, Cardiff, Wales, July 2015. Lessons from nature; brain tolerance to hypoxia in vertebrates.
- 2015** The Gerontological Society of America's 68th Annual Scientific Meeting, November

- 2015, Orlando, FL. Insights into Aging from Turtles, Animals that Show Extremely Slow Aging.
- 2013** Univ. of Miami RSMAS: Coming Full Circle: Sea turtles to stroke research and back again.
- 2012** Gordon Research Congress: Brain Energy Metabolism and Blood Flow, Colby College, ME (August 2012). Modulation of reactive oxygen species in the anoxia tolerant turtle.
- 2012** Tenth International Congress of Neuroethology, University of Maryland, MD. Adaptations for long term anoxia tolerance reduce oxidative stress in the freshwater turtle *Trachemys scripta*.
- 2012** Neuroscience seminar series, FAU. To Anoxia and Beyond: Living without oxygen and surviving afterwards
- 2011** Eco-Watch Lecture Series, Gumbo Limbo Nature Center, Boca Raton, FL, October 2011. “Rumors about tumors”.
- 2011** Florida Sea Turtle Permit Holders Meeting, Jensen Beach, FL. Quantifying the energetic cost of disorientation in loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) hatchlings.
- 2008** Frontiers in Science, FAU. “Stayin’ Alive: Mechanisms of survival in the brain without oxygen.”
- 2008** Neuroscience seminar series, FAU. “If you hold your breath, can you live forever? Turtles, anoxia, and aging.”
- 2008** Toronto Zoo Turtle Stewardship and Management Workshop. “Extreme survivor: The physiology of living through the winter without oxygen.”
- 2007** Francis Silliman Endowed Lecture, Bridgewater College, VA. “Stayin’ Alive: an animal model of neuronal survival without oxygen”.

**Student Presentations at International Meetings (\* student author, † post-doc, ‡ presentation resulted in a publication)**

- \*Shlepr, K.R., **S.L. Milton**, and D.E. Gawlik. 2020. Risk of hyperthermia during an acute stress response varies with body size and condition in the altricial young of a subtropical bird species. Waterbird Society annual meeting. Virtual talk. \*Student Paper Award winner
- Garefino, Victoria, and **Milton, Sarah**. Influence of UV light on vitamin D and immune function in green (*Chelonia mydas*) sea turtles with fibropapillomatosis. 2019 International Sea Turtle Symposium, February 2019, Charleston, SC. Oral.
- Henaghan, Chris\* and **Milton, Sarah**. Incubation temperature effects on loggerhead (*Caretta caretta*) sea turtle hatchling vigor. 2019 International Sea Turtle Symposium, February 2019, Charleston, SC. Oral.
- Tezak, Boris\*‡, Itzel Sifuentes-Romero†, **Sarah Milton**, and Jeanette Wyneken. Using blood samples to identify the sex of hatchling loggerhead sea turtle hatchlings. 2019 International Sea Turtle Symposium, February 2019, Charleston, SC Oral. \*\* **Winner:** best student oral presentation.

- Grell, Kaitlin\*\*, and **Sarah L. Milton**. The Effect of High Nest Temperatures on the Growth Rates of Loggerhead Sea Turtle (*Caretta caretta*) Embryos and Hatchlings. 2019 International Sea Turtle Symposium, Charleston, SC, February 2019. Poster (also was selected to be backup oral presenter). \*\* Undergraduate student
- Sifuentes, Itzel†‡; Tezak, Boris\*; **Milton, Sarah**; Wyeneken, Jeanette. Hydric environment in a turtle nest: how does it affect sex determination? Eight International Symposium on Vertebrate Sex Determination, April 16-20, 2018. Kona, Hawaii. Poster.
- Reiterer, Melissa\* and **Milton, Sarah**. Mechanisms of neuroprotection against oxidative stress in the anoxia tolerant turtle *Trachemys scripta*. Experimental Biology 2018, April 21-25, 2018, San Diego, CA. Oral
- Reiterer, Melissa\* and **Milton, Sarah**. Mechanisms of neuroprotection against oxidative stress in the anoxia tolerant turtle *Trachemys scripta*. Experimental Biology 2018, April 21-25, 2018, San Diego, CA. Poster.
- Sifuentes, Itzel†; Tezak, Boris; **Milton, Sarah**; Wyeneken, Jeanette. The hydric environment in a sea turtle nest: effects on sex determination. 38th International Sea Turtle Symposium. February 18th-23rd, 2018. Kobe, Japan. Oral.
- Sifuentes, Itzel†; Tezak, Boris\*; **Milton, Sarah**; Wyeneken, Jeanette. Hydric environment in a turtle nest: how does it affect sex determination? Society for Integrative and Comparative Biology, Annual Meeting 2018. January 3-7, 2018 San Francisco, CA. Poster
- Reiterer, Melissa\* and **Milton, Sarah**. Methionine sulfoxide reductase as a neuroprotective mechanism in a model of anoxia tolerance: *Trachemys scripta*. Experimental Biology, April 2017, Chicago, IL. Oral.
- Reiterer, Melissa\* and **Milton, Sarah**. Methionine sulfoxide reductase as a neuroprotective mechanism in a model of anoxia tolerance: *Trachemys scripta*. Experimental Biology, April 2017, Chicago, IL. Poster.
- Rachel A. Bladow\*, Tiffany Roberts Briggs, and **Sarah L. Milton**. Beach dynamics, human use, and climate change: interactions that impact sea turtle nesting beaches. 37th Annual Symposium on Sea Turtle Biology and Conversation (Las Vegas, NV; April, 2017) Oral.
- Sifuentes, Itzel†‡; Tezak, Boris\*; Wyeneken, Jeanette; **Milton, Sarah**. The hydric environment inside a turtle nest: How does moisture affect development? 37th Annual Symposium on Sea Turtle Biology and Conversation (Las Vegas, NV; April, 2017) Oral.
- Tezak, Boris\*; Sifuentes, Itzel†; **Milton, Sarah**; Wyeneken, Jeanette. Estimating the sex ratio of sea turtle hatchlings vis blood samples. 37th Annual International Symposium on Sea Turtle Biology and Conversation (Las Vegas, NV; April, 2017) . Poster.
- Cocilova, Courtney\* and **Milton, Sarah**. The effects of red tide toxins in turtles – developing treatment protocols for endangered sea turtles. Society for Integrative and Comparative Biology 2017, New Orleans, LA
- Riggs, Claire\*‡; Dowd, Wesley; Lefevre, Sjannie; **Milton, Sarah**; Nilsson, Goran; Warren, Daniel; and Podrabsky, Jason. Extreme vertebrate anoxia tolerance and small RNA expression. Society for Integrative and Comparative Biology 2017, New Orleans, LA.
- Cocilova, Courtney\* and **Milton, Sarah**. The effects of red tide toxins in turtles – developing treatment protocols for endangered sea turtles. International Association for Aquatic Animal Medicine (IAAAM) annual meeting in Virginia Beach, VA (May 2016; oral),

- Cocilova, Courtney\* and **Milton, Sarah**. The effects of red tide toxins in turtles – developing treatment protocols for endangered sea turtles. 17<sup>th</sup> International Conference for Harmful Algae (October, 2016) in Florianopolis, Brazil. Oral. Supported by an ICHA Travel award.
- Sifuentes, Itzel†; Tezak, Boris\*; **Milton, Sarah**; Wyneken, Jeanette. Hydric environment in a turtle nest: how does it affect sex determination? Society for Developmental Biology, 75th Annual Meeting – International Society of Differentiation, 19th International Conference. August 4-8, 2016. Boston, MA. Poster
- Pankaew, Karen\*‡, and **Milton, S.** Running for Their Lives: Physiological effects of disorientation in loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle hatchlings. 36th Annual International Symposium on Sea Turtle Biology and Conservation, 29 February - 04 March 2016 in Lima, Peru. **Archie Carr award winner** for best student oral presentation.
- Sifuentes, Itzel†; Tezak, Boris\*; Wyneken, Jeanette; and **Milton, Sarah L.** Effect of incubation conditions on DNA methylation in turtles with environmental dependent sex determination. Society for Integrative and Comparative Biology, Portland, OR, 2016.
- Sifuentes, Itzel†; Tezak, Boris; Wyneken, Jeanette; **Milton, Sarah L.** Effect of incubation conditions on DNA methylation in turtles with environmental dependent sex determination. 36th Annual International Symposium on Sea Turtle Biology and Conservation, 29 February - 04 March 2016 in Lima, Peru.
- Reis, Andrea\*, and **Milton, Sarah**. Sex identification in sea turtle hatchlings by HPLC assay of plasma steroid hormones. Society for Integrative and Comparative Biology. Palm Beach, FL January 2015 [Poster].
- Pankaew, Karen\*, and **Milton, Sarah**. Physiological effects of disorientation in loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle hatchlings. Society for Integrative and Comparative Biology,, Palm Beach, FL January 2015 [Poster].
- Cocilova, Courtney\*‡, Bossart, Gregory; Flewelling, Leanne; Walsh, Catherine; and **Milton, Sarah**. Brevetoxin metabolism and physiology – a freshwater model of morbidity in endangered sea turtles. 16th International Conference on Harmful Algae (ICHA) Wellington, New Zealand 27–31 October 2014 [Oral].
- Reiterer, Melissa\* and **Milton, Sarah L.** MsrA as an Important Neuroprotective Mechanism in the Anoxia Tolerant Model: *Trachemys scripta elegans*. 2014 American Physiological Society Intersociety Meeting: Comparative Approaches to Grand Challenges in Physiology, San Diego, CA. October, 2014 [poster].
- Olena Makhnyeva\*, Ken Dawson-Scully and Sarah L. **Milton**. Activation of cGMP-dependent protein kinase reduces *Drosophila* S2 cell injury caused by anoxia and oxidative stress. 2014 APS Intersociety Meeting: Comparative Approaches to Grand Challenges in Physiology, San Diego, CA. October, 2014 [poster].
- Cocilova, Courtney\*, Bossart, Gregory; Flewelling, Leanne; Walsh, Catherine; and **Milton, Sarah**. Brevetoxin metabolism and physiology – a freshwater model of morbidity in endangered sea turtles. Thirty-Fourth Annual International Symposium on Sea Turtle Biology, April 2014, New Orleans, LA. [Oral].
- Sposato, Patricia\*, and **Milton, S.** Ecosystem health and environmental influences on innate

- immune function in the loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle. Thirty-Fourth Annual International Symposium on Sea Turtle Biology, April 2014, New Orleans, LA. [Oral].
- Makhnyeva, Olena\*, Dawson-Scully, Ken; and **Milton, Sarah L.** Effects of cGMP-dependent protein kinase signaling in *Drosophila* S2 cells subjected to anoxia and oxidative stress, Cell Symposia: Genes, Circuits and Behavior, Toronto ON 2013 [Poster]
- Makhnyeva, Olena\*; Dawson-Scully, Ken; and **Milton, Sarah L.** Effects of cGMP-dependent protein kinase signaling in *Drosophila* S2 cells subjected to anoxia and oxidative stress. Cell Symposia: Genes, Circuits and Behavior, Toronto ON 2013 [Oral]
- Homer-Drummond, Sharon\* and **Milton, Sarah.** Quantitative structure-activity relationships between native reproductive hormones, gonadal receptors and endocrine-disruptors in *Tursiops truncatus* (Atlantic bottlenose dolphins). 41<sup>st</sup> Annual International Association for Aquatic Animal Medicine Conference, May, 2010, Vancouver, B.C. Canada. [Oral].
- Homer-Drummond, Sharon\* and **Milton, Sarah.** Parameters impacting the reproductive success of *Tursiops truncatus* (Atlantic bottlenose dolphins): interactions between native endocrinology and endocrine-disruptors. Southeast Atlantic Marine Mammal Symposium (SEAMAMMS), March 26-28, 2010, Virginia Beach Aquarium and Marine Science Center, Virginia Beach, VA. 2010 [Oral].
- Couturier, Christine S‡; Ellefsen, Stian; Sandvik, Guro K, Stenoslokken, KareOlav, Stecyk, Jonathon A; Fagernes, Cathrine E; **Milton, Sarah L**; Prentice, Howard M; and Nilsson, Goran E. Gene expression in anoxic turtle brain, the inhibitory pathway. Society for Experimental Biology Main Meeting, Anaheim CA 2010. [Poster].
- Deming, Alissa\*. and **Milton, Sarah L.** Stress and anti-apoptotic protein expression in green turtle (*Chelonia mydas*) fibropapillomatosis. International Association for Aquatic Animal Medicine, 2008 Rome, IT. [Oral]
- Gauri Hari Nayak\*‡, **Sarah L Milton**, and Howard M Prentice. Neuroglobin is upregulated by hypoxia and anoxia in the brain of the anoxia-tolerant turtle *Trachemys scripta*. Experimental Biology 2007, Washington, D.C. (May 07). [Oral]
- Deming, Alissa\*. and **Milton, SL.** Stress and anti-apoptotic protein expression in green turtle (*Chelonia mydas*) fibropapillomatosis. Twenty-eighth Annual International Symposium on Sea Turtle Biology and Conservation. Mexico. 2008. [Oral]
- Bruce, Lynsey\*, Prentice, Howard P, and **Milton, Sarah L.** The role of Methionine Sulfoxide Reductase A in the anoxia-tolerant turtle (*Trachemys scripta*). Experimental Biology 2010, Anaheim CA (April 10). [Poster]
- Kesaraju, Shailaja\*‡; Prentice, Howard P; and **Sarah L Milton.** Heat shock protein 72 stabilizes the mitochondrial membrane potential in the anoxia tolerant turtle (*Trachemys scripta*) neuron. Experimental Biology 2009, New Orleans, LA (April 09). [Poster]
- Kesaraju, Shailaja\*‡; Howard Prentice; and **Sarah L. Milton.** Hsp72 is critical to neuronal survival in an in vitro model of anoxia tolerance. International Stroke Conference, 2008, New Orleans, LA (Feb 08) [Poster]
- Nayak, Gauri\*‡; **Sarah L. Milton**, and Howard Prentice. The anti-apoptotic regulator Bcl-2 decreases cell death in the brain of the anoxia tolerant turtle. International Stroke

- Conference, 2008, New Orleans, LA (Feb 08) [Poster]
- Kowalski, Amy\*; Peter L. Lutz, and **Sarah L. Milton**. Specific dynamic action in hatchling green (*Chelonia mydas*) and loggerhead (*Caretta caretta*) sea turtles. The Joint Meeting of Ichthyologists and Herpetologists, Tampa, FL 2005. [Poster]
- Botterill, Brooke E\*; Steven M. Blair, and **Sarah L. Milton**. Identification of steroid hormones in the allantoic fluid and plasma of loggerhead hatchlings. Joint Meeting of Ichthyologists and Herpetologists, Tampa, FL 2005. [Poster]
- McGarrity, Monica E\*; **Sarah L. Milton** and Peter L. Lutz. Heat shock protein expression and fibropapillomatosis: novel use of molecular techniques to evaluate health and stress levels in marine turtles. Twenty-fifth Annual International Symposium on Sea Turtle Biology and Conservation. Charleston, SC, 2005. [Poster]
- Botterill, Brooke E\*; Steven M. Blair, and **Sarah L. Milton**. Identification of steroid hormones in the allantoic fluid and plasma of loggerhead hatchlings. Twenty-fifth Annual International Symposium on Sea Turtle Biology and Conservation. Charleston, SC, 2005. [Poster]

### **Student Presentations at National Meetings**

- Courtemanche\*, Ali ; **Sarah L. Milton**. 2020. Embryonic mortality of loggerhead (*Caretta caretta*) sea turtle nests by inundation events and frequency. Southeast Regional Sea Turtle Meeting. Corpus Christi, TX, February 2020. Poster.
- Seaman, Heather\*; **Sarah L. Milton**. 2020. The impacts of nest microenvironment on leatherback (*Dermochelys coriacea*) hatchling performance and their responses to thermal stress. Southeast Regional Sea Turtle Meeting. Corpus Christi, TX, February 2020. Poster.
- Serra, Ivana\*, **Sarah L. Milton**. 2020. Assessing the Effect of Incubation Temperature on the Cognitive Ability of Loggerhead Sea Turtle, *Caretta caretta*, Hatchlings. Southeast Regional Sea Turtle Meeting. Corpus Christi, TX, February 2020. Oral. Runner up: Best Student Oral Presentation.
- Garefino\*, Victoria, **Sarah L. Milton**. 2020. Influence of uv light on vitamin d and immune function in green (*Chelonia mydas*) sea turtles with fibropapillomatosis. Southeast Regional Sea Turtle Meeting. Corpus Christi, TX, February 2020. Oral.
- Cordoba\*\*, Melissa; Seaman, Heather; **Sarah L. Milton**. 2020. The effects of body morphology on performance in green, leatherback, and loggerhead sea turtle hatchlings. Southeast Regional Sea Turtle Meeting. Corpus Christi, TX, February 2020. Poster. \*\* Undergraduate student presentation.
- Serra, Ivana\*, **Sarah L. Milton**. 2020. Assessing the Effect of Incubation Temperature on the Cognitive Ability of Loggerhead Sea Turtle, *Caretta caretta*, Hatchlings. FAU Environmental Sciences Annual Symposium. Oral. Winner: Best Student Presentation.
- Courtemanche\*, Ali; Briggs, Tiffany; and **Milton, Sarah**. Influences of flooding and sediment on loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle reproduction success. American Shore and Beach Preservation Association National Coastal Conference, Myrtle Beach, NC, October 22-25, 2019.

- Bladow, Rachel\* and **Milton, Sarah**. Beach dynamics, human use, and climate change: interactions that impact sea turtle nesting beaches. 2018 Meeting of the Southeast Regional Sea Turtle Network, Feb. 2108, Myrtle Beach, SC. Oral.
- Henaghan, Chris\* and **Milton, Sarah**. Incubation temperature effects on loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle hatchling vigor. 2018 Meeting of the Southeast Regional Sea Turtle Network, Feb. 2108, Myrtle Beach, SC. Oral.
- Tezak, Boris\*, Itzel Sifuentes-Romero†, **Sarah Milton**, and Jeanette Wyneken. Identifying the sex of sea turtle hatchlings via blood samples. 2018 Meeting of the Southeast Regional Sea Turtle Network, Feb. 2108, Myrtle Beach, SC. Oral. \*\* **Winner: Boyd Lyon Award** for best student oral presentation.
- Makhnyeva, Olena\*, Dawson-Scully, Ken; and **Milton, Sarah L.** Effect of cGMP-dependent protein kinase (PKG) signaling on mitochondrial content in *Drosophila melanogaster* subjected to anoxia and reoxygenation. Mitochondrial Physiology Association, Greenville, NC, August 2015[Poster]
- Wood, Lawrence\*‡; Brunnick, Barbara; and **Milton, Sarah**. Home range and habitat use of hawksbill turtles in Palm Beach County, Florida. Southeast Regional Sea Turtle Meeting, Jekyll Island, GA Feb 2015 [Oral].
- Ahles, Natasha\*‡; and **Milton, Sarah**. Mid-Incubation Relocation and Embryonic Survival in Loggerhead Sea Turtle Eggs Southeast Regional Sea Turtle Meeting, Jekyll Island, GA Feb 2015 [Oral].
- Reis, Andrea\*, and **Milton, Sarah**. Sex identification in sea turtle hatchlings by HPLC assay of plasma steroid hormones. Southeast Regional Sea Turtle Meeting, Jekyll Island, GA Feb 2015 [Poster].
- Pankaew, Karen\*, and **Milton, Sarah**. Physiological effects of disorientation in loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle hatchlings. Southeast Regional Sea Turtle Meeting, Jekyll Island, GA Feb 2015 [Poster]. **Winner: Boyd Lyon Student Award** for Best Poster.
- Cocilova, Courtney\*, Bossart, Gregory; Flewelling, Leanne; Walsh, Catherine; and **Milton, Sarah**. Brevetoxin metabolism and physiology – a freshwater model of morbidity in endangered sea turtles. 7<sup>th</sup> Symposium on Harmful Algae in the US (Sarasota, FL; October 2013). [Poster]
- Homer-Drummond, Sharon\*; and **Milton, Sarah**. Parameters impacting the reproductive success of *Tursiops truncatus* (Atlantic bottlenose dolphins): interactions between native endocrinology and endocrine-disruptors. Southeast Atlantic Marine Mammal Symposium (SEAMAMMS), March 26-28, 2010, Virginia Beach Aquarium and Marine Science Center, Virginia Beach, VA. Oral.

### **Student Presentations at Local/Regional Meetings:**

- Lezcano, Ivana and **Milton, Sarah**. Baked: Does Incubation Temperature Affect Cognitive Ability of Sea Turtle Hatchlings? Environmental Sciences Research Day, FAU. April 8,

2019

- Grell, Kaitlin\*\*, and **Sarah L. Milton**. The Effect of High Nest Temperatures on the Growth Rates of Loggerhead Sea Turtle (*Caretta caretta*) Embryos and Hatchlings. ORAL Undergraduate Research Day, 4-19. WINNER: Best oral presentation Environmental, Ecological, and Marine Sciences category, \*\* Undergraduate student
- Esposito, Lisa Anne\*\*; Milton, Connor\*\*; Briggs, Tigffany, and **Sarah Milton**. The effects of inundation and relocation on sea turtle hatching success. **Poster**: Undergraduate Research Day, spring 2019. \*\* Undergraduate student
- Tovar, Victoria\*\*, and **Milton, Sarah**. The effects of rising nest temperatures on the embryonic mortality rates of Loggerhead Sea Turtles (*Caretta caretta*) for the nesting season of 2018. **Poster**: Undergraduate Research Day, spring 2019. \*\* Undergraduate student
- Mahneva, Olena\*; Milton, **Sarah L.**; Dawson-Scully, Ken. Effect of *foraging* on mitochondrial content in *Drosophila melanogaster* subjected to anoxia and reoxygenation. Sunposium Feb. 2017. Poster.
- Reiterer, Melissa\* and **Milton, Sarah**. Role and Regulation of MsrA and FOXO3a during oxidative stress in an anoxia tolerant model: *T. scripta*. Sunposium Feb. 2017. Poster.
- Makhnyeva, Olena\*, Dawson-Scully, Ken and **Milton, Sarah L.** Activation of cGMP-dependent protein kinase reduces *Drosophila* S2 cell injury caused by chemical hypoxia and oxidative stress. Sunposium 2016, Jupiter, FL. [Poster]
- Cocilova\*, Courtney, Bossart, Gregory; Flewelling, Leanne; Walsh, Catherine; and **Milton, Sarah**. Brevetoxin metabolism and physiology – a freshwater model of morbidity in endangered sea turtles. Max Planck Florida Institute Sunposium, 2015 [poster]
- Makhnyeva, Olena\*, Dawson-Scully, Ken; and **Milton, Sarah L.** cGMP/PKG-mediated survival in a *Drosophila* cell culture model of anoxia and oxidative stress injury. Flies on the Beach, Delray Beach, FL. 2014.
- Caplan Stacee\*‡; **Milton, Sarah L.**; and Dawson-Scully Ken. A cGMP-dependent kinase (PKG) controls synaptic transmission tolerance to acute oxidative stress at the *Drosophila* larval neuromuscular junction. Center of Excellence in Biomedical and Marine Biotechnology Symposium. 2013 [Oral]
- Caplan Stacee\*; **Milton, Sarah L.**; and Dawson-Scully Ken. A cGMP-dependent kinase (PKG) controls synaptic transmission tolerance to acute oxidative stress at the *Drosophila* larval neuromuscular junction. Sunposium, Max Planck FL 2013 [Poster]
- Sposato, Patricia\*, and **Milton, Sarah**. Ecosystem health and environmental influences on innate immune function in sea turtles. Florida Keys Sea Turtle Workshop 2013. [Oral]
- Makhnyeva, Olena\*, Dawson-Scully, Ken and **Milton, Sarah L.** Effects of cGMP-dependent protein kinase signaling in *Drosophila* S2 cells subjected to anoxia and oxidative stress, Sunposium, Max Planck FL 2012 [Poster]
- Caplan, Stacee\*; **Milton, Sarah**; Dawson-Scully Ken. Rapid Neuroprotection from Acute Oxidative Stress. IBRO Max Planck Symposium, FL 2012 [Poster]
- Caplan, Stacee; **Milton, Sarah**; Dawson-Scully Ken. Rapid Neuroprotection from Acute Oxidative Stress. South Florida *Drosophila* Consortium Meeting, Boca Raton, 2012.



[Poster]

Caplan, Stacey\*; **Milton**, Sarah; Dawson-Scully, Ken. Rapid Neuroprotection from Acute Oxidative Stress. South Florida *Drosophila* Consortium Meeting. University of Miami. 2010 [Oral].

Nayak, Gauri Hari\*, **Sarah L Milton**, and Howard M Prentice. Gene transcription and translation of Neuroglobin is upregulated by hypoxia and anoxia in the brain of the anoxia-tolerant turtle *Trachemys scripta*. Charles E. Schmidt College of Biomedical Science, Biomedical Science Research Day, Florida Atlantic University, 2007. **Selected as the best talk and best poster.**

**Meeting Organizer:**

Southeast Regional Sea Turtle Meeting, Myrtle Beach, SC. February 12-16, 2018.

**Symposia Organizer:**

Peter L. Lutz Memorial Symposium, Boca Raton, FL, September, 2005. Co-organizer with Dr. Howard Prentice.

Life With and Without Oxygen, Society for Experimental Biology. Canterbury, England, April 2006. Co-organizer with Dr. Goran Nilsson.

**Symposium Chair:**

Insights into Aging from Turtles, Animals that Show Extremely Slow Aging. The Gerontological Society of America's 68th Annual Scientific Meeting, November 2015, Orlando, FL.

Anatomy, Physiology, and Health. Thirty-Fifth Annual International Symposium on Sea Turtle Biology, April 2015, Istanbul, Turkey

Anatomy, Physiology, and Health. Thirty-Fourth Annual International Symposium on Sea Turtle Biology, April 2014, New Orleans, LA.

Anatomy, Physiology, and Health. Thirty-Third Annual International Symposium on Sea Turtle Biology, Feb 2013, Baltimore, MD.

**Invited attendee:**

Climate Change and Sea Turtle Workshop, New Smyrna, FL, May 2016

McGraw-Hill Anatomy & Physiology Symposium, Tucson AZ, March 2004

The 2<sup>nd</sup> Sea Turtle Health Assessment Workshop, Charleston, SC, March 2001

**Non-refereed Works**

**Journal Publications:**

**Journal of Experimental Biology column – contributing writer:**

Milton, Sarah Hydrogen saline a real gas. J. Exp. Biol. 2009 212: v-a

Milton, Sarah Rising to the challenge of diving seals. J. Exp. Biol. 2009 212: v-a

Milton, Sarah DOR-mant brains maintain ion balance. J. Exp. Biol. 2009 212: vi

Milton, Sarah Anoxic goldfish are depressed, not drunk. J. Exp. Biol. 2008 211: vi-a

- Milton, Sarah No depth to neuroglobin. *J. Exp. Biol.* 2008 211: v-a
- Milton, Sarah Thawing no problem for supercool turtles. *J. Exp. Biol.* 2008 211: v-a
- Milton, Sarah More Neuroglobin makes good sense. *J. Exp. Biol.* 2007 210: v-a
- Milton, Sarah ROS stress in mice: Not just a guy thing. *J. Exp. Biol.* 2007 210: v
- Milton, Sarah Hibernating hamsters really disconnect. *J. Exp. Biol.* 2007. 210(7): vii
- Milton, Sarah Hypoxic brain cells lose their inhibitions. *J. Exp. Biol.* 2007 210(1): vii.
- Milton, Sarah Resetting the oxygen-sensing set point. *J. Exp. Biol.* 2006. 209: v-a
- Milton, Sarah Mitochondria at the heart of cardiac preconditioning. *J. Exp. Biol.* 2006 209: vi.
- Milton, Sarah Aroused hamsters scavenge reactive oxygen species. *J. Exp. Biol.* 2006 209: viii.
- Milton, Sarah Fetal llamas give hypoxia the cold shoulder. *J. Exp. Biol.* v. 209: iv.
- Milton, Sarah Arctic ground squirrels handle stress with finesse. *J. Exp. Biol.* 2005 208: v
- Milton, Sarah Diving seals don't get the shivers. *J. Exp. Biol.* 2005 208: v-a.
- Milton, Sarah A whale of a case of the bends. *J. Exp. Biol.*, 208(7): v, 2005.
- Milton, Sarah Anoxia not a real heartbreaker. *J. Exp. Biol.* 208: v, 2004.
- Milton, Sarah Cool squirrels turn down their Akt. *J. Exp. Biol.*, 207(21): v, 2004.
- Milton, Sarah Divers' detergents are different! *J. Exp. Biol.*, 207(9): iv, 2004.
- Milton, Sarah Go ahead! Vent your spleen! *J. Exp. Biol.*, 207(3): 390, 2004.
- Milton, Sarah A case for crustacean navigation (Or, there's no place like home...) *J. Exp. Biol.* 206:1432, 2003.
- Milton, Sarah Don't mind the gap! *J. Exp. Biol.* 206(15): 2529 – 2530, 2003.
- Milton, Sarah Man can conserve O too! *J. Exp. Biol.* 206(3): 427-428, 2003.

### Other Publications:

- Nelson, D.A., S. M. Blair, R. Cheeks, P.L. Lutz, **S.L. Milton**, and T.S. Gross. Evaluation of alternative beach nourishment sands as loggerhead sea turtle nesting substrates. US Army Corps of Engineers Technical Report, 1996.
- Shaw (Milton) SL**, S. Leone-Kabler, P.L. Lutz, and A. Schulman. Isoflurane: A safe and effective anesthetic for marine and freshwater turtles. Pp. 112-119 IN Proceedings of the 1992 International Wildlife Rehabilitation Council Conference. Omnipress, Madison, WI, 1992.

**Abstracts: († post-doc author, \* graduate student author, \*\* undergraduate student author)**

### International:

- Reiterer\*, Melissa; **Sarah L Milton**. 2017. Methionine sulfoxide reductase as a neuroprotective mechanism in a model of anoxia tolerance: *Trachemys scripta*. The FASEB Journal 31 (1supplement), 1075.4-1075.4
- Sifuentes, Itzel†; Boris Tezak\*, **Sarah L Milton**, Jeanette Wyneken. 2017. Sex determination in turtles: is moisture playing a role? *Integrative and Comparative Biology* 57, E154-

- E154.
- Claire L. Riggs\*, Amanda Summers, Daniel E. Warren, Göran E. Nilsson, Sjannie Lefevre, W. Wesley Dowd, **Sarah Milton**, Jason E. Podrabsky. 2017. Extreme Vertebrate Anoxia Tolerance and Small RNA Expression. *Integrative and Comparative Biology* 57, E387-E387.
- Cocilova\*, Courtney; **Sarah L Milton**, Leanne J Flewelling, Gregory D Bossart, Catherine J Walsh. 2017. The Effects of Red Tide Toxins in Turtles-Developing Treatment Protocols for Endangered Sea Turtles. *Integrative and Comparative Biology* 57, E227-E227.
- Sifuentes, Itzel†; Boris Tezak\*, **Sarah L Milton**, Jeanette Wyneken. 2016. Effect of incubation conditions on DNA methylation in turtles with environmental dependent sex determination. *Integrative and Comparative Biology* 56, E370-E370.
- Milton**, Sarah. 2015. Insights into aging from turtles, animals that show extremely slow aging. *Gerontologist* 55, 383-383.
- Reis\*, Andrea L; **Sarah L Milton**. 2015. Sex Identification in Sea Turtle Hatchlings by HPLC Assay of Plasma Steroid Hormones, *Integrative and Comparative Biology* 55, E319.
- Milton, Sarah**; Melissa Reiterer\*, Lynsey Bruce\*, Howard Prentice. 2011. Oxidative stress resistance in a novel animal model of aging without senescence. *Gerontologist* 51, 506-506.
- Lynsey Bruce\*, **Milton, Sarah**. 2010. The role of Methionine sulfoxide reductase A (MsrA) in the anoxia-tolerant turtle (*Trachemys scripta*). *The FASEB Journal* 24 (1\_supplement), 1022.2-1022.2
- Milton, Sara L** and Ken Dawson-Scully. 2010 Neuroprotection by cGMP/PKG mechanisms in two anoxia tolerant animal models: fruit fly and freshwater turtle. *Proceedings of the Society for Experimental Biology Main Meeting, 2010.*
- Milton**, Sarah; Shailaja Kesaraju, K Ayyanathan, Howard Prentice. 2010. Differential regulation of HIF-1 alpha and VEGF in an anoxia tolerant brain. *The FASEB Journal* 24 (1 supplement), 1022.1-1022.1
- Couturier, Christine S; Ellefsen, Stian; Sandvik, Guro K; Stenoslokken, Kare-Olav; Stecyk, Jonathon A; Fagernes, Cathrine E; **Milton, Sarah L**; Prentice, Howard M; and Nilsson, Goran E. 2010. Gene expression in anoxic turtle brain, the inhibitory pathway. *Proceedings of the Society for Experimental Biology Main Meeting, 2010.*
- Milton**, Sarah and Kesaraju, Shailaja\*. 2009. Heat shock protein 72 stabilizes the mitochondrial membrane potential in the anoxia tolerant turtle (*Trachemys scripta*) neuron. *Federation of American Societies for Experimental Biology Journal* 23: LB129
- Nayak, Gauri\*; **Sarah L Milton**, Howard M Prentice. 2008. The anti-apoptotic regulator bcl-2 decreases cell death in the brain of the anoxia tolerant turtle. *STROKE* 39 (2), 674-675.
- Milton**, Sarah L., Dirk\*, Linda J., Kara\*\*, Laurie F., and Prentice, Howard M. 2008. Neuroprotective pathways are modulated by adenosine in the evolutionarily adapted anoxia tolerant neuron. *Stroke*.
- Kesaraju, Shailaja\*, Schmidt-Kastner, Rainald, Boatright, Jeffrey\*\*, Prentice, Howard M., and **Milton**, Sarah L. 2008. Hsp72 Is Critical To Neuronal Survival In An In Vitro Model Of Anoxia Tolerance. *Stroke*.
- Milton**, Sarah L., Howard Prentice, Gauri Nayak\*, Laurie Kara\*\*, and Shailaja Kesaraju\*.

2007. Suppression of reactive oxygen species production in the anoxia-tolerant turtle *Trachemys scripta*. Federation of American Societies for Experimental Biology Journal. 21: 966.2
- Nayak, Gauri Hari\*, Sarah L **Milton**, and Howard M Prentice. 2007. Neuroglobin is upregulated by hypoxia and anoxia in the brain of the anoxia-tolerant turtle *Trachemys scripta*. Federation of American Societies for Experimental Biology Journal 21: 762.15
- Shailaja Kesaraju\*, Howard M. Prentice, and Sarah L. **Milton**. 2007. Hsp72 is neuroprotective in the the anoxia tolerant turtle, *Trachemys scripta elegans*. Federation of American Societies for Experimental Biology Journal. 21: 917.7
- Milton**, Sarah; Howard Prentice. 2006. Anoxic and reoxygenation survival in the turtle brain. Comparative Biochemistry and Physiology A-Molecular & Integrative Physiology Volume143, Issue 4: S104-S104
- Milton**, Sarah L, Howard M. Prentice and Peter L. Lutz, Molecular mechanisms of ROS defense in the turtle *Trachemys scripta*. IN Proceedings of the Society of Experimental Biologists meeting (July 05).
- Milton**, Sarah L, Peter L. Lutz, and Howard M. Prentice. Strategies to survive brain anoxia. IN Proceedings of the Society of Experimental Biologists meeting (July 05).
- Milton** Sarah L, and Howard M. Prentice. Anoxic and reoxygenation survival in the turtle brain. IN Proceedings of the Society of Experimental Biologists meeting (April 06).
- Prentice, Howard M, and Sarah L. **Milton**. Molecular aspects of the anoxic turtle IN Proceedings of the Society of Experimental Biologists meeting (April 06).
- Kowalski\*, Amy, Peter L. Lutz, and Sarah L. **Milton**. Specific dynamic action in hatchling green (*Chelonia mydas*) and loggerhead (*Caretta caretta*) sea turtles. IN Proceedings of The Joint Meeting of Ichthyologists and Herpetologists, 2005
- Botterill\*, Brooke E., Stephen M. Blair, and Sarah L. **Milton**. Identification of steroid hormones in the allantoic fluid and plasma of loggerhead hatchlings. . IN Proceedings of The Joint Meeting of Ichthyologists and Herpetologists, 2005
- Milton**, Sarah L.; Howard M. Prentice, and Peter L. Lutz. Differential upregulation of heat shock proteins in the anoxic turtle brain IN Proceedings of the Society for Experimental Biology, 2004.
- Prentice, Howard M., **Milton** Sarah L., Scheurle Danielle; and Lutz Peter L. Gene transcription of brain voltage-gated potassium channels is reversibly regulated by oxygen supply. IN Proceedings of the Society for Experimental Biologists, 2003.
- Milton**, Sarah; John W Thompson\*, Peter L Lutz. 2002. COMPLEX FUNCTION OF THE CENTRAL NERVOUS SYSTEM, SLEEP AND LOCOMOTION-Mechanisms for maintaining extracellular glutamate levels in the anoxic turtle striatum. American Journal of Physiology-Regulatory Integrative and Comparative Physiology. 5195): R1317.
- Milton**, Sarah L. and Peter L. Lutz. Activation of  $K_{ATP}$  channels depresses dopamine release in the turtle striatum. IN Proceedings of the Federation of the American Society of Experimental Biologists, 2001.
- Milton**, Sarah L. and Peter L. Lutz. ATP-sensitive potassium channels modulate dopamine release in the anoxic turtle striatum. IN Proceedings of the 29<sup>th</sup> Meeting of the Society for Neuroscience, 1999.

**Milton**, Sarah L. and Peter L. Lutz. 1993. Effect of anoxia on adenosine and amino acid release in muscle and liver of the freshwater turtle. Abstract. Proceedings of the International Union for Physiological Science XVIII: 26.

#### **National:**

Deming\*, Alissa. and **Milton**, Sarah L. 2008. Stress and anti-apoptotic protein expression in green turtle (*Chelonia mydas*) fibropapillomatosis. IN Proceedings of the Twenty-eighth Annual Workshop on Sea Turtle Biology and Conservation. NOAA Technical Memorandum.

McGarrity\*, Monica E., Sarah L. **Milton** and Peter L. Lutz. 2005. Heat shock protein expression and fibropapillomatosis: novel use of molecular techniques to evaluate health and stress levels in marine turtles. IN Proceedings of the Twenty-fifth Annual Symposium on Sea Turtle Biology and Conservation. NOAA Technical Memorandum.

Botterill\*, Brooke E., Stephen M. Blair, and Sarah L. **Milton**. 2005. Identification of steroid hormones in the allantoic fluid and plasma of loggerhead hatchlings. IN Proceedings of the Twenty-fifth Annual Symposium on Sea Turtle Biology and Conservation. NOAA Technical Memorandum.

**Shaw**, Sarah L., Alexis Schulman, and Peter L. Lutz. 1993. The effect of Hurricane Andrew on a monitored *Caretta caretta* nesting beach. IN Proceedings of the Thirteenth Annual Symposium on Sea Turtle Biology and Conservation. NOAA Technical Memorandum. NOAA-SEFC-341.

**Shaw**, Sarah L., Alexis Schulman, and Peter L. Lutz. 1992. The suitability of aragonite as a nesting substrate for sea turtles. Abstract. IN Proceedings of the Twelfth Annual Workshop on Sea Turtle Biology and Conservation. NOAA Technical Memorandum, NMFS-SEFC-361.

**Shaw (Milton), Sarah**; Peter L Lutz, Alexis A Schulman. 1992. The suitability of aragonite sand as a nesting substrate for loggerhead sea turtles (*Caretta caretta*). Florida Shore & Beach Preservation Assoc., Tallahassee, FL(USA)., 179-180.

**Shaw**, Sarah L., Ross Witham, Peter Lutz, and Gregory Bossart. 1989. Possible effects of artificial foods on sea turtle health. Abstract. IN Proceedings of the Ninth Annual Workshop on Sea Turtle Biology and Conservation. NOAA Technical Memorandum NMFS-SEFC-232.

Alfaro, Alexis, Gregory Bossart, Thomas. Jackson, Peter Lutz, and **Sarah Shaw**. 1990. Physiological and morphological measurements on a leatherback turtle. Abstract. IN Proceedings of the Tenth Annual Workshop on Sea Turtle Biology and Conservation. NOAA Technical Memorandum NMFS SEFC-278.

#### **Patents and Technology Transfer**

Dawson-Scully K, **Milton SL** (2010). NEUROPROTECTION FROM ANOXIA AND REPERFUSION INJURY COMPOSITIONS OF PKG PATHWAY ACTIVATORS AND METHOD OF USE THEREOF. Patent Pending Jun 9<sup>th</sup> 2010. *United States Patent Office*, Serial number 61/353,033.

**Grants and Awards:**

**Active, external:**

**Florida Sea Turtle License Plate Grant.** Tracking movements of juvenile green turtles in Lake Worth Lagoon. Role: Co-PI (Dr. A. Karjian, PI, HBOI). (\$22,840)

**Friends of Gumbo Limbo:** Boosting immune function in GTFP turtles in rehabilitation through light therapy. Sarah L. Milton, Ph.D. (PI) March 2018 – December 2020. \$10,472 (3% Foundation OH)

**Friends of Gumbo Limbo:** Looking for clues in human lymphatic failure to help explain fibropapillomatosis in sea turtles: a preliminary comparative pathology study. Heather Hettrick, Nova Southeastern University (PI). Co-PIs: Derek Burkholder, Nova Southeastern University; Sarah Milton, FAU (\$6250, funded to NSU)

**Active, internal:**

**FAU McGinty Scholar Award in Marine Biology.** 7-1-18 – 6-30-20. \$30K/year to support marine research.

**Submitted 2020, not funded:**

**NSF: CNH-L: Beach Evolution and Adaptability to Coupled Human and Environmental Stressors (BEACHES): Linking beach responses to multi-objective coastal management strategies. Co-PI, \$1.4 million**

**Previous**

**Florida Sea Turtle License Plate Grant.** Incubation temperature effects on sea turtle hatchling fitness. Role: PI. \$14,931, awarded. 5-1-17 – 11-31-18, 5% OH

**FAU Undergraduate Research (OURI) award**

Spring 2019, \$600.00

**FAU Summer Undergraduate Research Fellowship (SURF) award**

Evaluating Morphodynamic Influences on Sea Turtle Nest Inundation

Sarah L. Milton, Ph.D. (PI) & Tiffany Roberts Briggs, Ph.D. (co-PI)

6-1-18 – 12-31-18

\$5000

**National Save The Sea Turtle Foundation:** Beach dynamics, human use, and climate change: interactions that impact sea turtle nesting beaches. Role: PI (funded) \$4500, 3% Foundation OH

**FAU McGinty Scholar Award in Marine Biology.** 7-1-16– 6-30-18. \$40K/year to support research in marine biology.

**NSF:** Collaborator on Doctoral Dissertation Improvement Grant proposal (titled: Small RNA regulation and the evolution of extreme anoxia tolerance) \$6K to Jason Podrabsky and Claire Riggs, Portland State U.

**Walter and Lalita Janke Sustainability Science Research Fund Proposal 2016**

Determining the relationship between beach morphology, flooding, and sea turtle nesting: Implications of the impact of sea-level rise on the coastal environment Role: Co-PI (funded) 5K

**National Save The Sea Turtle Foundation:** Beach dynamics, human use, and climate change: interactions that impact sea turtle nesting beaches. Role: PI (funded) \$4500 (3% Foundation OH)

**National Oceanic and Atmospheric Administration** Milton (PI) 9/1/11 – 8-31/16  
 ECOHAB: Brevetoxin metabolism and physiology - a freshwater model of morbidity in endangered sea turtles. \$643,000

**American Federation of Aging Research** Milton (PI) 7/1/08 – 12/31/10

Methionine sulfoxide reductase A and resistance to oxidative damage in an animal model of aging without senescence  
\$60,000

**FAU Seed Grant – Research priority Area** Dawson-Scully, PI, Milton, co-PI  
1/1/12 – 12/31/13  
Activating the PKG pathway as a means of neural protection from stroke-like injury  
\$19,724

**Neuroscience Research Priority Grant award** Milton (PI) 8-17-12 – 12-31-13  
Neuronal Protection against oxidative stress via upregulation of MsrA.  
\$8500

**NIH – NIA** Milton (PI) 8/01/09-7/31/11  
Project No. 1R15AG033374 - 01  
Molecular mechanisms of oxidative stress resistance in an animal model of aging without senescence  
\$213,413

**Caribbean Conservation Corp** Milton (PI) 6/1/10 – 5/31/11  
Project No. 10-007R  
Quantifying the energetic cost of disorientation in loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) hatchlings  
\$15,957

**Morris Animal Foundation** Milton (PI) 12/1/10 – 11/30/12  
Determination of Innate Immune Function in the Loggerhead (*Caretta caretta*) and Green (*Chelonia mydas*) Sea Turtle by Flow Cytometry  
\$25,202

**Funding Source/Agency: FAU Research Priority Area**  
FAU climate change initiative priority theme: research, engineering, and adaptation to a changing climate  
Dates: 08/10 – 07/12  
Amount: \$500,000 Role: Collaborating Investigator/Team Member

**Funding Source/Agency: FAU Research Priority Area**  
Brain function, damage and repair  
Dates: 08/10 – 07/12  
Amount: \$500,000 Role: Collaborating Investigator/Team Member

**Funding Source/Agency: FAU Foundation**  
Anemia induced cardiac hypertrophy in rainbow trout and the red-eared slider.



Dates: 2/1/08 – 12/31/11

Amount: \$20,000

Role: PI

**Caribbean Conservation Corp**

Milton (PI)

7/1/06 – 8/31/07

Stress Protein Expression as a Marker of Physiological Stress: Associations with Green Turtle Fibropapillomatosis

Role: PI

\$21,519

**FAU Travel Grant**

Milton

5/07

\$893.00

**NIH AREA Grant**

Milton (PI)

7/1/04 – 8/30/06

ROS defense mechanisms in brain reoxygenation.

Role: PI

\$139,000 over 24 months

**American Heart Association Grant-in-Aid**

Milton (PI)

7/01/04 – 12/31/06

Role of adenosine pathways in brain anoxic tolerance and reoxygenation survival.

Role: PI

\$120,000 over 24 months

**South Florida Water Management District contract**

Milton (PI)

10/1/04 – 8/30/06

Evaluation of physiological stress indicators in fishes to determination restoration success in the Kissimmee River.

Role: PI

\$38,078 over 12 months

**Florida Fish & Wildlife Conservation Comm. Milton (PI) 7/1/03 – 6/30/04**

An improved non-invasive method to determine hatchling sex using estrogen:testosterone profiles in allantoic fluid and blood.

Role: PI

\$16,816 for 1 yr.

**American Heart Association Grant-in-Aid**

Lutz (PI)

7/01/02 – 6/30/04

Mechanisms of brain anoxia tolerance and the determination of molecular targets for stroke therapy. Role: Co-Investigator

\$120,000 over 24 months.

**Maytag Predoctoral Fellowship (U.M.) 1988 - 1991 (3 years support + stipend)**

Rosenstiel Fellowship 1992 (RSMAS) (1 yr support + stipend)

Sigma-Xi Student Grant in Aid of Research 1993 \$500

**Instruction:**

**Courses Taught at FAU:** (\*New course or redeveloped after several years of not being offered due to loss of previous instructor)

<u>Course</u>	<u>Institution</u>	<u>Dates</u>	<u>Approximate Enrollment</u>
Integrative Biology I	Florida Atlantic University	2016-2018	20
Environmental * Physiology (graduate)	Florida Atlantic University	2005-present	11
Physiology of Marine* Animals (graduate)	Florida Atlantic University	2010-present	10
Comparative Animal Physiology	Florida Atlantic University	2003- present	45-130
Comparative Animal Physiology Lab	Florida Atlantic University	2003-present	30-100
Biology of Sea Turtles (graduate)	Harbor Branch Oceanographic Institute, Ft. Pierce, FL	2002-present	8
Seminar in Marine* Research (graduate)	Florida Atlantic University	2011 (fall)	25
Neuroscience Seminar (graduate seminar)	Florida Atlantic University	2008	15
Living Without Oxygen* (graduate seminar)	Florida Atlantic University	2006, 08	15
Respiratory Physiology unit (2 <sup>nd</sup> year medical school)	Schmidt College of Medicine Florida Atlantic University	2005-2009	50
Renal Physiology Unit (2 <sup>nd</sup> year medical school)	Schmidt College of Medicine Florida Atlantic University	2005-2009	50
Anatomy and Physiology I and II	Florida Atlantic University	1995-2016	220/semester
Directed Independent Study	Florida Atlantic University	1996-present	2-4/semester
Undergraduate Honors Thesis	Florida Atlantic University	ongoing	1-2/semester
Masters Thesis Supervision	Florida Atlantic University	ongoing	2-4
Ph.D. Dissertation Supervision	Florida Atlantic University	ongoing	2-4

**Graduate Students Chaired (Masters):**

- Rebecca Cheeks M.S. '04 The effect of imported sand on the nest environment of sea turtles
- Brooke Botterill M.S. '05. Sex Determination of Loggerheads (*Caretta caretta*) via Hormonal Analysis by High Performance Liquid Chromatography.
- Monica McGarrity M.S. '05 Stress Protein Expression And Marine Turtle Fibropapillomatosis
- Amy Kowalski M.S. '05 Specific Dynamic Action in Hatchling and Post-Hatchling Green (*Chelonia mydas*) and Loggerhead (*Caretta caretta*) Sea Turtles
- Lynda Dirk M.S. '06 Markers of Hypoxic Stress in Fish in the Kissimmee River, Florida
- Alissa Deming M.S. '08 Stress protein and anti-apoptotic protein expression in green turtle (*Chelonia mydas*) fibropapillomatosis
- Awards:** Travel Award, FAU Graduate Student Association, 2008  
Travel Award, International Sea Turtle Symposium, 2008  
Travel Award, International Association for Aquatic Animal Medicine, 2008
- Angela Bancalari M.S. '09 Vascular endothelial growth factor (VEGF), Bcl-2, and Bax expression in fibropapilloma tumor tissue and skin tissue of sea turtles
- Natasha Jensen M.S. '09 Effects of mid-incubation egg movement on loggerhead (*Caretta caretta*) turtle hatch success and embryo development on Singer Island, Palm Beach County, Florida
- Lynsey Bruce M.S. '10 Methionine sulfoxide reductase A in an animal model of aging without senescence
- Awards:** Best poster presented by a first year student, FAU COS Research Day 2009
- Sean Williams M.S. 2012 Quantifying the energetic cost of disorientation in sea turtle hatchlings
- Rachelle Shaw M.S. 2012 non-Thesis
- Heather Chada M.S. 2013 non-Thesis

- Patricia Sposato-Ploski, M.S. 2014  
Ecosystem Health and Environmental Influences on Innate Immune Function in the Loggerhead (*Caretta caretta*) and Green (*Chelonia mydas*) Sea Turtle
- Awards:** Friends of Gumbo Limbo Graduate Scholarship 2010
- Andrea Reis M.S. 2015  
Determination of sex in sea turtle hatchlings by High Performance Liquid Chromatography
- Awards:** National Save the Sea Turtle Foundation Scholarship
- Karen Pankaew M.S. 2015  
Quantifying the energetic cost of disorientation in sea turtle hatchlings
- Awards:** Friends of Gumbo Limbo Graduate Scholarship, 2014  
Boyd Lyon Student Award for Best Poster. Southeast Regional Sea Turtle Meeting, 2015.  
Archie Carr award winner for best student oral presentation, Biology. 36th Annual International Symposium on Sea Turtle Biology and Conservation, 2016, Lima, Peru.
- Rachel Bladow MS, 2017  
Beach dynamics, human use, and climate change: interactions that impact sea turtle nesting beaches
- Awards:** FAU Excellence in Scholarship 2016  
3MT heat winner and People's Choice award 2017
- Ryan Bruellman MS, 2017 Non-Thesis
- Christopher Henaghan (MS, start 2016)  
**Awards:** National Save the Sea Turtle Foundation Scholarship 2017
- Victoria Garefino (MS, 2020)  
**Awards:** Friends of Gumbo Limbo Graduate Scholarship 2018
- Heather Seaman (MS, Marine Sci, 2020)
- Ivana Lezcano Serra (MS, Envir Sci, start 2020)

**Awards:** Best Student Presentation Award, Gopher Tortoise Council Annual Meeting (Fall 2018)  
 FAU Provost Fellowship Recipient (Fall 2018)  
 Charles E. Roberts Environmental Science Research Award  
 2020 3MT Preliminary heat 1<sup>st</sup> place winner

Ali Courtmanche (MS 2020)  
 Alyssa Dorfman (MS, Marine Sci, start spring 2019)  
 Abigail Chaney (MS, start fall 2020)  
 Lisa Anne Esposito (MS, start fall 2020)

**Graduate Students Chaired (Doctoral):**

Shailaja Kesarju, Ph.D. 2009 Molecular mechanisms of neuroprotection in the anoxia tolerant freshwater turtle

**Awards:** Lifelong Learning and Aging Fellowship for Doctoral Students FAU COS 2008  
 Lifelong Learning Society Graduate Fellowship, FAU 2008  
 Vincent Saurino Fellowship for graduate students in Biological Science, Dept. Biological Sciences, FAU, 2007  
 Young Investigator Award, Society for Experimental Biology and Medicine, 2007  
 Comparative and Evolutionary Physiology Section Travel Award, Experimental Biology, 2007.  
 Best Poster Award, CESCOS Research Day, FAU 2007  
 Graduate Fellowship for Academic Excellence, FAU 2006  
 Phi Kappa Phi student scholarship, FAU 2005  
 Newell Doctoral Fellowship, FAU, 2004

Gauri Nayak, Ph.D. 2009 (with H. Prentice) Determining future targets and neuroprotective cascades in anoxia and oxidative stress in *Trachemys scripta elegans*

**Awards:**  
 2009 Delores A. Auzenne Fellowship sponsored by the State University System.  
 2008 Dr. Vincent Saurino Scholarship, Biology Department, FAU  
 2008 Lifelong Learning Society Graduate Fellowship, FAU  
 2008 Foundation Fellowship, Florida Atlantic University  
 2008 Delores A. Auzenne Fellowship sponsored by the State University System  
 2008 Selected as a promising young researcher and a recipient of Sigma Xi Grant in- Aid of Research  
 2008 Travel Award, International Stroke conference, New Orleans.  
 2007 Best poster Award, Biomedical Science Research Day, FAU

- 2007 Delores A. Auzenne Fellowship sponsored by the State University System  
 2006 FAU Graduate Fellowship for Academic Excellence  
 2006 Delores A. Auzenne Fellowship sponsored by the State University System

Sharon Homer-Drummond Ph.D. 2012 Parameters Impacting the Reproductive Fitness of *Tursiops truncatus* (Atlantic bottlenose dolphins): Interactions Between Native Endocrinology and Endocrine-Disrupters

**Awards:** FAU Student Government Travel Grant, 2006:  
 FAU Gustin Scholarship, 2008:  
 FAU Graduate Diversity Fellowship, 2008  
 FAU Memorial Scholarship, 2008 –2010  
 Student Government Scholarship, 2008 –2009  
 FAU, Private Donor Scholarships, Captain Nathan Award, 2009  
 FAU National Alumni Association, Alumni Scholarship, 2010  
 FAU Student Government Travel Grant, 2010:  
 FAU College of Science Travel Grant, 2010  
 FAU, inter-departmental scholarship. Biological Sciences, Charles E. Schmidt College of Science, 2011  
 Todd Auster Memorial Fellowship. Florida Atlantic University National Alumni Association, 2011

Lawrence Wood Ph.D. 2014 Origins, Movements, and Foraging Behavior of Hawksbill Sea Turtles (*Eretmochelys imbricata*) in Palm Beach County Waters, Florida, USA

**Awards:** Florida Sea Turtle License Plate Program 2011  
 National Save the Sea Turtle Foundation 2010, 2011, 2012, 2013, 2014  
 Bay and Paul Foundations Award, 2009 - 2011

Stacey Caplan, Ph.D. (with K. Dawson-Scully) 2015 Identifying discrete cellular mechanisms of anoxia tolerance

Courtney Cocilova Ph.D. 2017 Brevetoxin metabolism and physiology - a freshwater model of Morbidity in endangered sea turtles

**Awards:** Friends of Gumbo Limbo Graduate Fellowship, 2014  
 Travel Award: 16th International Conference on Harmful Algae (ICHA) Wellington, New Zealand 2014

- Travel Award, International Sea Turtle Symposium, 2014  
 Graduate and Professional Student Association Research Day,  
 2015 Poster (1<sup>st</sup> place winner in “Marine Biology”  
 category).  
 College of Science Research Day, Boca Raton, FL  
 03/2015, Poster (3<sup>rd</sup> place winner)  
 Travel Award: 17th International Conference on Harmful Algae  
 (ICHA) Florianopolis, Brazil, 2016  
 FAU Excellence in Scholarship 2016  
 Travel Award: Society for Comparative and Integrative Biology,  
 New Orleans, LA, 2017
- Olena Makhnyeva 2018  
 The PKG pathway for neuroprotection in the ischemic brain
- Awards:** Newell Doctoral Fellowship, FAU, 2013  
 Newell Doctoral Fellowship, FAU, 2014  
 2014 FAU Dissertation Award  
 GPSA Research Day 2015, Boca Raton, FL, [Poster]  
 (1<sup>st</sup> place winner in “Interdisciplinary”).
- Melissa Reiterer 2018  
 Methionine sulfoxide reductase and oxidative stress in the anoxia  
 tolerant turtle
- Awards:** Graduate Diversity Fellowship 2012  
 Vincent Saurino Fellowship 2012  
 FAU Memorial Scholarship 2012  
 Dissertation year award fall 2012  
 Newell Doctoral Fellowship 2012  
 Newell Doctoral Fellowship, FAU, 2013  
 FAU Memorial Scholarship 2013  
 GRIP grant, FAU 2015  
 FASEB Mentored Presenter, Experimental Biology 2017 (mentoring plus  
 travel reimbursement)
- Cody Mott start fall 2019
- Heather Seaman start fall 2020
- Post-doctoral fellows  
 Itzel Sifuentes Fullbright post-doctoral fellow: August 2015- October 2016  
 McGinty post-doctoral scholar October 2016 - 2019

Graduate Student Committees (Masters):

J. William Thompson (Lutz)  
Deborah Knickerbocker (Lutz)  
T. Todd Jones (Lutz)  
Erin Redfearn (Wyneken)  
Elizabeth Orcutt  
Andrew Foster  
Robert Delaney (not completed)  
Scott Gesualdi  
Aleksandr Gerasimov (not completed)  
Victor Dea  
Natasha Bower (not completed)  
Grace Kwong (Wyneken)  
Zack Rickaway (Prentice)  
Carrie Kemmerer  
Kimberly Blair (Wyneken)  
Brandi Pridemore (MST)  
Zach Rickaway  
Odette Simpson  
Miranda Hoover (MA)  
Carrie Kemmerer (MA)  
Connor Irwin (Koch)  
Cody Mott (Salmon)  
Jessica Bruso (MA)  
Carlos Gonzalez (MST)  
Ashley Campbell (Maples)  
Emmanuel McDonald (Ayanathan)  
Emily Weston (Wyneken)  
Zachary Anderson (Wyneken)  
Jennifer Chastant (Gawlik)  
Raquel Benasayag (Dawson-Scully)  
Veronica Runge (Herzing)  
Eloise Cave (MS, Kajiura)  
Jessica Huffman (MS, Frazier)  
Gibran Casas (MS, Owens)  
Adam Matulik (MS, Theissen)  
Nirthieca Suthakaran (MS, Binninger)  
Christie Gonzalez (MA, McCarthy)  
Kimberly McFarlane (Koch, MST)  
Jessica Noble (MS, Baldwin)  
Caitlin Shea-Vantine (MS, Kajiura)  
Heather Smith (MS, Salmon/Perrault)  
Grace Dodillet (MS, Karjian)



Jessica Gravelle (MS, Wyneken)  
 Trevor Davis (MS, Wyneken)  
 Jacqueline Evans (MS, Gawlik)

Graduate Student Committees (Doctoral):

Garth Herring (Gawlik)  
 Ian Moench (Prentice)  
 Tricia Meredith (Kajiura) 2011  
 Justin Perrault (Wyneken) 2013  
 Gabrielle Bortot (McCarthy) 2015  
 Chandana Buddhala (Wu) 2012  
 Adam Matulik (Theissen) not completed  
 Janet Menzie (Wu) 2016  
 Jennifer Chastant (Gawlik) 2016  
 Jennifer Krill (Dawson-Scully) 2018  
 Kyle Newton (Kajiura) 2017  
 Boris Tezak (PhD, Wyneken) 2019  
 Alexandra Lolavar (PhD, Wyneken) ongoing  
 Katherine Galloway (Porter, PhD) ongoing  
 Shannon Dougherty (PhD, Binninger) ongoing  
 Mary Elizabeth Bowers (Ph.D., Kajiura) ongoing

Graduate Student Committees (Doctoral Supervisory Committees):

*As Associate Director of the PhD program in integrative Biology, I sat on the initial Supervisory committee for all new PhD students. This was to ensure that all students are making adequate progress their first year and that they and their supervisors understand the various regulations of the IB program; this requires approximately 1h meeting for each student in their first year, for 17 students in 2018-2019.*

**External reviewer for PhD defense:**

Srinivasan (Sri) Narayanan, U. Miami School of Medicine 2015  
 (Doctoral Supervisor: M. Perez-Pinzon)  
 Kevin Koronowski, Ph.D. defense, U. Miami Neuroscience Program, 8-25-17  
 (Doctoral Supervisor: M. Perez-Pinzon)

**Directed Independent Studies/ Honor's Thesis (undergraduate/graduate)**

>150 to date since 2002

**2020**

**2019:**

Kaitlin Grell (Awardee –Undergraduate Research Fellowship)  
 LisaAnne Esposito  
 Carly Scarbrough  
 Rose Ferron  
 Melissa Cordoba  
 Karina Atienza  
 Taylor Snyder  
 Ferlanda Fortune

**2018:**

John Pearl (undergraduate volunteer)  
 Kaitlin Grell (Awardee – Summer Undergraduate Research Fellowship)  
 Sydney Renstrom (Awardee – HBOI Kelly Foundation Research Fellowship)  
 LisaAnne Esposito  
 Kimberly McFarlane (Graduate DIS, summer 2018)  
 Carly Scarbrough

**2017:**

Morgayne Leech  
 Paul Nagib  
 Kaitlin Grell  
 Xavier Jaques  
 Samantha Berner  
 Madeline Rubio  
 Connor Milton

**2016:**

Morgayne Leech  
 Diego Manuel (High School)  
 Austin Cavallo (High School)

**2015:**

Jean, Christina (Honors)                      Karlis Justis (PhD. Lab rotation)  
 Picado, Janisse

**2014:**

Caldas, Ricardo  
 Jean, Christina (Honors) - **Investigating the Expression of Uncoupling Protein 2 in The  
*Trachemys scripta* Brain.**  
 Allgood, Hillary E.  
 Menashe, Megan  
 Richar, Jenifer M.

Vaskovic, Christine  
 Dinnerstein, Joseph S.  
 Thornburg, Matthew P. (High School)  
 Thornburg, Thomas S. (High School)

**2013:**

Christina Jean (Honors)  
 Ricardo Caldas (Honors 2014)  
 Ashwin Kalyandurg  
 Polina Ivko

**2012:**

Jonatha Carr                    **Graduate DIS:** Mickey Gaffney  
 Raissa Macintosh (Honor's)  
 Olven Campos (URM)  
 Polina Ivko

**2011:**

Rusheena Bartlett (URM)  
 Olven Campos (URM)  
 Raissa Macintosh (Honors)  
 Jonatha Carr  
 Mickey Gaffney  
 Veronica Runge  
 Courtney Cocilova  
 Kevin Tootle

**2010:**

Nicholas Joissant            **Graduate DIS**  
 Young Le                      Shivanie Saith  
 Elizabeth Hodges  
 Rusheena Bartlett  
 Jonatha Carr  
 Mickey Gaffney

**2009:**

Douglas Ferraz              **Graduate DIS**  
 DJ Thomas                    Carlos Gonzalez  
 Anila Quesreshi  
 Erica Danaee  
 Nicholas Joissant

Young Le  
Rusheena Bartlett

**2008:**

Lynsey Bruce	<b><u>Graduate DIS</u></b>
Nabila Quadira	Jeffrey Boatright
Sandra Lexine	Stacey Caplan
Vanessa Watts	Gabrielle Bortot

**2007:**

Valmire Valcine  
Jeffrey Boatright  
Monica Meija  
Jonathon Campbell  
Analisa Edell  
Valentina Schneeberger  
Bobbie-Gaye Dunn  
Sharrell Cooper  
Joy Barcomb  
Laura Martinez  
Indira Perez  
Catherine Gonzalez  
Lynsey Bruce

**2006:**

Jeffrey Boatright  
Jonathon Campbell  
Bobbie Dunn  
Catherine Gonzalez  
Sharrell Cooper  
Deonne Thomas  
Laurie Kara

**2005:**

Vanessa Ramos  
Luz Bonahora  
Sana Ahmed  
Jordan Homen  
Valerie Warmuth  
Ruth Chery  
Smadar Shlomovitz  
Lindsey Frier  
Ashley King  
Christina Macon

Bernard Renner  
Jordan Homen

**2004:**

Judith Formul  
Samuel Boyd  
Chris Sitler  
Allison Hall

**Prior to 2004:**

Bridget Miller  
Kellane Howell  
Karon Royal  
Denise Jordan  
Dawn Nosel  
Patricia Sposato  
Louis Jean Sanon  
Wendy Lester  
Vitra Mitchell  
Ann Jeyarajah  
Elizabeth Zoch  
Barbara Green  
Aleksander Gerasimov  
Angela Hoffman  
Bernard Renner  
Robert Delaney

## **Service and Professional Development:**

### **Departmental Service:**

Associate Director of the Integrative Biology PhD Program 7/1/16 – 7/19  
 Departmental Assessment of Education Committee 2007-2017  
 Personnel Committee, Dept. Biological Sciences 2007- present  
 Search Committee Chair: Behavioral Ecologist, FAU, Spring 2014 – recruited Dr. Rindy Anderson  
 MS Admissions Committee, 2016-2017  
 Panel speaker – “Balancing family and a research career” URM/Honor’s class, fall 2011  
 Search Committee: Evolutionary Biologist, FAU, 2013-14 – recruited Dr. Colin Hughes  
 Guest lectures: IB seminar, fall 2011 – research overview, 2012, 2103 – Scientific teaching

### **College Service:**

Faculty Advisor: Association of Biological and Biomedical Students at FAU (ABBS) 2015-present  
 Co-director: Program for Master of Science in Marine and Coastal Science, 2015-present  
 Developed MS Program in Marine and Coastal Science 2015-2017  
 With P. McCarthy, awarded 2 Provost Fellowships (\$2K/year for two years each) plus \$5K recruitment grant  
 IB Program Committee (Chair), 2016-present  
 IB Admissions Committee (Chair), 2016- present  
 CES College of Science Graduate Program Committee, 2017-present  
 CES College of Science Executive Committee, 2017 - present  
 Student Poster Judge, Indian River Lagoon Symposium 2017  
 Reviewer: HBOI Specialty License Plate Grants 2016  
 Reviewer: Brain Institute Seed Grant program 2017  
 Dean’s Planning Committee 2012  
 Neuroscience Curriculum Committee, College of Science 2007-2009  
 Research Priorities Steering Committee: Brain Damage and Repair 2010

### **Lectures:**

Current Issues in Biomedicine (FAU undergrad class): Survival without oxygen in the freshwater turtle *Trachemys scripta*. Annual presentation: 2012-2018  
 Neuroscience seminar series, FAU. To Anoxia and Beyond: Living without oxygen and surviving afterwards 2012  
 URM/Honors class, spring 2011 – research overview  
 FAU Pre-professional class , fall 2011 - research overview

### **University Service:**

Service on the Comparative medicine Advisory Board 2019  
 Chair of Eminent Scholar Review Committee for Dr. Scott Kelso (2017-2018)

Environmental Science Graduate Program Committee 2009-present  
Organized Marine Biology at FAU Table for 2016 High School Expo (10/16)  
Search Committee: Dean, College of Science 2014-2016 – recruited Dean Ata Sarajedini  
FAU Institutional Animal Care and Use Committee 2006 - 2015  
Search Committee: HBOI Veterinarian, 2013-2015 – recruited Dr. Anne Paige-Karjian  
Departmental representative to FAU graduation ceremonies – 2015, 2107, 2018, 2019  
Search Committee: Senior Neuroscientist, FAU-Max Planck, spring 2012  
Harbor Branch Program Review Board 2009-2010  
Environmental Science Graduate Admission Committee 2008-2009

## **Professional Activities and Memberships:**

### **Service to the Discipline:**

**President and Meeting Organizer: Southeast Regional Sea Turtle Network 2018 Meeting.** Organized and ran the biannual meeting of over 350 sea turtle biologists, volunteers, and conservations from around the United State, Puerto Rico, and the US Virgin Islands. Feb 12-16, 2018, Myrtle Beach, SC. Currently serving as Vice-President until 2020.

### **External Reviewer:**

**Manuscripts (most multiple times):** Journal of Coastal Research, Polar Biology, Functional Ecology, European Journal of Biochemistry (FEBS), Marine Biology, Brain Research Bulletin, Journal of Neurophysiology, Restoration Ecology, Comparative Biochemistry and Physiology, Journal of Cerebral Blood Flow and Metabolism, Molecular and Cellular Biochemistry, Tissue and Cell, American Journal of Physiology, South American Biology, South American Journal of Herpetology, Cellular Molecular Life Sciences, Experimental Brain Research, Journal of Biomedical Science, Journal of Experimental Biology, Journal of the Marine Biological Association UK, Mutation Research, Genetic Toxicology and Environmental Mutagenesis, Polar Biology, BMC Genomics, PLoS I, Neuroscience, Endangered Species Research, Journal of Thermal Biology, Marine Pollution Bulletin, International Journal of Molecular Medicine , Science of the Total Environment, Biology Letters, Journal of Wildlife Management, Oncology Letters, Marine Environmental Research , Biochimica and Biophysica Acta, Free Radical Research, Steroid Biochemistry, Australian Journal of Zoology, Journal of Experimental Marine Biology and Ecology, Frontiers in Physiology

**Textbooks:** John Wiley and Sons, Inc., Sinauer Associates, McGraw Hill; Campbell Publishing

**Grant Reviewer:** National Oceanographic and Atmospheric Association; Austrian Science Fund; the Biotechnology and Biological Sciences Research Council (BBSRC, United Kingdom); National Science Foundation; Florida Fish and Wildlife Commission, Society for the Study of Amphibians and Reptiles' Roger Conant Grants in Herpetology; National Institute of Health, **NSF pre-proposal review panel:** Integrative Ecological Physiology. April 2016, Washington DC.

**Meetings:** International Symposium on Cerebral Blood Flow, Metabolism, and Function: Abstract Reviewer 2006 - 2013

**Contributing Writer:** Journal of Experimental Biology 2003 – 2009

### **Service to the Community/Public:**

Career Days: Marine Biology – La Salle High School, Miami, FL 2000



Career Days: Marine Biology – Belen Jesuit Preparatory School, Miami FL 2002, 2003  
 Guest lecture: Biology of Diving – Marine Science Camp, Jupiter, FL 2003  
 Classroom presentations on sea turtle biology: St. Philips School, Miami, 2005, 2006(2), 2007(2)  
 Science Olympiad: Herpetology (Sr. High), Reptiles and Amphibians (Middle School) – FAU: 2008, 2009  
 Classroom presentations on sea turtle biology: Morikami Elementary School, Boca Raton, FL, 2011.  
 Invited speaker Eco-Watch Lecture Series, Gumbo Limbo Nature Center, Boca Raton, FL, October 2011.  
 Classroom presentation (x2) on sea turtle biology and anoxia tolerance: Palmer Trinity High School, Miami, FL March, 2014  
 Classroom presentation on research and on being a woman scientist: RISE program, Florence Fuller Childhood Development Center, Boca Raton, Feb 2015.  
 Taught Boy Scout merit badge: Marine Science. Troop 76, Coral Gables, FL 2015  
 Organized Marine Biology at FAU Table for 2016 High School Expo (10/16)  
 Sea Turtle Awareness month: presented FAU research on sea turtles and beach habitats, climate change, Gumbo Limbo Nature Center, 3-25-17  
 Museum of Discovery and Science, Ft. Lauderdale, presented information table on our sea turtle research for World Ocean’s Day (6/2/17)  
 Riptide Music Festival, Ft. Lauderdale , presented information table on our sea turtle research Dec. 3, 2017  
 Sea Turtle Day: presented FAU research on sea turtles and beach habitats, climate change, Gumbo Limbo Nature Center, 2-24-18. Organized FAU sea turtle graduate students for FAU Gallery interactions with the public.

### **Professional Development:**

#### **Memberships**

American Physiological Society  
 Sigma Xi: The Scientific Research Society  
 Society for Experimental Biology  
 American Society of Ichthyologists and Herpetologists  
 American Gerontological Society

#### **Honors and Awards**

National Academies Education Fellow in the Life Sciences 2008-2009  
 Research Associate Professor of the Year (2012) CES College of Science, FAU

#### **Press**

Ft. Lauderdale Sun-Sentinel, August 31, 2009, By William E. Gibson: Turtles, Sea Snails and Stimulus Cash  
 South Florida TV2: The Morning Show. September, 2009. Interview on Stimulus funding and

FAU research.

Huffington Post, July 2, 2010, By Dan Froomkin: Gulf Oil Spill: The Plight of the Sea Turtles.

Miami Herald, June 10, 2011, By Todd Wright: BP Oil Spill Plan Consults Miami Dead Man (interviewed for article)

Ft. Lauderdale Sun-Sentinel, December 28, 2011 Boca Raton Forum: On the Spot: Sea Turtles and Red Tide Research at FAU

FAU Main Home Page Story – December 2011: Florida’s Red Tide Effect On Sea Turtles: FAU Professor Receives NOAA Grant to Study Endangered Species

Various press releases associated with NOAA grant, November – December 2011, including Sofpedia, The Ana Maria Islander, Global Adventures

Health & Medicine Week. Dec 9, 2016, 4200. Studies from Florida Atlantic University Have Provided New Information about Experimental Physiology (Lessons from nature: signaling cascades associated with vertebrate brain anoxic survival)

Commentator for New Scientist story on JEB paper (May 2016)

Wrote NOAA Harmful Algae website: Impacts of HAB’s on turtles  
<http://www.whoi.edu/redtide/page.do?pid=153356>

Featured in German public radio science program Leonardo, station WDR5 (August 2016)

[http://podcast-ww.wdr.de/medp/fsk0/118/1186123/wdr5leonardohintergrund\\_2016-08-15\\_extremetierehungernalsueberlebensmotto\\_wdr5.mp3](http://podcast-ww.wdr.de/medp/fsk0/118/1186123/wdr5leonardohintergrund_2016-08-15_extremetierehungernalsueberlebensmotto_wdr5.mp3)

Featured on conservation website Mongabay (June 2017)

Popular press: Cocilova, Courtney\* and Sarah Milton. Unraveling the Mysteries of Red Tides. Outreach magazine Vol 9(2), Pp 6-8, 2017.

## 2017/2018

Press release on in press paper in Journal of Experimental Biology picked up by **~150 TV, national, and international press, popular science magazine websites and blogs, and social media (December 2017 and January 2018)**. TV stations that aired segment on the evening news included ABC news in San Francisco, Fox news in Washington DC, NY, Atlanta, Chicago, Orlando, Dallas, Miami, Houston, Austin, Phoenix, Palm Beach, Boca Raton, and Charlotte

Other news outlets included Newsweek, the Miami Herald, USA Today

International press included sites in the UK, Australia, South Africa, and Germany

Science magazine outlets (online) included National Geographic, Smithsonian, forthcoming print commentary in National Geographic and Nat Geo Kids.

Popular blogs/websites included iflScience, atlasobscura, sciencedaily

**2019**

Featured 4X in German public radio science program dealing with maritime issues “Mare”  
<https://www.radiobremen.de/bremenzwei/sendungen/mare-radio/mare-schildkroeten102-popup.html>

**2020**

Interviewed for Miami Herald article on seizure of hawksbill turtle shells in Miami by US Customs.  
(6/13/2020)  
<https://www.miamiherald.com/news/local/environment/article244900152.html>

**Affiliations:**

2016 – **present** Member, FAU Brain Institute

2016 – **present** Member, FAU pillar: Healthy Aging

2016 – **present** Member, FAU pillar: Marine and Environmental Science (Harbor Branch)

**2008 – present** Member, FAU Center for Molecular Biology and Biotechnology (CMBB)

2005- 2011 Joint appointment, Assistant Professor, Dept of Biomedical Science, Florida  
Atlantic University

**CV**  
**PERAMBUR S. NEELAKANTA**

**ABRIDGED TO REFLECT:****Biomedical/Biocomplex/Bioinformatics/Neural Complex/ANN Areas****PERAMBUR S. NEELAKANTA, PH. D., C. ENG., FELLOW IET (UK)****Professor (Electrical & Bioengineering Program)**

Department of Computer and Electrical Engineering and Computer Science

Florida Atlantic University, Boca Raton, FL 33431, USA

neelakan@fau.edu

**ACADEMIC QUALIFICATIONS****Ph. D.** Electrical Engineering, Indian Institute of Technology, Madras, India 1975**M. Eng.** Electrical Communication Engineering, Indian Institute of Science, Bangalore, India, 1968 (Distinction/First Rank)**B. Eng.** Electronics and Communication Engineering, CEG/University of Madras, India, 1966**PROFESSIONAL AFFILIATIONS**

- Fellow of IET (UK)
- Chartered Engineer/IEE (UK)

**APPOINTMENTS**

August 1991-Present	Professor (Tenured), FAU
July 1991-August 1991	Associate Professor (Tenured), FAU
July 1988-July 1991	Associate Professor (Tenure-track), FAU
Sept. 1987-June 1988	Associate Professor (Tenure-track), Dept. of Electrical Engineering, University of South Alabama, Mobile,
Sept. 1984-August 1987	Director of Electronics Program, RIT Research Corporation (a wholly-owned subsidiary of Rochester Institute of Technology), Rochester, New York 14623, USA).
June 1981-Sept. 1984	Senior Lecturer, National University of Singapore,
June 1978-May 1981	Associate Professor and Program Chairman, Electronics and Computer Science and Technology, University of Science, Penang, Malaysia.
June 1970-May 1978	Lecturer, Department of Electrical Engineering, Indian Institute of Technology, Madras, India
August 1968-May 1970	Lecturer, Department of Aeronautical and Aerospace Engineering, Indian Institute of Science, Bangalore, India

**ACADEMIC PRODUCTS/ACCOMPLISHMENTS**

(A)	Publications In Refereed Journals:	Total 160 +
(B)	Conference Presentations/Proceeding Publications:	Total 60 +
(C)	Books: 10 Published + 1 Under Contract	

(D)	Ph. D. Dissertation/Thesis Supervised (Advisor):	20
(E)	MS/ME/M Tech Thesis Supervised (Advisor):	About 30+

## Some Assorted (Exemplar) Publications: Chronological ... **Related to Bioinformatics and Biomedical Engineering**

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### **Book**

**Perambur S. Neelakanta: A Textbook of Bioinformatics: Information-theoretic Perspectives of Bioengineering and Biological Complexes.** World Scientific, (Singapore/New-Jersey, USA): 2020  
ISBN: 978-981-121-288-8 (hardcover)

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### **Neural Complex/ANN/Biomed/Bioinformatics Related Dissertations/Theses**

#### **DISSERTATIONS**

B. Sharma: de Novo Applications of Exploring mm-Wave Band and THz-spectrum Electromagnetics in Biomedical, Material science and Communications (Fall 2014).

S. Chatterjee: Bioinformatic Analysis of Viral Genomic Sequences and Concepts of Genome-specific Vaccine Design, (Spring 2013)

T. Arredondo: Studies on Information-Theoretics Based Data-sequence Pattern-discriminant algorithms: Applications in Bioinformatic Data Mining (December 2003)

D. De Groff: Stochastic Aspects of Neuronal Activity, Neural Network and Communication (Spring 1993).

#### **THESES**

S. Sharma: Cytogenetic Bioinformatics of Chromosomal Synteny Assessment between Two Species: Human versus Mouse, Human versus Medaka and Medaka versus Zebrafish (Fall 2015)

K. Jagdeshwari: Cytogenetic Bioinformatics of Chromosomal Aberrations and Genetic Disorders: Data-mining of Relevant Biostatistical Features (Fall 2012)

D. Pappusetty: Bioinformatics-inspired Binary image Correlation: Application to Bio-/Medical-images, Microarrays, Finger-prints and Signature Classifications (Fall 2011)

N. DuPont: Risk-evaluation in Clinical Diagnostic Studies: Ascertaining Statistical Bounds *via* Logistic Regression of Medical Informatics Data (Fall 2011)

S. Shankar: Noninvasive blood Glucose Monitoring: A Microwave-based Biosensor Development (Summer 2008)

M. Leesirinkul: A Study on Glucose Metabolism: Computer Simulation and Modeling (Summer 2005)

S. B. Pandya: Binary Representation of DNA Sequences towards Developing Useful Algorithms in Bioinformatics (Fall 2003)

**Refereed Journal and Peer-reviewed Conference Publications:  
Biomedical/Biocomplex/Bioinformatics/Neural Complex/ANN etc.**

P. S. Neelakanta, Iman Ahmed and D. De Groff: Estimation of purine/pyrimidine estimation at splice junctions in human biosequences: Relevant biomarker-based metric for cancer diagnostics, *European Journal of Bioinformatics*, 2020, vol. 5, 15-27.

M. Pavlovich, S. Chatterjee, A. Kats and P. Neelakantaswamy: Parvovirus B19 and autoantibodies reactive with ssDNA in lupus disease: Bioinformatics analysis and hypothesis. *MOJ Autoimmune Diseases*, 2017, vol. 2(1), 1-6.

D. De Groff and P. S. Neelakanta: Faster Convergence Artificial Neural Networks. *International Journal of Computers and Technology*, 2018, vol.17(1), 7126-7132

D. De Groff and P. S. Neelakanta: Predicting Hurricane Intensity via A Fast Convergent Artificial Neural Network. *American Journal of Engineering Research.*, 2018, vol.7(7), 219-227

D. De Groff, R. Melendez and P. S. Neelakanta: Electric Power System Supporting a Smart-grid: ANN-Based Prediction of a Representative Load-Curve to Assess Power Consumption and Tariff . *American Journal of Energy and Power Engineering*, 2018, vol.5(3), 20-29

P.S. Neelakanta and S. Sharma: Estimating Maximum Plausible Conserved Synteny between Orthologous Genomes of a Species Pair Compared in an Exhaustive Search-space. *European Journal of Bioinformatics*. vol. 3, 2016, 01-09.

S. Chatterjee, P. S. Neelakanta and M. Pavlovic, A cohesive analysis of DNA/RNA sequences via entropy, energetics and spectral-domain methods to assess genomic features across single viral diversity, *International Journal of Bioinformatics Research and Applications*, vol. 11(4), 2015, 281-307

P. S. Neelakanta: Biohazard *incognito*: Potential health hazards due to proliferating usage of nonionizing radiation in the submillimeter wave though THz spectral range, *Proceedings of National Conference on Recent Trends and Developments in Radiation Dosimetry*, 09-10 October 2014, Chennai, India, pp. 1-2 (Invited paper)

P. S. Neelakanta and S. Pandya, T. V. Arredondo and D. De Groff: Heuristics of AI-based Search Engines for Massive Bioinformatic Data-Mining: An Example of Codon/Noncodon Delineation in a Binary DNA Sequence, Presented in 1<sup>st</sup> Indian International Conference on Artificial Intelligence, (IICAI-03), (December 18-20, 2003, Hyderabad, India)

P. S. Neelakanta and B. Sharma B. *de Novo* radio frequency ablation therapy: Application of unexplored electromagnetic spectral resources of mm-Wave/THz band in clinical ablation procedures- A review. *British Journal of Medicine & Medical Research*. 2013; vol. 3(4):1701-1730

K. Ramakrishnan and P. S. Neelakanta DNA Microarray Data Classification via Haralick Parameters, *International Journal of Advance in Medical Science*, vol.1(2) May 2013, 19-28

P. S. Neelakanta and B. Sharma, "Conceiving THz Endometrial Ablation: Feasibility, Requirements and Technical Challenges," *IEEE Transactions on Terahertz Science and Technology*, vol. 3, no. 4, 402-408, July 2013.

P. S. Neelakanta and B. Sharma, "Conceiving THz Endometrial Ablation: Feasibility,

Requirements and Technical Challenges,” *IEEE Journal of Biomedical and Health Informatics*, vol. 17, no. 4, 813-819, July 2013.

P. S. Neelakanta and D. Pappusetty, Bioinformatics-inspired algorithms for 2D-image analysis-application to synthetic and medical images. Part I: Images in rectangular format, *International Journal of Biomedical & Clinical Engineering*, vol. 1(1), 2012, 14-38

P. S. Neelakanta, E. M. Bertot and D. Pappusetty, Bioinformatics- inspired algorithms for 2D-image analysis- application to synthetic and medical images. Part II: Images in rectangular format, *International Journal of Biomedical & Clinical Engineering*, vol. 1(1), 2012, 49-58.

P. S. Neelakanta, S. Chatterjee, D. Pappusetty, M. Pavlovic and A. Pandya: Information-theoretic Algorithms in Bioinformatics and Bio-/Medical-imaging: A Review. *Proc. IEEE International Conference on Recent trends in Information Technology*, (IEEE ICRTIT 2011), Chennai, India, pp. 183–188, 31 (June 3-5, 2011).

P.S. Neelakanta, M. Pavlovic and H. Zhuang: Editorial: Special Issue on Viral DNA Analysis and Rational Vaccine Design, *International J. Bioinformatics and Applications*, vol. 7(3), 2011, 217-219

P. S. Neelakanta, S. Chatterjee, G. A. Thengum-Pallil: Computation of entropy and energetics profiles of a single-stranded viral DNA, *International J. Bioinformatics and Applications*, vol. 7(3), 2011,239-261

P.S. Neelakanta, S. Chatterjee, M. Pavlovic, A. Pandya and D. De Groff: Fuzzy Splicing in Precursor-mRNA Sequences: Prediction of Aberrant Splice-junctions in Viral DNA Context, *Journal of Biomedical Science and Engineering*, vol. 4, 2011, 270-279

T. V. Arredondo, P. S. Neelakanta and D. De Groff: Fuzzy Attributes of a DNA Complex: Development of a Fuzzy Inference Engine for Codon-“Junk” Codon Delineation”, *Artificial Intelligence in Medicine*, vol.35, 2005, 87-105

P. S. Neelakanta, T. V. Arredondo and D. De Groff: Redundancy Attributes of a Complex System: Application to Bioinformatics. *Complex Systems (USA)*, vol. 14, 2003, 215-233

P. S. Neelakanta, M. Leesirikul Z. Roth and S. Morgera: A Complex System Model of Glucose Regulatory Metabolism, *Complex Systems*, vol.16, 2006, 343-367

P. S. Neelakanta, S. Pandya and T. V. Arredondo, Binary Representation of DNA Sequences Towards Developing Useful Algorithms in Bioinformatics The 7<sup>th</sup> World Multi Conference on Systemics, Cybernetics and Informatics (SCI 2003), (July 27-30, 2003, Orlando, FL, USA), Vol. VIII, 195-197

P.S. Neelakanta, J.C. Park, and D. De Groff: Fuzzy Nonlinear Activity and Dynamics of Fuzzy Uncertainty, *Neurocomputing (The Netherlands)*, vol.20, 1998, 123-153

P.S. Neelakanta, J.C. Park, and D. De Groff: Complexity Parameter vis-a-vis Interaction Systems: Application to Neurocybernetics, *Cybernetica (Belgium)*, vol. XL (4), 1997, 243-253

P.S. Neelakanta, S. Abusalah, D. De Groff, R. Sudhakar and J.C. Park: Logistic Model of Nonlinear Activity in the Neural Complex: Representation via Riccati Differential Equation. *Cybernetica (Belgium)*, 1996, vol. 39, No. 1, pp. 15-30.

D. De Groff, P.S. Neelakanta, R. Sudhakar and F. Medina: Collective Properties of Neuronal Activity: Momentum Flow and Particle Dynamics Representation, *Cybernetica*, (Belgium), vol. XXXVI (2), 1993, 105-119.

P.S. Neelakanta, and J. C. Park: Information-Theoretic Aspects of Neural Stochastic Resonance, *Complex Systems* (USA), vol.10 (1996), 55-71.

P.S. Neelakanta, S. Abusalah, D. De Groff, R. Sudhakar and J.C. Park: Csiszár's Generalized Error-Metrics for Gradient Descent Based Optimizations in Neural Networks Using Backpropagation Algorithm, *Connection Science* (UK), 1996, vol.8, No. 1, pp.79-114.

P.S. Neelakanta, S. Abusalah, R. Sudhakar, D. De Groff, V. Aalo and J. C. Park: Dynamic Properties of Neural Learning in the Information-Theoretic Plane, *Complex Systems* (USA), vol.9, (1995), 349-374.

J.C. Park, P.S. Neelakanta, S. Abusalah, D. De Groff and R. Sudhakar: Information-Theoretic Based Error-Metrics for Gradient Descent Learning in Neural Networks, *Complex Systems* (USA), vol.9, (1995), 287-304.

D. De Groff, P.S. Neelakanta, R. Sudhakar and F. Medina: Liquid-crystal Model of Neural Networks, *Complex Systems* (USA), Vol. 7(1), February 1993, 43-57

P.S. Neelakanta, D. De Groff and F. Medina: Representation of Hopfield's Biological Neural Network via Particle Dynamics Considerations. Presented in: International Joint Conf. on Neural Networks - IJCNN '93 (October 25-29, 1993, Nagoya, Japan).

D. De Groff, P.S. Neelakanta, R. Sudhakar, V. Aalo: Stochastic Aspects of Neuronal Dynamics: Fokker-Planck Approach, *Biological Cybernetics*, Vol. 69(2), June 1993, 155-164.

P.S. Neelakanta, R. Sudhakar and D. De Groff: Langevin Machine: A Neural Network Based on Stochastically Justifiable Sigmoidal Function. *Biological Cybernetics* (Germany), vol. 65-1991, 331-338.

M. Mobin, P.S. Neelakanta, K.L. Pilgreen and L.D. Aldes: Comparison of Linearly Predicted Multichannel EMG Signals: Amplitude and Phase Dissimilarities. Presented in: 1989 IEEE Engineering in Medicine and Biology Society 10th Annual International Conference. (November 4-7, 1988, New Orleans, LA). (Proceedings pp. 1728-1729).

P.S. Neelakantaswamy, K.F. Aspar, A. Rajaratnam and N.P. Das: A Simple Conductivity Meter for Applications in Clinical Chemistry, *Analytical Instrumentation* (USA), vol. 13(1), 1984, 69-78.

P.S. Neelakantaswamy, K.F. Aspar, A. Rajaratnam and N.P. Das: A Conductimetric Experiment to Assay Hemoglobin in Blood, *Med. and Biol. Eng. and Comput.* (UK), vol. 22, July 1984, 367-370.

P.S. Neelakantaswamy, K.F. Aspar, N.P. Das and A. Rajaratnam: Conductimetric Method of Determining the Hematocrit Value of the Blood, *Rev. Sci. Instrum.* (USA), vol. 54-(9), September 1983, 1186-1190.

P.S. Neelakantaswamy, K.F. Aspar, N.P. Das and A. Rajaratnam: A Dielectric Model of the Human Blood, *Biomed. Technik* (Germany), vol. 28(1-2), February 1983, 19-22.



P.S. Neelakantaswamy and F. Ah Meng: Bioassay Approach to Prescribe Safe-limits of Exposure to Non-ionizing Radiations in Electromagnetic Ecosystems, *Biometrical J.* (Germany), vol. 24(1), January 1982, 69-86.

P.S. Neelakantaswamy: Analysis of Arterial Blood-flow in a Primate Subject Exposed to Microwave Radiations, *J. Singapore Natl. Acad. Sci.* (Singapore), vol. 9 (1980), 81-84 (Published in 1982).

P.S. Neelakantaswamy, F. Ah Meng and Abu Hassan Mohd. Isa: Microprocessor-based Instrumentation to Monitor Microwave-interactions with the Physiological Activities in a Primate Subject, *Biomed Tech.* (Germany), vol. 26(6), June 1981, 140-146

P.S. Neelakantaswamy and K.P. Ramakrishnan: Microwave Interference with the Function of an Implanted Cardiac Pacemaker, *IEEE Trans. Elect. Mag. Compat.*, vol. EMC-21-(3), August 1979, 276-276.

F.F. Papa, P.S. Neelakantaswamy and R. Sethuraman: Propagation of Light through Human-eye: A Model for the Retinal Spectral Response Characteristics, *Zeitschrift für Elek. Inform-u Energietechnik* (Germany), vol. 9(3), March 1979, 199-208.

P.S. Neelakantaswamy, K.K. Gupta and K. Basavaraju: A Non-invasive Partial-body Exposure Method for Measuring the Complex Permittivity of Biological Substances at Microwave Frequencies, *Med. and Biol. Eng. and Comput.* (UK), vol. 16(7), July 1978, 419-424.

P.S. Neelakantaswamy: Microwave-induced Injurious Effects on the Human-embryo in Utero, *Biomed. Tech.* (Germany), vol. 23(11), November 1978, 263-269.

P.S. Neelakantaswamy and K.P. Ramakrishnan: Microwave-induced Hazardous Thermal Stresses in the Ocular Lens of the Human-eye, *Biomed Tech.* (Germany), vol. 23(5), May 1978, 190-213.

P.S. Neelakantaswamy, V.C.V. Pratapa Reddy and N.S. Ramaswamy: Measurement of Respiration Using a Microwave Technique, *Electro-Tech.* (India), vol. XX, June 1976, 45-47.

V. Blazek, P.S. Neelakantaswamy and V.C.V.P. Reddy: Generation of Complex Waveforms for Biomedical Applications, *IEEE Trans. Biomed. Engineering*, vol. BME-22(11), November 1975, 535-536.

## **SYNERGISTIC ACTIVITIES**

1. Associate Editor: International Journal of Biomedical & Clinical Engineering
2. Editorial Board Member: Electronic Science & Technology Application Journal
3. Reviewer: Journals like IEEE Trans., Electronics Letts. Etc.
4. Ph D. External Thesis Examiner: Several Universities in Common Wealth Countries including India (for Institutions like IITs and IISc)

# Curriculum Vitae

**RAMIN PASHAIE, PhD,**

Phone: (267) 984-1671,

E-mail: [rpashaie@fau.edu](mailto:rpashaie@fau.edu).

## Positions:

**Associate Professor**, Electrical and Computer Engineering Department, Florida Atlantic University, Started at Aug. 2020,

**Associate Professor**, Electrical and Computer Engineering Department, University of Wisconsin-Milwaukee, Period – Sep. 2015 to Aug. 2020,

**Assistant Professor**, Electrical and Computer Engineering Department, University of Wisconsin-Milwaukee, Period – Sep. 2009 to Aug 2015,

## Postdoctoral Appointment

**Stanford University**, California, USA.

Advisor - **Karl Deisseroth**, MD, PhD,

Period - 2007 to 2009,

## Education

PhD, Electrical and Systems Engineering,

**University of Pennsylvania**, Philadelphia,

Major – Electrical and Systems Engineering,

Thesis title: *Modeling and optoelectronic realization of an artificial cortex*,

Advisor - **Nabil Farhat**, PhD

Graduation - 2007,

MS, Electrical Engineering, Fields and Waves, Electromagnetic Optics,

Khajeh Nasir Toosi University of Technology (KNTU), Tehran, Iran,

Major – Electrical Engineering, Fields and Waves, Electromagnetic, Microwave, Optics,

Thesis title: *Analysis and simulation of the fabrication process and electromagnetic guiding properties of Ion-Exchange integrated optical waveguides*,

Advisor - **N. Geranpayeh**, PhD

Graduation - 2001.

BS, Electrical Engineering, Microelectronics,

Melli University, Tehran, Iran,

Major – Electrical Engineering, Microelectronics, Circuit design,

Advisor - **M. Eshghi**, PhD

Graduation - 1998.

## Journal Publications

1. **Ramin Pashaie**, "Fourier Decomposition Analysis of Anisotropic Inhomogeneous Dielectric Waveguide Structures," IEEE Transaction on Microwave Theory and Techniques, Vol. 55, No. 8, pp. 1689-1696, Aug. 2007.
2. **Ramin Pashaie**, and Nabil H. Farhat, "Self-Organization in a Parametrically Coupled Logistic Map Network: A Model for Information Processing in the Visual Cortex," IEEE Transaction on Neural Networks, Vol. 20, No. 4, pp. 597-608, April 2009.
3. **Ramin Pashaie**, and Nabil H. Farhat, "Dynamics of electron-trapping materials under blue light and near infrared exposure: an improved model," Journal of the Optical Society of America B, Vol. 24, No. 8, pp. 1927-1941, Aug. 2007.

4. **Ramin Pashaie**, and Nabil H. Farhat, "An Analytical Model for the Dynamics of the Electron Trapping Materials with Applications in Nonlinear Optical Signal Processing," *Journal of the Optical Society of America B*, Vol. 25, No. 1, pp. 15-21, Jan. 2008.
5. **Ramin Pashaie**, and Nabil H. Farhat, "Realization of Receptive Fields with Excitatory and inhibitory Responses in Equilibrium-State Luminescence of Electron Trapping Materials," *Optics Letters*, Vol. 32, No. 11, pp. 1501-1503, June 2007.
6. **Ramin Pashaie**, and Nabil H. Farhat, "Optical Realization of Bio-inspired Spiking Neurons in Electron Trapping Material Thin Films," *Applied Optics*, Vol. 46, No. 34, pp. 8411-8418, Dec. 2007.
7. Diester I, Kaufman MT, Mogri M, **Pashaie Ramin**, Goo W, Yizhar O, Ramakrishnan C, Deisseroth Karl, Shenoy KV, "An optogenetic toolbox designed for primates," **Nature Neuroscience**, Vol. 14, No. 3, pp. 387-397, March 2011.
8. **Ramin Pashaie**, Ryan Falk, "Single Optical Fiber Probe for Fluorescence Detection and Optogenetic Stimulation," *IEEE Transaction Biomedical Engineering*, Vol. 60, No. 2, p. 268-280, Feb. 2013.
9. **Ramin Pashaie**, Ryan Falk, "Spectral Analysis of Whisking Output via Optogenetic Modulation of Vibrissa Cortex in Rat," *Biomedical Optics Express*, Vol. 4, No.1, pp. 122-133, Jan. 2013.
10. **Ramin Pashaie**, " Associative Memory in a Volume Holographic Medium: A New Approach Based on Operator Theory," *Journal of Optics*, Vol. 16, 075701, 2014.
11. **Ramin Pashaie**, "Distributed Light Delivery and Detection via Single Optical Fiber and Tilted Grating," *Journal of Modern Optics*, Vol. 16, No. 6, 518-529, 2014.
12. Mehdi Azimipour, **Ramin Pashaie**, "Nonlinear Optical Signal Processing on Multiwavelength Sensitive Materials," *Optics Letters*, Vol. 38, No. 2, pp. 4324-4326, Nov. 2013.
13. **Ramin Pashaie**, Polina Anikeeva, Jin Hyung Lee, Rohit Prakash, Ofer Yizhar, Matthias Prigge, Divya Chander, Thomas Richner, Justin Williams, "Optogenetic Brain Interfaces," *IEEE J. RBME*, Vol. 7, pp. 3-30, 2014. (**IEEE Journal Cover, 2014**).
14. Thomas J Richner, Sanitta Thongpang, Sarah K Brodnick, Amelia A Schendel, Ryan W Falk, Lisa A Krugner-Higby, **Ramin Pashaie**, and Justin C Williams, "Optogenetic micro-electrocorticography for modulating and localizing cerebral cortex activity," *Journal of Neural Engineering*, 11, 016010 (12pp), Jan. 2014.
15. Thomas J. Richner, Ryan Baumgartner, Sarah K. Brodnick, Kevin W. Eliceiri, Justin C. Williams, and **Ramin Pashaie**, " Patterned optogenetic modulation of neurovascular and metabolic signals," **Nature Publishing Group- Journal of Cerebral Blood Flow and Metabolism**, vol. 35, pp. 140-147, 2015.
16. Farid Atry, Seth Frye, Thomas J. Richner, Sarah K. Brodnick, Alana Soehartono, Justin Williams, **Ramin Pashaie**, "Monitoring Cerebral Hemodynamics Following Optogenetic Stimulation via Optical Coherence Tomography," *IEEE Transaction on Biomedical Engineering*, vol. 62, no. 2, pp. 766-773, 2015.
17. Amelia A. Schendel, Michael W. Nonte, Corinne Vokoun, Thomas J. Richner, Sarah K. Brodnick, Farid Atry, Seth Frye, Paige Bostrom, **Ramin Pashaie**, Sanitta Thongpang, Kevin W. Eliceiri, and Justin C. Williams, "The effect of micro-ECOG substrate footprint on the meningeal tissue response," *Journal of Neural Engineering*, Vol. 11, No. 4, Aug. 2014.
18. Amelia A. Schendel, Dong-Wook Park, Solomon Mikael, Thomas J. Richner, Sarah K. Brodnick, Farid Atry, Seth Frye, **Ramin Pashaie**, Sanitta Thongpang, Justin C. Williams and Zhenqiang Ma, "Carbon Layered Electrode Array (CLEAR) technology for neural imaging and optogenetic applications," **Nature Communications**, vol. 5, no. 5258, pp. 1-11, 2014.
19. Mehdi Azimipour, Ryan Baumgartner, Yuming Liu, Steven Jacques, Kevin Eliceiri, **Ramin Pashaie**, "Extraction of Optical Properties and Prediction of Light Distribution in Rat Brain Tissue," *Journal of Biomedical Optics*, Vol. 19, No. 7, 075001, July, 2014.
20. **Ramin Pashaie**, Thomas Richner, Ryan Baumgartner, Sarah Brodnick, Mehdi Azimipour, Kevin Eliceiri, Justin Williams "Closed-loop Optogenetic Brain Interface," *IEEE Transaction on Biomedical Engineering*, Vol. 62, No. 10, pp. 2327-2337 , 2015. (**IEEE Journal Cover, Featured story, Oct 2015**).

21. Mehdi Azimipour, Farid Atry, **Ramin Pashaie**, "Effect of Blood Vessels on Light Distribution in Optogenetic Stimulation of Cortex," Vol. 40, Issue 10, pp-2173-2176, Optics Letters, 2015.
22. Mehdi Azimipour, Farid Atry, **Ramin Pashaie**, "Effect of Blood Vessels on Light Distribution in Optogenetic Stimulation of Cortex," Vol. 40, Issue 10, pp-2173-2176, Optics Letters, 2015.
23. Christopher Pawela, Edgar DeYoe, **Ramin Pashaie**, "Intracranial Injection of an Optogenetics Viral Vector Followed by Optical Cannula Implantation for Neural Stimulation in Rat Brain Cortex," To Appear in Methods in Molecular Biology, Springer, 2015.
24. Yuming Liu, Steven Jacques, Mehdi Azimipour, Jeremy Rogers, **Ramin Pashaie**, Kevin Eliceiri, "OptogenSIM: a 3D Monte Carlo simulation platform for light delivery design in optogenetics," Biomedical Optics Express, Vol. 6, No. 12, pp. 4859-4870, Dec. 2015.
25. Farid Atry, **Ramin Pashaie**, "Analysis of Intermediary Scan-Lens and Tube-lens Mechanisms for Optical Coherence Tomography," Applied Optics, Vol. 5, No. 4, pp. 646-653, 2016.
26. Dong-Wook Park, Sarah Brodnick, Jared Ness, Farid Atry, Lisa Krugner-Higby, Amelia Sandberg, Solomon Mikael, Thomas Richner, Joseph Novello, Hyungsoo Kim, Dong-Hyun Baek, Jihye Bong, Cuong Nguyen, Seth Frye, Sanitta Thongpang, Kyle Swanson, Wendell Lake, **Ramin Pashaie**, Justin Williams, and Zhenqiang Ma, "Fabrication and utility of a transparent graphene neural electrode array for electrophysiology, in vivo imaging, and optogenetics," **Nature Protocols**, doi:10.1038/nprot.2016.127, Oct. 2016.
27. Mehdi Azimipour, Farid Atry, **Ramin Pashaie**, "Calibration of Digital Optical Phase Conjugation Setups Based on Zernike Decomposition Analysis," Applied Optics, Vol. 55, No. 11, pp. 2873-2880, 2016.
28. Mehdi Azimipour, Mahya Sheikhzadeh, Ryan Baumgartner, Patrick K. Cullen, Fred J. Helmstetter, Woo-Jin Chang, and **Ramin Pashaie**, "Fluorescence laminar optical tomography for brain imaging: system implementation and performance evaluation," J. Biomedical Optics, Vol. 22, NO. 1, 016003, Jan. 2017.
29. Dong-Wook Park, Jared P. Ness, Sarah K. Brodnick, Corinne Esquibel, Joseph Novello, Farid Atry, Dong-Hyun Baek, Hyungsoo Kim, Jihye Bong, Kyle I Swanson, Aaron J. Suminski, Kevin J. Otto, **Ramin Pashaie**, Justin C. Williams, and Zhenqiang Ma, "Electrical neural stimulation and simultaneous in vivo monitoring with transparent graphene electrode arrays implanted in GCaMP6f mice," ACS Nano, Vol. 12, No. 1, pages 148-157, 2018.
30. Israel De La Rosa, Mehdi Azimipour, Patrick Cullen, Fred Helmstetter, and **Ramin Pashaie**, "Angularly resolved deep brain fluorescence imaging using a single optical fiber," **International Journal of Optics** Article ID 8903413, 10 pages, Vol. 2018.
31. Farid Atry, Israel De La Rosa, Kevin Rarick, **Ramin Pashaie**, "Design and implementation guidelines for a modular spectral-domain optical coherence tomography scanner," **International Journal of Optics**, Vol. 2018, Article ID 3726207, 22pages.
32. Farid Atry, Rex Chen, J. Pisaniello, S. Brodnick, A. Suminski, J. Novello, J. Ness, J. Willimas and **Ramin Pashaie**, "Optogenetic interrogation and manipulation of vascular blood flow in cortex," **Journal of Neural Engineering**, Vol. 15, 056033, 2018.
33. Morgan E. Stevenson, Jacob J.M. Kaya, Farid Atry, Alexander T. Wickstrom, Josephine R. Kruegera, **Ramin Pashaie**, Rodney A. Swain, "Wheel running for 26 weeks is associated with sustained vascular plasticity in the rat motor cortex," Behavioral Brain Research, Vol. 380, Feb. 2020, 112447.
34. **Ramin Pashaie**, "Optogenetics: Novel Brain Interface Technology That Originates in Bioprospecting," Springer's special edition on Neuroengineering, published 2020.
35. **Ramin Pashaie**, "Double Diversity Optical Coherence Tomography," **Journal of Modern Optics**, Vol. 67, No. 10, pp. 857-868, 2020.
36. Rex Chin-Hao Chen, Farid Atry, Thomas Richner, Sarah Brodnick, Jane Pisaniello, Jared Ness, Aaron J. Suminski, Justin Williams, **Ramin Pashaie**, "A System Identification Analysis of Optogenetically Evoked Electroencephalography and Cerebral Blood Flow Responses," **Journal of Neural Engineering**, 17(5):056049. doi: 10.1088/1741-2552/ab89fc, Oct. 2020.

### Honors and Awards

- Rank#1 student in Master Program, 2001.
- Rank#1 in PhD qualification exam in the field of electrophysics, University of Pennsylvania, July 2003.
- Stanford University prestigious postdoctoral fellowship award, June 2008.
- Brain and Behavior Research Foundation (NARSAD) Young Investigator Award, 2013.
- Brain and Behavior Research Foundation (NARSAD) Young Investigator Award, 2015.
- National Science Foundation (NSF) Career Award, July 2015.
- Excellence in Research Award, University of Wisconsin, Oct. 2016.

## **Funding**

### - **Active:**

- **National Science Foundation (NSF) Career Award**, title: Study of Neurovascular coupling and role of Astrocytes in Functional Hyperemia, **Role: PI**, ~\$506k, 07/01/15-08/30/2022, grant#1454300.
- **National Science Foundation (NSF)**, title: Optical and System Engineering Interrogation of Vascular Amyloid in Alzheimer's Disease, **Role: PI**, ~\$300k, 05/31/2018-05/31/2021, grant# 1830145.
- **Army Research Office (ARO)**, title: Brain Functional Imaging via Optical Coherence Tomography, **Role: PI**, ~\$265k, 07/01/2018-06/30/2021, grant#W911NF1810323.
- **National Institute of Health (NIH)**, title: Metabolism of Alzheimer's Disease: systems and cellular networks, **Role: Co-I**, Pashaie's budget share \$430k, 7/15/2020-7/14/2025, grant# 1 R01 AG 67330-01.

### - **Completed**

- **Defense Advanced Research Projects Agency (DARPA)**, Title: "Multi-scale bidirectional neural interfaces for comprehensive central nervous system interface reliability improvement," \$360k, 3/16/12-8/15/15, 144PRJ59XI, Award ID: MIL105760.
- **Brain and Behavior Research Foundation (NARSAD), Young Investigator Award # 1**, Title: "Transparent micro fabricated electrode array & micro-projection/imaging system for closed-loop optogenetic investigation of cortical dynamics," \$60k, Jan. 2013 - Jan 2015, Role: PI, grant# 20610.
- **Brain and Behavior Research Foundation (NARSAD), Young Investigator Award # 2**, Title: "Multi-Modal Brain Interface System Investigating Neurovascular Coupling," \$70k, Jan. 2015 - Jan 2017, Role: PI, grant#23620.
- **Army Research Office (ARO), STTR grant**, " Multi-Modal Brain Interface System for the Study of Neurovascular Coupling," \$50k, July 2016-May 2017.
- **Rockwell Foundation Catalyst Grant**, Title: "Implementation of Photonic Processor Optimized for Parallel Nonlinear Information Processing," March 2011, ~\$60k, role: PI, 3/1/11-8/31/12, 133PRJ46TY, Award ID: MIL105039.
- **John and Jeanne Byrnes foundation**, Title: "Establishing a Cellular Basis for fMRI Brain Mapping and Visual/Motor Prostheses through Optogenetic Brain Stimulation," ~\$100k, role: Co-PI, 4/1/12-10/1/13, 144PRJ64JD, Award ID: MIL106128.
- **UW Research Growth Initiative**, Title: "Optical Programming of brain Activities via Optogenetics," ~\$167.6k, role: PI, Award # 101X172, July/02/2010-12/31/2011.
- **UW Research Growth Initiative**, Title: "Optogenetic Visual Neuroprosthetics," May 2011, ~\$183.33k, role: PI, 101X213, 07/02/2011-12/31/2012.
- **UW Research Growth Initiative**, Title: "Interrogation of Large-scale Neural Circuits with Optogenetic-fMRI," ~\$139.8K, role: PI, Award # 101X254, 7/02/12-12/31/13.
- **UW Research Growth Initiative**, Title: "Interrogation of Cortical Dynamics via Optogenetic- $\mu$ ElectroCorticoGraphy," 07/02/213-07/01/2015, ~\$222.7k, role: PI, Award # 101X288.

- **University of Wisconsin Intercampus grant**, Title: "SOS-CNS: Software for optical Stimulation of Central Nervous System," \$50k, July 2012-Dec. 2013, role: PI.
- **National Institute of Health (NIH)**, title: Systems and molecular mechanisms of retrieval-dependent memory destabilization **Role: Co-I**, PI: Fred Helmstetter (Neuroscience, UW-Milwaukee), 09/16/2016-06/30/2019, Pashaie's share ~\$45k, grant# 1R01MH112141-01.
- **University of Wisconsin**, title: Functional Imaging in The Central Nervous System via Optical Coherence Tomography, **Role: PI**, 07/01/2018-12/30/2020, ~\$183k, grant# 101X378.

## **Student Supervision**

### **1. PhD Students**

- **Farid Atry**: PhD Student, Thesis title: Hemodynamic Response of Cortical Tissue to Optogenetic Stimulation in Transgenic Mice, Defense: Aug. 2017. Currently postdoc at UW-Madison Bioengineering.
- **Mehdi Azimipour**: PhD Student, Thesis title: Extraction of optical properties and prediction of light distribution in rat brain tissue, Defense: May 2016. Currently postdoc at UC-Davis.
- **Rex Chen**: PhD Student, Defense: expected Dec. 2020
- **Yuber Samir Sanchez Rosas**: PhD Student, Defense: expected 2022.
- **Mahshad Javidan**: Started in Fall 2019.
- **Hadi Esfandi**: Started in Fall 2019.

### **2. Master Dissertations**

- **Ryan Falk**: Master Student, Thesis title: Development of Optoelectronic Probes for Optical Interrogation of Neural Circuits, Defense: May 2012.
- **Alana Sohartono**: Master Student, Thesis tile: Angiography and Monitoring of Hemodynamic Signals in the Brain via Optical Coherence Tomography, Defense: Dec. 2013.
- **Ryan Bamgartner**: Master Student, Thesis title: Optogenetic Brain-Machine Interface for Investigating Neural Circuitry, Defense: Nov 24, 2014.
- **Seth Frye**: Master Student, Thesis title: Monitoring Changes in Hemodynamics following Optogenetic Stimulation, Defense: May 2014.
- **Rex Cheng**: Master Student, Thesis title: Laser Speckle Imaging for Monitoring Hemodynamic Signals Following Optogenetic Stimulation, Defense: Dec. 2015.
- **Mayha Sheikhzadeh**: Master Student, Thesis title: Design and implementation of fluorescence laminar optical tomography for brain imaging, Defense: May 2016.

### **3. Postdoctoral Supervision**

- **Amy Kaczmarowski**: Postdoctoral Scholar (Oct. 2012-Feb. 2014), Currently a Postdoc in Medical College of Wisconsin.
- **Mohammad Habibi**: Postdoctoral Scholar (Sep. 2010-Sep. 2011), Currently Assistant Professor, Minnesota State University-Mankato.
- **Aurel Strat**: Postdoctoral Scholar (Sep. 2011-Sep. 2012).

## Connie K. Porcaro (Keintz)

### Work Address

Department of Communication Sciences & Disorders  
777 Glades Road, PO Box 3091  
Boca Raton, FL 33431-0991  
Email: [cporcaro@fau.edu](mailto:cporcaro@fau.edu)

### Education

Dec 2004 Ph.D. Speech, Language, and Hearing Sciences, University of Arizona  
*Dissertation: Influence of visual information on the intelligibility of dysarthric speech*

May 1989 M.A. Speech Pathology, University of Northern Colorado

May 1987 B.A. Communication Disorders, University of South Dakota

### Employment

2011-present Associate Professor  
Department of Communication Sciences and Disorders  
Florida Atlantic University

2005–2011 Assistant Professor  
Department of Communication Sciences and Disorders  
Florida Atlantic University

2008-2018 Speech-Language Pathologist (part-time)  
Manor Care Skilled Nursing Facility, Boca Raton, FL

2004-2005 Speech-Language Pathologist(part-time)  
Northwest Medical Center, Tucson, AZ

1999 - 2005 Instructor (part-time)/Graduate Teaching Assistant  
Department of Speech and Hearing Sciences, University of Arizona

1997–1999 Clinic Director/Practicum Coordinator  
Department of Speech Pathology and Audiology, University of Wyoming

1994 - 1997 Clinical Supervisor  
Department of Speech Pathology and Audiology, University of Wyoming

1993-1997 Speech-Language Pathologist  
High Country Home Health Care, Laramie, Wyoming

1989-1992 Speech-Language Pathologist  
Area Education Agency Seven  
Cedar Falls, Iowa

### Honors and Awards

- 2018 Selected as a Master Teacher from the College of Education in the FAU Master Teacher Program
- 2018 Elected by faculty in the Department of Communication Sciences and Disorders to serve as a member of the College of Education's Thought Leaders committee formed by the Provost
- 2015 Awarded funding for and selected to attend the 2015 Council of Academic Programs in Communication Sciences and Disorders Leadership Academy, competitive application process, programed aim to train future leaders in academic settings in the fields of Speech Pathology or Audiology
- 2014 Nominated for and selected to attend the Essentials of Academic Leadership Training Sessions held at FAU
- 2013-2018 Selected into the College of Education Dean's Leadership Explorers, a faculty group designed to facilitate leadership skills within the college
- 2010 Nominated for Distinguished Teacher of the Year by the student body of Florida Atlantic University College of Education
- 2005 Awarded the American Speech-Language-Hearing Association Convention Registration Award for Recent Graduates
- 2003 Awarded the Douglas G. Stuart Predoctoral Fellowship in Neuroscience, University of Arizona
- 2002 Received a Graduate Student Scholarship from the American Speech-Language-Hearing Foundation
- 2002 Awarded a Predoctoral Traineeship through the National Center for Neurogenic Communication Disorders, University of Arizona
- 2002 Offered a Predoctoral Teaching Assistantship in the Human Neuroscience course, College of Medicine, University of Arizona (declined)
- 2001 Awarded a competitive grant to attend the Graduate Research Ethics Education workshop held at the University of Indiana
- 2000–2002 Awarded a Predoctoral Traineeship through Motor Control Neurobiology Training Grant funded by the National Institutes of Health
- 1999- 2001  
& 2002-2003 Awarded a Predoctoral Teaching Assistantship by the Speech and Hearing Sciences Department, University of Arizona (declined 2002-2003)
- 1999 Chosen by University of Wyoming National Student Speech-Language-Hearing group as Faculty Member of the Year
- 1996, 1998  
2009 Received awards for continuing education (ACE) from the American Speech-Language-Hearing Association (ASHA) in recognition of continued



professional study

1989                      Awarded the Graduate Dean's Citation for Excellence by the University of Northern Colorado

### **Professional Memberships**

1999–2003                      Arizona Speech-Language-Hearing Association

1994–1999                      Wyoming Speech-Language-Hearing Association

1990 - present                      American Speech-Language-Hearing Association  
Certificate of Clinical Competence - 1990

### **Scholarship, Research and/or Other Creative Activity**

#### **Refereed Works**

#### **Journal Publications**

- Porcaro, C.K.**, Singer, C., Djokic, B., Danesh, A, J., Tappen, R., Engstrom, G. (In press). Perceived voice disorders in the elderly and impact on social interaction. *Perspectives of the ASHA Special Interest Groups*, SIG 15.
- Porcaro, C.K.**, Howery, S., Suhandron, A., & Gollery, T. (2019). Impact of vocal hygiene training for teachers on willingness to change vocal behaviors. *Journal of Voice* DOI: <https://doi.org/10.1016/j.jvoice.2019.11.011>
- Porcaro, C.K.**, Alavi, E., Gollery, T., & Danesh, A.A. (2019). Misophonia: Awareness and responsiveness in academics. *Journal of Postsecondary Education and Disability* 32 (2)107-118.
- Porcaro, C.K.**, Evitts, P., Smyth, N., Hood, C., Campbell, E., White, L., & Veraguas, J. (2019). Effect of listener strategies on speech intelligibility of dysphonic speakers. *Journal of Voice*, online publication (April 25, 2019) DOI: <https://doi.org/10.1016/j.jvoice.2019.03.013>
- Grama, R., Coppens, P., Greenwald, M., & **Keintz, C.K.** (2016). Collaborative methods for training research and evidence-based practice: The TRIAD Model. *Contemporary Issues in Communication Sciences and Disorders*, 43 139-153.
- Naharci, I., Engstrom, G., **Keintz, C.K.** , Danesh, A., Tappen, R., & Ouslander, J. (2016). Association between self-reported hearing loss and frailty in four ethnic groups. *West Indian Medical Journal* 68 (1) 29-34, DOI: 10.7727/wimj.2016.174
- Keintz, C.K.** (2011). Utilization of visual information and listener strategies in intelligibility Improvement related to bilateral facial paralysis. *International Journal of Speech-Language Pathology*, 13, (6), 510-517.
- Danesh, A., Buemi, M., & **Keintz, C.K.** (2010). Neurofibromatosis: Audiologic and genetic manifestations. *Medical Data Review* 2, (3).
- Boliek, C., **Keintz, C.K.**, Norrix, L.W., & Obrzut, J. (2010). Auditory-visual perception of speech

in children with learning disabilities: The McGurk Effect. *Canadian Journal of Speech-Language Pathology and Audiology*, 34 (6), 124-131.

Bunton, K. & **Keintz, C.K.** (2008). Effects of a concurrent motor task on speech intelligibility in speakers with Parkinson disease. *Journal of Medical Speech-Language Pathology*, 16 (3) 141-155.

**Keintz, C.K.**, Bunton, K., & Hoit, J.D. (2007). Influence of visual information on the intelligibility of dysarthric speech. *American Journal of Speech-Language Pathology*, 6, 222-234.

## Books

O'Connor-Wells, B. & **Porcaro, C.K.** (Eds). (In Press) A caregiver's guide to communication and related disorders after brain injury or disease. Johns Hopkins University Press, Baltimore, MD.

### Authored Chapters:

**Porcaro, C.K.** Chapter 2: Communication is a two-way street: The path to understanding unclear speech.

**Porcaro, C.K.** Chapter 3: The owner's guide for your voice.

## Book Chapters

**Keintz, C. K.** & Williams, D. F. (2011). Swallowing Disorders. In Williams, D.F. *Communication sciences and disorders: An introduction to the professions*. Taylor & Francis, New York, NY.

## Scholarly Activities in Progress

**Porcaro, C.K.** (author contract with Plural Publishers). Improving speech intelligibility in adults: Clinical application of evidence-based strategies

**Porcaro, C.K.**, Singer, C., Newman, D., Danesh, A, Engstrom, E., Ouslander, J., Tappen, R. (all data collected/analyzed, manuscript in preparation for submission to the *International Journal of Language and Communication Disorders*). Dysphagia, Fatigue, and Quality of Life: Self-Perceptions in Healthy Aging Individuals.

## Refereed Presentations

Evitts, P., Porcaro, C.K., Getejanc, C., & Scott, J. (November, 2020). The relationship between cepstral-based acoustic measures and speech intelligibility with low proficiency speakers. Poster session accepted for presentation at the American Speech-Language-hearing Association Annual Convention, San Diego, CA (conference canceled).

Evitts, P., Yinger, S., & **Porcaro, C.K.** (November, 2019). Does providing listeners perceptual strategies improve dysphonic speech intelligibility in the presence of background noise? Poster session presented at the American Speech-Language-Hearing Association Annual Convention, Orlando, FL.

Howery, S., Suhandron, A., **Porcaro, C.K.**, & Gollery, T. (November, 2019). Impact of vocal hygiene training on teachers' willingness to change vocal behaviors. Poster session presented at the American Speech-Language-Hearing Association Annual Convention, Orlando, FL.

Danesh, A.A & **Porcaro, C.** (July, 2019). Reasonable adjustments (accommodations) for decreased sound tolerance disorders in academic settings. Presented at the Fourth International Conference on Hyperacusis/Mini seminar on Misophonia: Causes, Evaluation, Diagnosis and Treatment, London, UK.

Dressler, D., Blanchet, P., & **Porcaro, C.K.** (November, 2018). Motor speech disorders: Bringing the clinic to the classroom. One-hour technical session presented at the American Speech-Language-Hearing Association Convention, Boston, MA.

Evitts, P., **Porcaro, C.K.**, & Simons, B. (November, 2018). Acoustic predictors of cognitive workload using LTAS in speakers with phonotraumatic hoarseness. Poster session presented at the American Speech-Language-Hearing Association Convention, Boston, MA.

**Porcaro, C.K.**, Alavi, E., Gollery, T., & Danesh, A.A. (November, 2017). Faculty awareness of misophonia and receptivity to provide classroom accommodations. Technical session presented at the American Speech-Language-Hearing Association Convention, Los Angeles, CA

Evitts, P., **Porcaro, C.K.**, Smyth, N., Hood, C., Campbell, E., White, L., & Veraguas, J. (November, 2017). Effect of listener strategies on speech intelligibility of dysphonic speakers. Poster session presented at the American Speech-Language-Hearing Association Convention, Los Angeles, CA

Danesh, A.A., **Porcaro, C.K.**, & Alavi, E. (May, 2017). Tinnitus and misophonia: A tale of two cities. Technical session presented at the 12<sup>th</sup> International Tinnitus Seminar and 1<sup>st</sup> World Tinnitus Congress, Warsaw, Poland.

Naharci, M., Danesh, A.A., **Keintz, C.**, Engstrom, G. Tappen, R. & Ouslander, J. (April, 2016). Correlations between self-reported hearing loss and frailty in four ethnic groups. Poster session presented at the Annual Convention of the American Academy of Audiology, Phoenix, AZ

**Keintz, C.K.**, Singer, C., Newman, D., Danesh, A, Engstrom, E., Ouslander, J., Tappen, R. (November, 2015). Dysphagia & fatigue: Self-perceptions in healthy aging individuals. Poster session presented at the American Speech-Language-Hearing Association Convention, Denver, CO.

Singer, C., Danesh, A, **Keintz, C.K.**, Engstrom, E., Ouslander, J., Tappen, R. (November, 2014). Perceived swallowing disorders in healthy aging individuals: Impact on quality of life. Poster session presented at the American Speech-Language-Hearing Association Convention, Orlando, FL.

Danesh, A., **Keintz, C.**, Singer, C., Lieberman, M., Ouslander, J. & Tappen, R. (March, 2014). The effects of social engagement and self-awareness on communication. Poster presented at the Annual Convention of the American Academy of Audiology (AAA), Orlando, FL.

**Keintz, C.K.**, Danesh, A, Singer, C., Ouslander, J., Tappen, R. (November, 2013). Perceived voice disorders in the elderly and impact on social interaction. Poster session presented at the American Speech-

Language-Hearing Association Convention, Chicago, IL.

Greenwald, M, **Keintz, C.K.**, Coppens, P., Grama, R. (November, 2011). Collaborative methods for training research and evidence-based practice: The TRIAD model. Technical session presented at the American Speech-Language-Hearing Association Convention, San Diego, CA.

**Keintz, C.K.** (May, 2011). Intersection of recreation therapy and speech therapy: Speech, language, and swallowing disorders: How to assist. Ninety minute presentation for the 3<sup>rd</sup> Annual South Florida Recreational Therapy Conference (Working Together) Ft. Lauderdale, FL.

**Keintz, C.K.** (July, 2010). Communicating with cognitively impaired individuals. Ninety minute presentation for the 2<sup>nd</sup> Annual South Florida Recreational Therapy Conference (Innovation Through Education), Ft. Lauderdale, FL.

**Keintz, C.K.**, Barrero, N., and Van Leiu, K. (November, 2010). University student preferences in voice characteristics. Poster session presented at the American Speech-Language-Hearing Association Convention, Philadelphia, PA.

**Keintz, C.K.** (November, 2008). Application of situational leadership to the clinical supervision process. Poster session presented at the American Speech-Language-Hearing Association Convention, Chicago, IL.

**Keintz, C.K.** (November, 2007). Influence of visual information on the intelligibility of speech in bilateral facial paralysis. Technical session presented at the American Speech-Language-Hearing Association Convention, Boston, MA.

**Keintz, C.K.**, Hustad, K., Garcia, J., & Klasner, E. (November, 2006). Speech intelligibility: Clinical treatment approaches for children and adults. Two-hour technical session presented at the American Speech-Language-Hearing Association Annual Convention, Miami, FL.

Bunton, K. & **Keintz, C.K.** (March, 2006). Effects of a concurrent motor task on speech intelligibility for speakers with Parkinson disease. Session presented at the Conference on Motor Speech, Austin, TX.

**Keintz, C.K.** & Bunton, K. (November, 2005). Influence of visual information on the intelligibility of dysarthric speech. Technical session presented at the American Speech-Language-Hearing Association Convention, San Diego, CA.

### **Clinical Consultation, Workshops, and Presentations**

**Porcaro, C.K.** (May, 2020). Professional supervision in speech-language pathology. Two-hour online training constructed for Professional Development Resources offered nationally for continuing education for speech-language pathologists.

**Porcaro, C.K.** (June, 2019). Professional supervision in speech-language pathology. Two-hour keynote presentation for the 10<sup>th</sup> Annual Online Supervisor's Conference for Nova Southeastern University.

**Porcaro, C.K.** (June, 2019). Ethical considerations in speech-language pathology. One-hour keynote

presentation for the 10<sup>th</sup> Annual Online Supervisor's Conference for Nova Southeastern University.

**Porcaro, C.K.** (April, 2018). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the Speech-Language-Hearing Association of Maryland, Annapolis, MD.

**Porcaro, C.K.** (April, 2018). Professional supervision in speech-language pathology. Three-hour presentation for the Speech-Language-Hearing Association of Maryland, Annapolis, MD.

**Keintz, C.K.** (March, 2014). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the Speech-Language-Hearing Association of Ohio, Columbus, OH.

**Keintz, C.K.** (March, 2014). Professional supervision in speech-language pathology. Two-hour presentation for the Speech-Language-Hearing Association of Ohio, Columbus, OH.

**Keintz, C.K.** (March, 2012). Speech intelligibility: Clinical approaches based on current research. Four-hour presentation for the Speech-Language-Hearing Association of Virginia Convention, Tyson's Corner, VA.

**Keintz, C.K.** (March, 2012). Professional supervision in speech-language pathology. Two-hour presentation for the Speech-Language-Hearing Association of Virginia Convention, Tyson's Corner, VA.

**Keintz, C.K.** (March, 2011). Speech intelligibility: Clinical approaches based on current research. Four-hour presentation for the West Virginia State Speech-Language-Hearing Association Convention, Sutton, WV.

**Keintz, C.K.** (March, 2011). Professional supervision in speech-language pathology. Two-hour presentation for the West Virginia Speech-Language-Hearing Association Convention, Sutton, WV.

**Keintz, C.K.** (April, 2010). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the Arizona State Speech-Language-Hearing Association Convention, Tempe, AZ.

**Keintz, C.K.** (April, 2010). Professional supervision in speech-language pathology. Ninety-minute presentation for the Arizona Speech-Language-Hearing Association Convention, Tempe, AZ.

**Keintz, C.K.** (March, 2009). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the Nevada Speech-Language-Hearing Association Convention, Reno, NV.

**Keintz, C.K.** (March, 2009). Professional supervision in speech-language pathology. Ninety-minute presentation for the Nevada Speech-Language-Hearing Association Convention, Reno, NV.

**Keintz, C.K.** (February, 2009). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the Kentucky Speech-Language-Hearing Association Convention, Louisville, KY.

**Keintz, C.K.** (February, 2009). Professional supervision in speech-language pathology. Ninety-minute presentation for the Kentucky Speech-Language-Hearing Association Convention, Louisville, KY.

**Keintz, C.K.** (October, 2008). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the Eastern North Carolina Fall Speech, Language, Hearing Symposium,

Greenville, NC.

**Keintz, C.K.** (February, 2008). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the 50<sup>th</sup> Annual South Carolina State Speech-Language-Hearing Association Convention, Charleston, SC.

**Keintz, C.K.** (February, 2008). Professional supervision in speech-language pathology. Ninety minute presentation for the 50<sup>th</sup> Annual South Carolina State Speech-Language-Hearing Association Convention, Charleston, SC.

### **Funding or Grants Received**

- 2020                      Parkinson Voice Project, Phase III Grant for training SPEAK OUT!® /The LOUD Crowd® was submitted and funded in 2020. This project provided training for 50 graduate students to provide free of cost speech/voice treatment for patients with Parkinson Disease. In addition, the grant covered marketing and therapy materials and a stipend for group expenses. The total potential amount of this grant (based on number of students) was greater than \$6,000. Grant Awardees were Connie Porcaro and Kelly Steele.
- 2019                      Parkinson Voice Project, Phase I Grant for training SPEAK OUT!® /The LOUD Crowd® was submitted and funded in 2019. This project provided training for supervisors and students to provide free of cost speech/voice treatment for patients with Parkinson Disease. Overall, the grant provided training for three supervising speech-language pathologists (1 face to face and 2 online), travel expenses related to training for one supervisor, and online training for the other two supervisors and for as many as 50 graduate students. In addition, the grant covered marketing and therapy materials and a stipend of \$1,000 in cash. The total potential amount of this grant (based on number of students) was greater than \$13,000. Grant Awardees were Connie Porcaro and Kelly Steele.
- 2012                      Healthy Aging of Human Communication seed project submitted to Florida Atlantic University's Healthy Aging Research Initiative. This project provided funding for graduate student research in areas involving language and hearing in the healthy aging population. The purpose was to promote further grants and research in these areas following initial inquiry with a large database. Co-PIs were Ali A. Danesh and Connie Keintz, and the Graduate Student Researcher was Clare Singer. This project was funded for the requested amount of \$2500.
- 2012                      Mobile Clinical Technology proposal submitted to Florida Atlantic University's Technology Fee Proposal Committee. This project requested funds for two iPad devices and for speech therapy applications for two

years to be used by student clinicians in the FAU Communication Disorders Clinic, where clients with communication disorders are treated each semester. The project was funded for the requested amount of \$2400.

- 2010 Healthy Aging Research Initiative proposal (Primary Investigators Ouslander, J. and Tappen, R) was awarded and selected as a Research Priority Area for Florida Atlantic University (\$150,000, Funded). Connie Keintz serves as a research collaborator on this project.
- 2008 Teaching grant recipient: Selected through a competitive process to attend the 14<sup>th</sup> Annual Training the Trainers Survival Skills and Ethics Conference in Snowmass, Colorado, June 8-13, 2008. Funding from the Survival Skills and Ethics Program: University of Pittsburgh, which included all expenses and materials, approximately \$5,000.

### **Grants Submitted or in Preparation**

- 2019 Video Library Collection of Motor Speech Patients proposed to the Spencer Foundation. This project was designed for three PI's Richard Dressler, Paul Blanchet, and Connie Porcaro to coordinate capturing audio and video speech samples from clients with various motor speech disorders. The purpose is to provide a library that will be available through internet resources for instructional purposes during classroom instruction and for practicing speech-language pathologists to use for reference. A component involving simulated cases during courses was included to determine the impact of the use of actual cases with videos in the instruction of different types of motor speech disorders. This application was not funded.
- 2016 Video Library Collection of Motor Speech Patients proposed to Dystonia Medical Research Foundation. This project was designed for three PI's Richard Dressler, Paul Blanchet, and Connie Porcaro to coordinate capturing audio and video speech samples from clients with various motor speech disorders. The purpose is to provide a library that will be available through internet resources for instructional purposes during classroom instruction and for practicing speech-language pathologists to use for reference. The project was not selected for funding by this foundation.
- 2015 Cognition, Swallowing, and Balance: Keeping the Aging Adult at Home was proposed by Drs. Ali Danesh, Connie Keintz, and Deena Louise Wener, Dr. Sue Graves, and Dr. Paul Peluso for consideration for a Healthy Aging U54 application process at Florida Atlantic University.
- 2015 Motor Speech Disorder Video Library proposed to Aegis Rehabilitation (private clinical company). This project was designed for three PI's Richard

Dressler, Paul Blanchet, and Connie Keintz to coordinate capturing audio and video speech samples from clients with various motor speech disorders. The purpose is to provide a library that will be available through internet resources for instructional purposes during classroom instruction and for practicing speech-language pathologists to use for reference. The requested amount for this project was \$69,840.00. Only partial funding was received with this award, so the investigators are seeking alternative funding to complete the project.

2010

The Aging Auditory and Balance Function in a Variety of Clinical Populations, submitted to Florida Atlantic University's Division of Research Priority Area. This proposal was considered initially from a pool of 45 submissions, and 11 proposals were selected for the full proposal stage of funding. This proposal was selected for further consideration. Proposals are being added to this project under my direction to provide feedback to patients with swallowing and voice disorders related to aging. These proposals involve technologically oriented interventions where devices and/or software will be used to assist patients. Clinical studies will be conducted with patents filed to commercialize the resulting procedures and devices. Participants in this grant include researchers from the FAU College of Education, College of Engineering and Computer Science, College of Science, College of Nursing, and international and industrial collaborators. This project was not selected for funding, although the initial studies in my area were completed.

2009-10

The Influence of Online Student Participation on Student Learning Outcomes in an Introductory Communication Sciences and Disorders Course, submitted to the Florida Atlantic University Faculty Assessment Grant, 2010. This proposal was aimed at using technology in novel ways to improve student comprehension of material and exam performance. The main goals included increasing time spent engaged in active learning on course content (including self-tests and discussion boards), and improved performance on learning outcomes on formal assessment following the use of online learning activities. This project was not selected for funding.

2008

Severity of Speech Intelligibility and Use of Listener Strategies in Communicating with Speakers with Parkinson's Disease \$5000 grant submitted to the Parkinson's and Movement Disorder Foundation in April, 2008. The proposal was based on an extensive research project to examine severity levels of intelligibility impairment due to Parkinson disease and how listeners can better understand these speakers. The project was not selected for funding.

## **Invited Presentations**



Steele, K.B. & **Porcaro, C.K.** (October, 2020). The challenges of swallowing and speech in Parkinson's disease. One-hour keynote presentation for the Parkinson's Foundation Herbert Kay JCC Community Educational Event for the Parkinson's Community.

**Porcaro, C.K.** & Steele, K. B. (January, 2020). The challenges of swallowing and speech in Parkinson's Disease. One-hour presentation at the Parkinson's Expo hosted by the Parkinson's Foundation, Palm Beach Gardens, FL.

**Porcaro, C.K.** (October, 2019). Language services related to neurological disease and disorders. One-hour presentation for neurology, medical residents at Boca Raton Regional Medical Center, Boca Raton, FL.

**Porcaro, C.K.** (October, 2019). Voice, speech, and swallowing services related to neurological disease and disorders. One-hour presentation for neurology, medical residents at Boca Raton Regional Medical Center, Boca Raton, FL.

**Porcaro, C.K.** (April, 2019). Strategies for aging well: Dealing with changes in communication and memory skills. One-hour presentation for residents/staff at Abbey Delray Florida Life Care Residents Association Meeting, Delray Beach, FL.

**Porcaro, C.K.** (March, 2019). Professional supervision In educational fields: Application of organizational leadership strategies. One-hour presentation for the Master Teacher Seminar Series, Boca Raton, FL

**Keintz, C.K.** (January, 2013). Traumatic brain injury: Success strategies in higher education. Thirty minute presentation for the FAU Division of Student Affairs Annual Veteran Forum: Adapting to college life: What we can do to assist the returning veteran, Boca Raton, FL

**Keintz, C.K.** (May, 2011). Lee Silverman voice therapy: Approaches to big and loud. One-hour presentation for the American Parkinson Disease Association South Florida Chapter Parkinson's Disease Symposium, Boca Raton, FL.

**Keintz, C.K.** (annually 2010-2013). Communicating with cognitively impaired individuals. One-hour presentation for employees/staff at the Louis and Anne Green Memory and Wellness Center, Florida Atlantic University, Boca Raton, FL

**Keintz, C.K.** & Schiller, K. (November, 2008). Vocal mechanics and hygiene. One-hour presentation for students in music performance program, Florida Atlantic University, Boca Raton, FL.

### **Media Publications/Presentations**

**Porcaro, C.K.** One hour interview with Scott Greenberg, Safely down the hatch: Swallowing issues related to age. WSVU 95.5 FM. February 17, 2020. Podcast Available:  
[https://www.podomatic.com/podcasts/omgimgettingolder/episodes/2020-02-18T10\\_30\\_10-08\\_00](https://www.podomatic.com/podcasts/omgimgettingolder/episodes/2020-02-18T10_30_10-08_00)

**Porcaro, C.K.** and Steele, K.B. One hour interview with Scott Greenberg, Communication impact of Parkinson Disease. WSVU 95.5 FM. December, 2, 2019. Podcast Available:  
[https://www.podomatic.com/podcasts/omgimgettingolder/episodes/2019-12-03T04\\_16\\_28-08\\_00](https://www.podomatic.com/podcasts/omgimgettingolder/episodes/2019-12-03T04_16_28-08_00)

**Keintz, C.K.** (2012). An owner's guide to your voice in Health & Wellness section of the *Parklander Magazine*.

## **Teaching**

### **Classroom Teaching**

#### Department of Communication Sciences and Disorders, Florida Atlantic University

2011, 2013-19	Instructor	(SPA 4101)	Anatomy/Physiology of Speech and Hearing Mechanism
2007	Instructor	(SLS 1503)	Learning Strategies and Human Development
2007-2020	Instructor	(SPA 4002)	Introduction to Communication Disorders
2006-2020	Instructor	(SPA 6211)	Voice and Velopharyngeal Disorders
2006-2020	Instructor	(SPA 6006)	Professional Practice/Program Organization
2006-2019	Instructor	(SPA 6230)	Motor Speech Disorders
2005-2020	Instructor	(SPA 6565)	Dysphagia
2005-2017	Supervisor	(SPA 6505)	Speech Pathology Clinical Practicum
2014-2019	Instructor	(SPA 5936)	Counseling and Supervision in Speech-Language Pathology

#### Miller School of Medicine, University of Miami

2008–2010	Instructor		Lecture on Aphasia in the course Neuroscience and Behavior
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#### College of Nursing, Florida Atlantic University

2017	Instructor		Lecture on Evidence Based Practice in Nursing and Research Course
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#### College of Medicine, Florida Atlantic University

2012-2020	Instructor		Lecture on Aphasia in Neuroscience And Behavior Course
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#### Department of Speech, Language, and Communication Disorders, Nova Southeastern University

2009-2019	Adjunct Instructor		Voice Disorders
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#### Department of Speech and Hearing Sciences, University of Arizona

2004 & 2005	Instructor		Clinical Observation and Analysis
2002	Preceptor		Survival Skills and Ethics
2000 & 2001	Co-instructor		Clinical Observation and Analysis

2000	Graduate Teaching Associate	Neuromotor Speech Disorders
1999	Graduate Teaching Associate	Anatomy/Physiology Speech Mechanism
1999	Graduate Teaching Associate	Adult Communication Disorders

University of Arizona School of Medicine

2002 & 2003	Case Discussion Facilitator	Human Neuroscience
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Department of Speech-Language Pathology and Audiology, University of Wyoming

2005	Instructor	Motor Speech Disorders–Distance Learning
1999 & 2000	Instructor	Dysphagia
1998	Instructor	Clinical Methods II–Distance Learning
1997 - 1999	Coordinator	Off-Campus Clinical Practicum
1997	Instructor	Clinical Methods I–Distance Learning
1995–1999	Coordinator	Public School Practicum
1995–1999	Co-instructor	Clinical Methods II
1995–1998	Instructor	Clinical Internship
1995–1997	Instructor	Speech-Language Pathology Procedures
1994–1998	Co-instructor	Clinical Methods I
1994–1998	Co-instructor	Clinical Practicum

**Student Research Advising**

Department of Communication Disorders, Florida Atlantic University

2019-2020	Flechaus, Cassidy - Self-reported voice quality measures pre- and post- SPEAK OUT!® & LOUD Crowd® treatment (Chair of Master's Thesis Project).
2018-2019	Howery, Stephanie and Suhandron, Amanda–Impact of vocal hygiene training for teachers on willingness to change vocal behaviors (Independent Study Project). This project was presented as a poster at the College of Education Student Achievement Council Research Symposium (March, 2019) and was selected as the winning poster at the Graduate & Professional Student Graduate Research Day in the humanities category (April, 2019).
2016-2017	Alavi, Emon–Perceptions of university faculty regarding Misophonia (Independent study project). This project was presented at the Undergraduate Research Symposium (May, 2017).
2016-2017	Garcia, Angelica–Literature review on Misophonia (Independent Study Project)

- 2012-2013 Heidenreich, Jamie—Effects of visual feedback on developmental stuttering (committee member of Master’s Degree Thesis Project).
- 2009-2010 Williams, Diane—Vocal hygiene for everyday use by teachers (Independent study project completed for course credit, presented for FAU student teachers summer, 2010)
- 2009-2010 Barrero, Natalia and Van Lieu, Katrina—Vocal preferences in America (Independent study project completed for course credit, selected by peer review for presentation at the American Speech-Language-Hearing Association Annual Convention in November, 2010)
- 2008-2009 Schiller, Karen—Vocal use and hygiene program (Independent study project completed for course credit, presented for professional voice majors at FAU in Fall, 2008)
- 2006-2007 Strahan, Gina and Robitaille, Renee—Influence of visual information on intelligibility of speech in bilateral facial paralysis. (Independent study project completed for course credit, presented in April, 2007 at College of Education Student Advisory Council Research Symposium VI)

Department of Speech-Language Pathology and Audiology, University of Wyoming

- 1999-2000 Steel, Amy—Accuracy of parental report on phonological development of toddlers using a modified version of the language development survey. (thesis committee member)
- 1999-2000 Sparks, Jennifer—Effects of sample size on accuracy of phonological measures of language-delayed two-year-olds. (thesis committee member)
- 1999-2000 Martens, Genevieve—Accuracy of a one-time versus a two-time conversational sample in depicting phonological development in language delayed toddlers. (thesis committee member)
- 1998-1999 Hursta, Anne— Comparisons of five-year-olds identified as language-normal or late-talkers at age two on measures of behavioral difficulties, and social and cognitive development. (thesis committee member)
- 1997-1998 Huntington, Robert - A comparison of speech naturalness using computerized versus non-computerized fluency therapy. (thesis committee member)
- 1997-1998 Satake, Kent - An assessment review of the computerized scoring of stuttering severity: Clinical uses and applications. (thesis committee member)
- 1997-1998 Simundson, Cindy - Consistency of language development in normal and late-talking children through five years of age. (thesis committee member)
- 1996-1997 Zimmerman, Diana - An examination of computer software for childhood language intervention. (thesis committee member)

**Service****Professional Experience/Service**

2020	Member	Florida Atlantic University Brain Institute Membership Committee
2018	Member	Program Selection Committee for poster proposals for the 2018 American Speech-Language-Hearing Association Health Care and Private Practice Connect Conference
2016-2017	Member	Scientific Committee, International Academic Geriatrics Congress April, 2017 in Belek/Antalya, Turkey
2016–current	Member	Biostatistics & Research Methodology Faculty Institute for Healthy Aging and Lifespan Studies (I-HEALTH)
2016–current	Member	Florida Atlantic University Brain Institute (I-Brain)
2015- Current	Member	American Speech-Language-Hearing Association Special Interest Group 2 (Neurogenic Communication Disorders) Appointed to 2015 Leadership Team Professional Development Subcommittee–3 year appointment, reappointed for a 2 <sup>nd</sup> term
2012- 2015	Member	American Speech-Language-Hearing Association Division 2 (Neurophysiology and Neurogenic Speech and Language Disorders) Appointed to 2012 Leadership Team Continuing Education Subcommittee–3 year appointment
2010	Mentor	American Speech-Language-Hearing Association Mentoring for Academic-Research Careers (MARC) program
2008-2009	Member	Speech Science Program Committee for 2009 Annual Convention of the American Speech-Language-Hearing Association
2008- 2012	Member	American Speech-Language-Hearing Association Division 2 (Neurophysiology and Neurogenic Speech and Language Disorders) Appointed to 2008 Leadership Team Research Subcommittee–3 year appointment
2006-2007	Member	Program Committee 7 <sup>th</sup> Annual Multidisciplinary Voice, Swallow and Airway Conference

2000–2002	Chair	Arizona Speech-Language-Hearing Association (ArSHA) Ethical Practice Committee
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**Wyoming Speech-Language-Hearing Association (WSHA)**

1999	Public Awareness Chair and Parliamentarian
1998	Past President
1997	President
1996	President-elect
1995	Conference site coordinator for annual conference
1994 & 1998	Secretary
1994	Regional representative

		Council of Supervisors in Speech-Language Pathology and Audiology
1996		Creator and administrator of a supervision listserv
1995 - 1997		SUPERNET Regional Coordinator

**Community Service**

2010-2012		Annual presentation for staff at the Louis and Anne Green Memory and Wellness Center “Communicating with Cognitively Impaired Patients”
2009		Presentation for members of the American Parkinson’s Disease Association, South Florida Chapter “Speech and Swallowing in Parkinson’s Disease”
2008-current		FAU Coordinator of Student Volunteers for Camp Superstar (Craniofacial Anomalies Camp for adolescents and their families)

**Departmental/College Committee Participation**

**Florida Atlantic University**

2013-current	Member	FAU Honors and Awards Committee
2013-current	Member	FAU Financial Conflict of Interest Committee
2010-2011	Member	FAU Non-Traditional Student Advisory Team
2009-2010	Member	FAU Housing Appeals Committee

**College of Education, Florida Atlantic University**

2020	Member	College of Education Sabbatical Committee
2018-2020	Director	Assessment for Dept. of Comm. Sciences & Disorders
2020-2021	Dept. Rep.	College of Education Faculty Assembly Steering Committee
2013	Member	College of Education Non-Tenure Track Promotion Committee
2012-2013	Member	College of Education Non-Tenure Track Promotion Task Force
2011-2012	President	College of Education Faculty Assembly Steering Committee
2010 -2011	Vice President	College of Education Faculty Assembly Steering Committee
2010-2012	Fac. Assembly Rep.	College of Education Executive Committee
2010-2011	Fac. Assembly Rep.	College of Education Budget Planning Committee
2009-2010	Archivist	College of Education Faculty Assembly Steering Committee
2008-2013	Dept. Rep.	College of Education Faculty Assembly Steering Committee
2007-2009	Member	Outstanding Dissertation Committee

2007-2010            Member            College of Education Technology Committee

Department of Communication Sciences and Disorders, Florida Atlantic University

2019	Member	Non-Tenure Track Promotion Committee
2019	Member	Tenure and Promotion Committee
2018	Chair	Search Committee
2017	Chair	Search Committee
2016	Chair	Search Committee
2012	Member	Search Committee
2010	Member	Search Committee
2010	Member	Graduate Recruitment Fellowship Program Committee
2009	Member	Search Committee
2005-2017	Member	Petitions Committee
2005-2017	Member	Admissions Committee
2005-06	Chair	Curriculum Review Committee

Department of Speech-Language Pathology and Audiology, University of Wyoming

1999	Member	College of Health Science Dean Search Committee
1998	Member	Administrative Review Committee
1997-1999	Member	Wyoming Rural Interdisciplinary Training Project
1996-1998	Co-Chair	Clinic Committee
1996-1998	Member	Kahn Committee
1996	Chair	Marketing Committee
1994-1995	Chair	Search Committee
1994-1996	Chair	Search Committee

**Reviewing**

2020	External Reviewer, Promotion/Tenure Process University of South Alabama
2020	Reviewer, International Journal of Research in Health Sciences
2020	Reviewer, Disability and Rehabilitation
2020	Reviewer, Journal of Speech-Language-Hearing Research
2019	Reviewer, Professional Development Resources (training module on supervision)
2019	Reviewer, Journal of Speech-Language-Hearing Research (multiple manuscripts)
2018	Reviewer, Journal of Speech-Language-Hearing Research
2018	Reviewer, Grant submitted to Parkinson's Disease Society of the United Kingdom
2018	Reviewer, Topics in Geriatric Rehabilitation
2018	Reviewer, American Journal of Speech-Language Pathology

2017	Reviewer, abstract submitted to American Speech-Language-Hearing Association Special Interest Group 2, Perspectives Member Publication
2016	Reviewer, Grant submitted to Parkinson's Disease Society of the United Kingdom
2016	Reviewer, ASHA Continuing Education (training module on medical errors)
2015	Reviewer, Journal of Phonetics
2014	Reviewer, Journal of Speech-Language-Hearing Research
2014	Reviewer, Textbook proposal for Jones and Bartlett Learning
2014	Reviewer, Grant submitted to Parkinson's Disease Society of the United Kingdom
2013	Reviewer, Textbook proposal for College Hill Press
2013	Reviewer, Textbook proposal for Jones and Bartlett Learning
2011	Reviewer, International Journal of Speech-Language Pathology
2010	Reviewer, Grant submitted to Parkinson's Disease Society of the United Kingdom
2010	Reviewer, ASHA Continuing Education (training module on medical errors)
2010	Reviewer, International Journal of Speech-Language Pathology
2010	Reviewer, ASHA Continuing Education (training module on intelligibility)
2008	Reviewer, Journal of Speech-Language-Hearing Research
2007-2008	Reviewer, Grant submitted to Parkinson's Disease Society of the United Kingdom
2007-2008	Reviewer, Neurology India Journal
2007-2008	Reviewer, Journal of American Speech-Language Pathology
2006-2007	Reviewer, Journal of Clinical Linguistics and Phonetics

### **Advising**

#### Department of Communication Sciences and Disorders, Florida Atlantic University

2006-current Graduate Student Advisor

2009-2016 National Student Speech-Language-Hearing Association Advisor

#### Department of Speech-Language Pathology and Audiology, University of Wyoming

1998-99 National Student Speech-Language-Hearing Association Advisor



1994

Undergraduate Student Advisor

Porcaro 19

11/4/2020

## Quan, Ning, PhD

**FAU Brain Institute**  
Department of Biomedical Sciences  
Charles E. Schmidt College of Medicine  
Florida Atlantic University  
Room 228, MC-17  
5353 Parkside Dr.  
Jupiter, FL 33458  
nquan@health.fau.edu

### Education:

Huazhong Univ. of Science & Technology, China	B.A	1985	Bioengineering
University of Tennessee, Memphis, TN	Ph.D	1991	Physiology
Duke University Medical Center, Durham, NC	Postdoctoral	1992	Neuroimmunology
National Institute of Mental Health, MD	Postdoctoral	1998	Neuroimmunology

**Personal statement:** The focus of my lab is how the nervous system and immune system form a combined neuroimmune supra-system. We are interested in understanding how these two systems communicate with each other to modulate each other's function. We use multiple techniques in molecular biology, neuroscience, and immunology to accomplish this goal. This multidisciplinary approach creates an ideal environment for training students on broad biomedical research subjects. Advanced technologies such as FACS analysis, cloning, in-cell Western, patch-clamping electrophysiology, production of transgenic mouse and targeted transgenesis, and behavioral analysis are employed in my laboratory. Our current research led to the discovery of the euflammatory process which can be used to design vaccine-based induction of immune responses as well as bacterial based cancer therapy. We are also conducting detailed analyses of cell-type specific actions mediated by IL-1R1 using several lines of transgenic animals that we created. This research has led to the identification of specific pathways related to the pathogenesis of various psychopathology caused by CNS inflammation.

### A. Positions and Honors.

#### Positions and Employment

1987-1991	Graduate Research Assistant, Department of Physiology, University of Tennessee, Memphis, TN
1991-1992	Postdoctoral Fellow, Department of Psychiatry, Duke University Medical Center, Durham, NC
1992-1995	Instructor, Department of Psychiatry, Emory University School of Medicine, Atlanta, GA
1995-1998	Intramural Training Fellow, National Institute of Mental Health, Bethesda, MD
1998-2003	Assistant Professor, Oral Biology and Institute for Behavioral Medicine Research, Ohio State University, Columbus, OH
2003-2009	Associate Professor, Oral Biology and Institute for Behavioral Medicine Research, Ohio State University, Columbus, OH

- 2009-2019 Tenure Professor, Biosciences and Institute of Behavior Medicine, Ohio State University.  
2009-2016 Chair, Oral Biology Graduate Program, Ohio State University.  
2009-present Guest Professor, Sichuan University, China  
2017-present Guest Lead Scientist, Hamilton Biotechnology, Wuhan China.  
2019-present Professor, Biomedical Science, Charles E. Schmidt College of Medicine, FAU  
2019-present Professor, FAU Brain Institute  
20-20-present Director, Program in Neuroimmunology & Glial Biology

### **B. Honors and Appointments**

- 1998 Tanaguchi Young Investigator  
2001 Stazen Award for Junior Research Scientist  
2008 Stazen Award for Senior Research Scientist  
2004-2008 Study Section Member (NNB, neuro-endocrine, neuro-immunology, and behavior) of an NIH Review Committee.  
2010-2017 Ad hoc Study Section (PMDA) Member of NIH Review Committee  
2017-2019 Study Section Member of PMDA.  
2018-present Member, Board of Directors, PNIRS

### **C. Invited Lectures**

- 2008 Invited lecture: "Pathophysiology of neuroimmune communication", Pennington Institute, Louisiana  
2010 Invited lecture: "Neuroimmune communication pathways", University of Virginia  
2011 Invited lecture: "Integrating neuroimmune suprasystem", Indiana University.  
2012 Invited lecture: "Integrated neuroimmune system", University of Kansas.  
2013 Invited lecture: "To talk or not to talk: that is the question for the neuroimmune suprasystem", Georgia Regents University  
2014 Invited lecture: "The neuroimmune system", Wuhan University, China  
2015 Invited lecture: "IL-1 and neuroimmune communication", Sept. 18<sup>th</sup>, at Vanderbilt University.  
2016 Invited speaker, International conference of physiological sciences. Sept. 27<sup>th</sup>, Beijing, China  
2016 Invited speaker, Department of Psychiatry and Behavioral Neuroscience, University of Cincinnati. Oct. 6.  
2017 Invited speaker, Department of Neuroscience, University of Kentucky. Feb. 17. 2017  
2018 Invited speaker, Hamilton Biotechnology Lecture Series, Wuhan, China. July, 10-17. 2018  
2018 Invited lecture: "IL-1R1 in the context of neuroimmunology, new discoveries and re-evaluation", Brain Institute, Florida Atlantic University, Oct. 5, 2018.  
2018 Invited speaker, Grand Round Series, School of Health and Rehabilitation, the Ohio State University, Oct. 19, 2018.  
2019 Invited lecture: "Health and neuroimmune communication", Nantong Medical College, Zhejiang, China, Jan. 7, 2019.  
2019 Invited lecture: "Insights from dissecting cell type specific IL-1R1 functions", Animal Sciences, University of Illinois at Urbana-Champaign, Feb. 21, 2019.

**Editorial Boards:** Journal of Inflammation Research, 2013-present, Editor-in-Chief.

Psychoneuroimmunology Journal, 2019-present, founding Editor-in-Chief  
Brain, Behavior, and Immunity. 2013-present, board member.

### **Teaching**

1998-2001 Molecular Techniques, course director, OSU  
1998-2001 Neuroimmunology, Lecturer, OSU  
1998-2001 Immunology and Microbiology, lecturer, OSU  
2001-2009 Biochemistry, lecturer, OSU  
2009-2019 Immunology and microbiology, lecturer, OSU  
2001-2019 Biochemistry, course director, OSU  
2019-present Neuriscience 1, lecturer, OSU

### **Research Project Funding**

#### **Current Projects**

**R01 NS116914 (Quan, PI)** 4/1/2020-3/31/2025  
Neuroinflammation, Neuronal IL-1R1, and Behavior

**R01 MH109165 (Quan, PI)** 12/1/15-12/1/20  
Anxiety, IL-1R1, and Neuroinflammation

**R33 MH 82118515 (Quan, Co-I)** 8/28/18-8/28/20  
The Role of the Intestinal Microbiome in Anxiety and Depression.

**R01 NS103785 (Quan, Co-I)** 12/15/18-11/30/23  
Cell-Specific Actions of IL-1 / IL-1R1 Signaling Following Traumatic Brain Injury

**Anonymous Donor (Quan, Co-I)** 1/1/2020-12/31/20  
Discretionary funds for research costs related to neuroimmune research

#### **Completed Projects**

**R01 NS04098 (PI)** 12/1/2001-11/31/2004  
Pathophysiology of Neuroimmune Communication

**R01 AI059089 (PI)** 12/1/2001-01/31/2007  
Stress & Enhancement of Skin Immunity: Molecular Mechanisms

**R01 AI059089 (PI)** 12/1/04-11/30/09  
Neuroimmune Communication at the Blood Brain Barrier.

**R01 AI076926 (PI)** 12/1/07-11/31/12

IL-1R1 Promoter Complex in the Neuroendocrine, Nervous, and Immune System.

**GRT00016597 (PI)** 8/13/2010-7/31/2014  
IL-1R3 and brain

**R01 AI076926 (PI)** 12/1/07-11/30/12  
IL-1R1 promoter complex in the neuroendocrine, nervous, and immune systems.

**R01 DA014610 (Co-I)** 1/15/09-11/30/14  
Mechanism of Drug Addiction.

**R21 MH099482 (PI)** 12/15/12-12/15/14 PI  
IL-1R1 Restore: Dissecting Cell Type Specific Functions of IL-1R1

**R01 MH097243 (Co-I)** 6/1/2012-6/1/2017  
Brain Region Specific Trafficking of Myeloid Cells in Repeated Social Defeat

**GRT00049956 (PI)** 1 2/08/17-12/31/18  
Anxiety Research (private foundation, SPM)

### Graduate and postdoctoral students

San Ching	Postdoctoral fellow	9/2006/-9/2008
Lin Zhu	Postdoctoral fellow	9/2008-9/2009
Jiang Qian,	Postdoctoral fellow	3/2011-8/2012
Andrew Tarr	postdoctoral fellow	9/2012-9/2015
Anping Song	postdoctoral fellow	9/2015-9/2017
Xiaoyu Liu	Postdoctoral fellow	5/2017-present
Emily Ho	Graduate student (Human ecology)	9/1999-9/2002 (Graduated)
Ana Mercado	Graduate student (Oral Biology)	9/1999-9/2002 (Graduated)
Mike Horan	Graduate student (Oral Biology)	9/2000-9/2003 (Graduated)
Hao Zhang	Graduate student (Biosciences)	9/2004-9/2009 (Graduated)
Qiming Li	Graduated student (MCDB program)	9/2008-12/2010 (Graduated)
Karol Ramirez	Graduate student (Biosciences)	9/2012-12/2015 (Graduated)
Ying An,	Graduate student (Biosciences)	9/2008-2016 (Graduated)
Dan Mckim	Graduate student (Neuroscience)	9/2012-2017 (graduated)
Xiaoyu Liu	Graduate student (Biosciences)	9/2011-2017 Graduated
Damon DiSabato	Graduate student (neuroscience)	9/2015-present
Daniel Nemeth	Graduate student (Biosciences)	1/2016-present

### Peer-reviewed publications.

1. Quan, N. and Blatteis, C.M. (1989) Microdialysis: A system for localized drug delivery into the brain. *Brain Res. Bull.* 22:621-625.
2. Quan, N. and Blatteis, C.M. (1989) Intrapreoptically microdialyzed and microinjected norepinephrine evoke different thermal responses. *Am. J. Physiol.* 257: R816-R821.

3. Blatteis, C.M., Dinarello, C.A., Shibata, M., Llanos-Q., J., Quan, N. and Busija, D.W. (1989) Does circulating interleukin-1 enter the brain? In: *Thermal Physiology 1989*, J.B. Mercer, ed., Elsevier, Amsterdam, pp. 385-390.
4. Blatteis, C.M., Quan, N., Xin, L. and Ungar, A.L. (1990) Neuromodulation of acute-phase responses to interleukin-6 in guinea pigs. *Brain Res. Bull.* 25:895-906.
5. Blatteis, C.M., Xin, L. and Quan, N. (1991) Neuromodulation of fever: Apparent involvement of opioids. *Brain Res. Bull.* 26:191-195.
6. Quan, N., Xin, L. and Blatteis, C.M. (1992) Microdialysis of norepinephrine into the preoptic area of guinea pigs: Characteristics of the hypothermic effect. *Am. J. Physiol.* 261:R378-R385.
7. Quan, N., Xin, L., Hunter, W.S. and Blatteis, C.M. (1992) Hypothalamic norepinephrine and body temperature control: Another look. In: *Pharmacology of Thermoregulation*, P. Lomax and E. Schonbaum, eds., Karger, Basel, pp. 46-49.
8. Quan, N., Xin, L., Hunter, W.S. and Blatteis, C.M. (1992) Validation of the hypothermic action of preoptic norepinephrine in guinea pigs. *Brain Res. Bull.* 28:537-542.
9. Quan, N., Xin, L., Ungar, A.L. and Blatteis, C.M. (1992) The hypothermic effect of norepinephrine in the preoptic area is mediated by  $\alpha$ 2-adrenoceptors. *Am. J. Physiol.* 262:R407-R411.
10. Quan, N., Sundar, S.K. and Weiss, J.M. (1994) Induction of interleukin-1 in various brain regions after peripheral and central injections of lipopolysaccharide. *J. Neuroimmunology* 49:125-134.
11. Weiss, J.M., Stout, J.C., Aaron, M.F., Quan, N., Owens, M.J., Butler, P.D. and Nemeroff, C.B. (1994) Experimental studies of depression and anxiety: Role of locus coeruleus and corticotropin-releasing factor. *Brain Res. Bull.* 35:561-572.
12. Weiss, J.M., Quan, N. and Sundar, S.K. (1994) Widespread activation and consequences of interleukin-1 in the brain. *Annals N.Y. Acad. Sci.* 741:338-357.
13. Blatteis, C.M., Xin, L. and Quan, N. (1994) Neuromodulation of fever: A possible role of Substance P. *Annals N.Y. Acad. Sci.* 741:162-173.
14. Quan, N., Zhang, Z., Emery, M., Bonsall, R. and Weiss, J.M. (1996) Detection of interleukin-1 bioactivity in various brain regions of normal healthy rats. *NeuroImmunoModulation.* 3:47-55.
15. Quan, N., Zhang, Z., Emery, M., Lai, E., Bonsall, R., Kalyanaraman, V.S. and Weiss, J.M. (1996) In vivo induction of interleukin-1 bioactivity in brain tissue after intracerebral infusion of native gp120 and gp160. *NeuroImmunoModulation.* 3:56-61.
16. Quan, N., Whiteside, M., Kim, L., and Herkenham, M. (1997) Induction of I $\kappa$ B- $\alpha$  mRNA in the central nervous system after peripheral lipopolysaccharide administration: an in situ hybridization histochemistry study in the rat. *Proc. Natl. Acad. Sci.* 94:10985-10990
17. Quan, N., Whiteside, M., and Herkenham, M. (1998) Time course and patterns of interleukin-1-beta mRNA expression in the central nervous system after peripheral LPS administration. (1998) *Neurosci.* 83:281-293
18. Quan, N., Mhlanga, J-D., Whiteside, M., McCoy, A.N., and Kristensson, K., and Herkenham, M. Chronic over-expression of pro-inflammatory cytokines and progressive neurodegeneration in the brain of rats infected with *Trypanosoma brucei*. *J. Comp. Neurol.* 414:114-130, 1999
19. Quan, N., Whiteside, M., and Herkenham, M. Cyclooxygenase 2 mRNA expression in rat brain after peripheral injection of lipopolysaccharide. *Brain Res.*, 802: 189-197, 1998.
20. M. Whiteside, N. Quan. and M. Herkenham, "Induction of pituitary cytokine transcripts by peripheral lipopolysaccharide. *J. Neuroendo.* 11:115-120, 1999.
21. Quan, N., Stern, E., Whiteside, M., and Herkenham, M. Induction of pro-inflammatory cytokine mRNAs in the brain after peripheral injection of subseptic doses of lipopolysaccharide in the rat. *J. Neuroimmunology.* 93:72-80, 1999

22. Quan, N., Zhang, Z., Kitson, R.P., Chambers, W.H., Goldfarb, R. H., and Weiss, J.M. Evidence for involvement of B lymphocytes in the surveillance of lung metastasis in the rat. *Cancer Res.* 59: 1080-1089, 1999.
23. Quan, N., Mhlanga, J-D., Whiteside, M., McCoy, A.N., and Kristensson, K., and Herkenham, M. Chronic sodium salicylate treatment exacerbates brain neurodegeneration in rats infected with *Trypanosoma brucei*. *Neurosci.* 96:181-194, 2000.
24. Stern, E., N. Quan, M, Proescholdt, and M. Herkenham. Spatiotemporal induction patterns of cytokine and related immune signal molecule mRNAs in response to intrastriatal injection of lipopolysaccharide. *J. Neuroimmunology* 106:114-129, 2000.
25. Herkenham, M. and Quan, N. Immune-brain interactions involving CNS immune signal molecules. *Neurogastroenterology and Motility*, 12: 372, 2000.
26. Ning Quan, Lingli He, Wenmin Lai, Tiansheng Shen, and Miles Herkenham. Induction of I $\kappa$ B $\alpha$  mRNA expression in the brain by glucocorticoids: a negative feedback mechanism for immune-to-brain signaling. *J. Neuroscience* 20: 6473-6477. 2000.
27. Emily Ho, Ning Quan, Weimin Lai and Tammy M. Bray. Dietary Zinc Supplementation Inhibits NF $\kappa$ B Activation and Protects Against Chemically Induced Diabetes in CD1 Mice. *Exp. Biol. Med.* 226:103-111. 2000.
28. Ning Quan, Emily Ho, Wenmin Lai, and Tammy Bray. Administration of NF-kB Decoy prevents the induction of diabetes by alloxan in vivo. *Faseb J.* 15: 1616-1618. 2001.
29. Ning Quan, Ronit Avitsur, Jennifer Stark, Lingli He, Manisha Shah, Michael Caligiuri, David. A. Padgett, Phillip.T. Marucha, and John F. Sheridan. Social stress increases the susceptibility to endotoxic shock. *J Neuroimmunology.* 115:36-45. 2001.
30. Staci D. Bilbo, Deborah L. Drazen, Ning Quan, Lingli He, and Randy J. Nelson. Short Day Lengths Attenuate the Symptoms of Infection in Siberian Hamsters. *Proc. R. Soc. Lond. B.* 269:447-454, 2002
31. Sarmila Majumder, Kalpana Ghoshal, Jharna Datta, Shoumei Bai, XiaoCheng Dong, Ning Quan, Christoph Plass, and Samson T. Jacob. Role of De novo DNA methyltransferases and methyl C-binding proteins in gene silencing in a rat hepatoma. *J. Biol. Chem.* 277: 16048-16058, 2002.
32. Jane A. Foster, Ning Quan, Edra L. Stern, Krister Kristensson, and Miles Herkenham. . Induced neuronal expression of class I major histocompatibility complex (MHC) mRNA in acute and chronic inflammation models *J. Neuroimmunol.* 131:83-91, 2002.
33. Ana M. Mercado, Ning Quan, David A. Padgett, John F. Sheridan, and Phillip T. Marucha. Restraint stress alters the expression of interleukin-1 and keratinocyte growth factor at the wound site: an *in situ* hybridization immunohistochemistry study *J. Neuroimmunol.* 129:74-83, 2002.
34. Li, J. Ning Quan, and Tammy Bray. Supplementation of N-acetylcysteine normalized lipopolysaccharide-induced NF-kB activation and proinflammatory cytokine production in early rehabilitation of protein malnourished mice. *Journal of Nutrition* 132: 3286-3292, 2002.
35. Ning Quan, Ronit Avitsur, Jennifer Stark, Lingli He, Wenmin Lai, Firdaus Dhabhar, and John Sheridan. Molecular mechanisms of glucocorticoid resistance in splenocytes of socially stressed mice. *J. Neuroimmunology* 137:51-58. 2003
36. Ning Quan, Lingli He, and Wenmin Lai. Endothelial activation is an intermediate step for peripheral lipopolysaccharide induced activation of paraventricular nucleus. *Brain Res. Bull.* 59:447-452. 2003.
37. Ning Quan, Wenmin Lai, and Lingli He. Intraventricular infusion of antagonists of IL-1 and TNF $\alpha$  attenuates neurodegeneration induced by the infection of trypanosome *brucei*. *J. Neuroimmunology* 138: 92-98. 2003.
38. Staci D. Bilbo, Ning Quan, Brian J. Prendergast, Stephanie L. Bowers, and Randy J. Nelson. Photoperiod Alters the Time Course of Brain Cyclooxygenase-2 Expression in Siberian Hamsters. *Journal of neuroendocrinology* 15: 958-964. 2003.

39. San Ching, Lingli He, Wenmin Lai, and Ning Quan. IL-1 type I receptor plays a key role in mediating the recruitment of leukocytes into the central nervous system. *Brain, Behavior, and Immunity* 19: 127-137, 2005.
40. Mike Horan, Ning Quan and Phillip Marucha. Impaired Wound Contraction and Delayed Myofibroblast Differentiation in Restraint-Stressed Mice. *Brain, Behavior, and Immunity*. 19:207-216, 2005
41. Annemarie Ledeboer, Mike Gamanos, Wenmin Lai, Steven F. Maier, Linda R. Watkins, and Ning Quan. Role of spinal cord nuclear factor  $\kappa$ B (NF- $\kappa$ B) activation in rat models of pain facilitation. *European J. Neuroscience*. 22. 8: 1977-1986, 2005
42. Leah M. Pyter, Andrew R. Samuelsson, Ning Quan and Randy J. Nelson. Photoperiod Alters Hypothalamic Cytokine Gene Expression and Sickness Behaviors Following Immune Challenge in Female Siberian Hamsters. *Neuroscience*. 131:779-784, 2006
43. San Ching, Hao Zhang, Wenmin Lai, and Ning Quan. Peripheral injection of lipopolysaccharide prevents brain recruitment of Leukocytes induced by central injection of IL-1. *Neuroscience*. 137: 717-726. 2006
44. Rong Chen, Michael R. Tilley, Hua Wei, Fuwen Zhou, Fu-Ming Zhou, San Ching, Ning Quan, Robert L. Stephens, Erik R. Hill, Timothy Nottoli, Dawn D. Han, and Howard H. Gu. Abolished cocaine reward in mice with a cocaine-insensitive dopamine transporter. *Proc Natl Acad Sci U S A*. 103: 9333-9338, 2006.
45. Dunn, A. J. Swiergiel, A. H. Zhang, H. and Quan, N. Reduced Ingestion of Sweetened Milk Induced by Interleukin-1 and Lipopolysaccharide Is Associated with Induction of Cyclooxygenase-2 in Brain Endothelia *Neuroimmunomodulation*, 13: 96-104, 2006.
46. Quan, N. Brain's firewall: blood brain barrier actively regulates neuroimmune information flow. *Brain Behav Immun* 20:447-448, 2006.
47. Ching S., Zhang H., Chen Q., Quan N (2007). Differential Expression of Extracellular Matrix and Adhesion Molecule Genes in the Brain of Juvenile versus Adult Mice in Responses to Intracerebroventricular Administration of IL-1. *Neuroimmunomodulation*. 14(1):46-56
48. Anar Dossumbekova, Mirela Anghelina, Shashi Madhavan, Lingli He, Ning Quan, Thomas Knobloch, and Sudha Agarwal. Inhibition of IKK activity mediates attenuation of proinflammatory gene induction by Biomechanical signals in chondrocytes. *Arthritis and Rheumatism*, 56: 3284-96, 2007.
49. Ching, S., Zhang H., Belevych, N., He, L., Lai, W., Pu, X. Jaeger, L. B., Chen Q., Quan N (2007). Endothelial-Specific Knockdown of Interleukin-1 (IL-1) Type 1 Receptor Differentially Alters CNS Responses to IL-1 Depending on Its Route of Administration. *J. Neuroscience*, 27(39):10476-10486
50. Harald Engler, Michael T. Bailey, Andrea Engler, LaTonia M. Stiner-Jones, Ning Quan, John F. Sheridan. Interleukin-1 receptor type 1-deficient mice fail to develop social stress-associated glucocorticoid resistance in the spleen. *Psychoneuroendocrinology*, 33: 108-117, 2008.
51. Zhang, H., Ching, S., Chen Q., Li Q, An, Y. Quan, N (2008). Localized inflammation in peripheral tissue signals the CNS for sickness response in the absence of interleukin-1 and Cyclooxygenase-2 in the blood and brain. *Neuroscience* 157(4):895-907
52. Sabahattin Bicer, Peter J. Reiser, San Ching and Ning Quan. Induction of Muscle Weakness by Local Inflammation: An Experimental Animal Model. *Inflammation Research* (2009) *Inflamm.res.* 58:175-183.
53. Chen, Q., Zhang, H., Li Q., An, Y., Herkenham, M., Lai, W., Popovich, P., Agarwal, S. and Quan, N (2009). Three promoters regulate tissue- and cell type-specific expression of murine IL-1R1. *JBC* 2009 Mar 27;284(13):8703-13



54. Peter Reiser, Sabahattin Bicer, Qun Chen, Ling Zhu and Ning Quan. Masticatory (“Superfast”) Myosin Heavy Chain and Embryonic/Atrial Myosin Light Chain 1 in Rodent Jaw-closing Muscles. *J. Exp. Bio.* (2009) 212: 2511-2519.
55. Qiming Li, Hao Zhang, Qun Chen, and Ning Quan. Existence of seven human IL-1R1 promoters. *Journal of Inflammation Research.* 3:17-24, 2010.
56. Belevych, N., Buchanan, K., Chen, Q., Bailey, M. and Quan, N. Location-specific activation of the paraventricular nucleus of the hypothalamus by localized inflammation. *Brain, Behavior, and Immunity.* 24 (2010) 1137–1147
57. Li Q., Powell, N., Zhang, H., Belevych, N., Ching, S. Chen, Q., Sheridan, J., Whitacre, C, Quan, N. Endothelial IL-1R1 is a critical mediator of EAE pathogenesis. *Brain, Behavior, and Immunity* 25 (2011) 160–167.
58. An, Y., Chen, Q., and Quan, N., Interleukin-1 exerts distinct actions on different cell types of the brain in vitro. *Journal of Inflammation Research* 2011(4):11-20
59. Tarr, A.J., Chen, Q., Wang, Y., Sheridan, J.F., and Quan, N. 2012. Neural and behavioral responses to low-grade inflammation. *Behav Brain Res* 235:334-341.
60. Qian, J., Zhu, L., Li, Q., Belevych, N., Chen, Q., Zhao, F., Herness, S., and Quan, N. 2012. Interleukin-1R3 mediates interleukin-1-induced potassium current increase through fast activation of Akt kinase. *Proc Natl Acad Sci U S A* 109:12189-12194.
61. Qun Chen, Andrew J. Tarr, Xiaoyu Liu, Yufen Wang, Nathaniel S. Reed, Cameron P. DeMarsh, John F. Sheridan, and Ning Quan. 2013. Controlled progressive innate immune stimulation regimen prevents the induction of sickness behavior in the open field test. *Journal of Inflammation Research* 6: 91-98
62. Quan, N. 2013. Networking into neural plasticity: a rising score on the cytokine learning curve. *Brain, Behavior, and Immunity:* 33: 14.
63. An, Ying; Belevych, Natalia; Wang, Yufen; Zhang, Hao; Herschman, Harvey; Chen, Qun; and Quan, Ning 2014. Neuronal and non-neuronal COX-2 expression confer neurotoxic and neuroprotective phenotypes respectively, in response to excitotoxin challenge. *Journal of Neuroscience Research* 92: 486-495
64. Jacqueline Lieblein-Boff, Daniel McKim, Daniel Shea, Ping Wei, Zhen Deng, Caroline Sawicki, Ning Quan, Staci Bilbo, Michael Bailey, Dana McTigue, and Jonathan Godbout. 2014. Infection Causes Neuro-Behavioral Deficits Associated with Hypomyelination and Neuronal Sequestration of Iron. *Journal of Neuroscience* 41: 16334-45.
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**Review Articles:**

1. Quan, N. Brain cytokine expression in response to peripheral infection. In: Taniguchi Symposia on Brain Sciences No. 21: Brain and Biodefence (Oomura, Y. and Hori, T. eds.), Karger, New York, pp. 125-141, 1998.
2. Quan, N and Miles Herkenham. Connecting cytokines and brain: A review of current issues. *Histology and histopathology* 17, 273-288 (2002)
3. Quan, N. Cytokines in Alzheimer's disease: Views through a kaleidoscope. In: Focus on Alzheimer's Disease Research, Nova Biomedical Books (Eileen M. Welsh, Editor), New York, pp. 93-114. 2003.
4. Quan, N., Banks, W.A., Brain-immune communication pathways. *Brain Behav. Immun.* 21:727-735. 2007.
5. Quan, N. Immune-to-brain signaling: how important are the blood-brain barrier independent pathways? *Molecular Neurobiology.* 37: 142-152, 2008.
6. Quan, N. Living History: Clark Blatteis. *Adv Physiol Educ* 33: 1-6, 2009.
7. Quan, N. In-depth conversation: Spectrum and kinetics of neuroimmune afferent pathways. *Brain Behav. Immun.* 40: 1-8, 2014
8. Liu, X., and Quan, N. Microglia and CNS Interleukin-1: beyond immunological concepts. 2018. *Frontiers in Neurology.* doi: 10.3389/fneur.2018.00008
9. Ning Quan, *Psychoneuroimmunology Journal—Welcome to a New Journal*, *Psychoneuroimmunology Journal*, 1 (2020), art236080. doi:10.32371/pnij/236080
10. Daniel Nemeth and Ning Quan. Modulation of neural networks by Interleukin-1. *Brain Plasticity* (accepted)

## CURRICULUM VITAE

**NAME:** Janet D. Robishaw, PhD

**PRESENT POSITION:** Professor and Chair,  
Department of Biomedical Science  
Senior Associate Dean for Research  
Charles E. Schmidt College of Medicine  
Florida Atlantic University  
Boca Raton, FL  
[jrobishaw@health.fau.edu](mailto:jrobishaw@health.fau.edu)  
(561) 297-4399

**PREVIOUS POSITIONS:**

1975 - 1979 BS Degree, Double Major in Chemistry and Biology  
Central Michigan University  
Mt. Pleasant, MI  
*Summa Cum Laude*

1979 - 1983 PhD Degree, Major in Physiology  
Pennsylvania State University, College of Medicine  
Hershey, PA

1983 - 1987 Post-doctoral Fellow and Research Assistant Professor  
University of Texas, Southwestern Medical School  
Dallas, TX  
*Supervisor, Dr. Alfred G. Gilman*  
*1994 Nobel Prize in Physiology and Medicine*

1987 - 1996 Staff Scientist  
Weis Center for Research  
Geisinger Clinic  
Danville, PA

1996 - 1997 Senior Scientist  
Weis Center for Research  
Geisinger Clinic  
Danville, PA

1997 - 2000 Professor with Tenure  
Dept of Cellular and Molecular Physiology  
Pennsylvania State University, College of Medicine  
Danville, PA

2000 – 2016	Director of Research Education Weis Center for Research Geisinger Clinic Danville, PA
2000 - 2016	Senior Scientist Weis Center for Research Geisinger Clinic Danville, PA
2005 - 2016	Associate Director and Senior Scientist Weis Center for Research Geisinger Clinic Danville, PA 17822-2614
2004-present	President and CEO SignalPlex, Danville, PA
2016 – present	Chair Professor with Tenure Dept of Biomedical Science Charles E Schmidt College of Medicine Florida Atlantic University Boca Raton, FL
2017 – present	Senior Associate Dean for Research Charles E Schmidt College of Medicine Florida Atlantic University Boca Raton, FL

**HONORS:**

1983-1986	National Research Service Award, National Institute of Health
1988	Selected Speaker, Science Writer's Forum, American Heart Association
1988-89	Regular Member of Biochemistry Study Section, National American Cancer Society
1989	Member of Research Review Group, Pennsylvania Affiliate of the American Heart Association
1990	Member of SCOR Review Committee, National Institutes of Health
1989-1994	Established Investigator Award, National American Heart Association
1990	Delegate for National Institutes of Health US-USSR Symposium on "Cardiovascular and Pulmonary Biology", Suzdal, USSR
1991-1995	Regular Member of Pharmacology Study Section, National Institutes of Health
1993	Advisory Panel Member, "Future Directions in Neuroscience Research", National Institutes of Health
1993-1998	Editorial Board Member, Journal of Biological Chemistry

- 1996 Chairperson for ASPET Symposium on "Role of  $\beta\gamma$  subunits in G protein-mediated signaling", Experimental Biology '96 Meeting.
- 1996-2000 Regular Member and Co-Chair of the Molecular Signaling I Study Section, National American Heart Association
- 199-2002 Regular Member, Pharmacology Study Section, National Institutes of Health
- 2002-2005 Executive Committee Member, Cardiovascular Division, American Society of Pharmacology and Therapeutics
- 2009 Reviewer, Glue Grant, National Institutes of Health
- 2007-2012 Regular Member of Molecular and Integrative Signal Transduction, National Institutes of Health
- 2013 Ad hoc Member, Vascular Biology, National Institutes of Health
- 2019 Ad hoc Member, HEAL Initiative, National Institute of Drug Abuse

**PROFESSIONAL SOCIETIES:**

American Society for Biochemistry and Molecular Biology

American Association for Advancement of Science

International Society for Heart Research

American Society for Pharmacology and Experimental Therapeutics

International Academy of Cardiovascular Sciences

Society for Developmental Biology

AAMC

Association of Professors of Human and Medical Genetics

**CREATIVE ACCOMPLISHMENTS:**

- 2002 Filing of US Patent Application 20020106678
- 2004 Filing of Provisional US Patent Application entitled " Identification of G protein  $\gamma$  subtype as potential drug target for angiogenesis therapy"

**LEADERSHIP EXPERIENCE:**

In 1997, I was awarded Tenure as a Full Professor, Department of Cellular and Molecular Physiology, Pennsylvania State University, College of Medicine, Hershey, PA. Subsequently, I gave up this position to continue my research as a Senior Scientist (equivalent to Full Professor rank) and to assume a leadership position as Director of Research Education at Geisinger. In my capacity as Director of Research Education, I run a Summer Undergraduate Research Program, offer several K-12 initiatives, provide instruction of medical students, residents, and fellow, and participate in many regional activities (see below). In 2005, I was promoted

to a more senior position as Associate Director of the Weis Center for Research at Geisinger. In this capacity, my major efforts revolve around budget planning, regulatory compliance, faculty development, programmatic initiatives, and community engagement. Perhaps, the most challenging part is in the area of programmatic initiatives. This involves identifying strategic opportunities between the laboratory and clinic and then gaining the support of the major players from both sides of the street to partner together on the programmatic initiative. Due to the strong personalities involved, this often requires equal parts of patience and perseverance and is akin to “herding cats”. Subsequently, a “business plan” is written to seduce the Geisinger leadership into providing the financial support needed to get the initiative off the ground along with a reasonable plan to achieve a return on their investment. Over the last few years, this strategy has been successfully used to launch a Neurosciences Initiative (Translational Medicine, Neurology, Neurosurgery, Autism and Developmental Medicine Institute), a Translational and Functional Genomics Initiative (Translational Medicine, Clinical Informatics, Bioinformatics), a Pharmacogenomics Initiative (Translational Medicine, Pain Clinic, Anesthesiology) and most recently, a Cardiogenomics Initiative (Translational Medicine, Radiology, Cardiology).

In 2016, I was hired as Chair and Full Professor with Tenure, Department of Biomedical Science, Florida Atlantic University, Charles E. Schmidt College of Medicine, Boca Raton, FL.

In 2017, I was appointed as Senior Associate Dean for Research, Florida Atlantic University, Charles E. Schmidt College of Medicine, Boca Raton, FL. A key part of this position is to develop and implement a Strategic Vision for Research within the College and the broader University. During my tenure, NIH research funding has nearly doubled in the past 2 years.

Finally, in addition to my institutional leadership experience, I also serve or lead advisory groups and initiatives for several regional and national organizations (see below).

## **SERVICE TO THE PROFESSION:**

### **1. Institutional and Regional Responsibilities**

1987-2005	Organizer, Faculty Talks Committee
1987-1997	Chair, Hazardous Waste Committee
1987-1997	Chair, Recombinant DNA and Biosafety Committee
1988-present	Chair, Selection Committee for James R. Neely Lectureship
1994-1997	Member, Scientific Review Committee
1998-present	Chair, Selection Committee for Balcueva Award
1997- 2016	Chair, Institutional Animal Care and Use Committee
2002-2003	Member, Ventures Committee
2003-present	Director, Research Education and Training
2003-present	Chair, Promotion and Tenure Committee
2005-present	Associate Director, Weis Center for Research
2007	Chair and Organizer, 20 <sup>th</sup> Anniversary Celebration and Scientific Symposium entitled “G Protein Coupled Receptor Signaling: Bench to Bedside”
2007-present	Organizer, Focus Group on “Signaling and Disease Modeling”

2011	Chair, Neuroscience Institute Steering Committee
2012	Chair, Strategic Vision Committee, Weis Center for Research
2013-present	Member, Organizing Committee, Susquehanna Valley Undergraduate Research Symposium
2014	Chair, Research Misconduct Committee Responsible for Reporting to the National Institutes of Health
2014-2016	Organizer, "Translational and Functional Genomics" Steering Committee
2014-2016	Head, Translational and Molecular Medicine Division, Weis Center for Research
2015	Geisinger-Regeneron Advisory Panel
2016-2018	Interviewer, Charles E. Schmidt College of Medicine Admissions Committee, Florida Atlantic University
2017	Member, Strategic Vision Panel, Florida Atlantic University
2017	Co-Chair, Strategic Vision Committee, College of Medicine, Florida Atlantic University
2017	Member, CFO Search Committee for the College of Medicine, Florida Atlantic University
2017-present	Member, Research Core Facility Oversight Committee, Florida Atlantic University
2018	Member, Pharmacology Faculty Search Committee, Florida Atlantic University
2019-2020	Member, Search Committee for Chair of the Department of Integrated Medical Science, Florida Atlantic University
2019- present	Member, Search Committee for Director of Surgical Research, Florida Atlantic University
2019-present	Member, Marcus Implementation Committee, Florida Atlantic University
2020	Member, Vivarium Task Force, Division of Research, Florida Atlantic University
2020	Member, Search Committee for Assistant Professor in Bioethics/Medical Ethics, Department of Philosophy, Florida Atlantic University
2020	Co-Chair, Strategic Plan Refresh: Advanced Patient-Centered Research& Discovery, College of Medicine, Florida Atlantic University
2020	EHR Analytics Infrastructure Task Force, Division of Research, Florida Atlantic University
2020-present	Institutional Liaison Committee, Florida Atlantic University
2020-present	Chief Diversity Officer Search Committee, College of Medicine, Florida Atlantic University

## **2. National Advisory and Review Groups**

1989	Member, Peer Review Group, Pennsylvania Affiliate, American Heart Association
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- 1988 Member, Biochemistry Study Section, American Cancer Society
- 1989 Member, Biochemistry Study Section, American Cancer Society
- 1990 Ad hoc Member, SCOR Review Committee, National Institutes of Health
- 1990 Ad hoc Member, Pharmacology Study Section, National Institutes of Health
- 1989 Delegate for National Institutes of Health US-USSR Symposium on "Cardiovascular and Pulmonary Biology", Suzdal, USSR
- 1991-95 Regular Member, Pharmacology Study Section, National Institutes of Health
- 1993 Panel Member, Advisory Committee on "Future Directions in Mental Health Research", National Institute of Mental Health
- 1996 Ad hoc Member, Cardiovascular Study Section, National Institutes of Health
- 1996-2000 Co-Chair, Molecular Signaling I Study Section, American Heart Association
- 1997 Ad hoc Member, SCOR Review Committee, National Institutes of Health
- 1989-97 Reviewer, Whitaker Foundation
- 1999-2002 Regular Member, Pharmacology Study Section, National Institutes of Health
- 2002-2006 Executive Committee Member, Cardiovascular Division, American Society of Pharmacology and Therapeutics
- 2009 Reviewer, Glue Grant, National Institutes of Health
- 2007-2012 Regular Member of Molecular and Integrative Signal Transduction, National Institutes of Health
- 2013 Ad hoc Member, Vascular Biology, National Institutes of Health
- 2020-2022 Technical Expert Panel (TEP), Pain Management & Opioid Use/Misuse in Older Adults, Agency for Healthcare Research & Quality

### **3. Editorial Boards.**

- 1993-1996.1 Editorial Board Member, Journal of Biological Chemistry

### **4. Journal Reviews.**

- 1987- present Referee for following journals: American Journal of Physiology, Biochemistry, Cardiovascular Research, Circulation Research, Trends in Cardiovascular Medicine

### **TEACHING SERVICE:**

#### **1. K-12 Students:**

As Director of Research Education and Training, I saw a need for practicing scientists to become more involved in the science education of K-12 students from the six surrounding rural school districts, which lack the resources

typically available to their more urban counterparts. To fulfill this need, I designed and implemented three types of programs: 1) Summer Science Workshops; 2) Field Trips; and 3) Research Internships.

Summer Science Workshops. I developed and obtained funding from Pfizer to run two workshops: "Fun with Science" for students entering 3<sup>rd</sup>-5<sup>th</sup> grade; and "Fun with DNA" for students entering 6<sup>th</sup>-8<sup>th</sup> grade. These workshops were designed to promote a better understanding of science and its impact on everyday life and health. Located in the Weis Center for Research, children explored science in fun and empowering ways in a real laboratory. Using state-of-the-art techniques and tools, children experienced the discovery process that scientists employ in the real world under the safe supervision of researchers and educators, such as me. For example, the younger students learned about the different types of germs and the common diseases they cause. In the process, they learned about epidemics, how easily they spread, and how to contain them. The older students learned about DNA and heredity. In the process, they used DNA fingerprinting to solve a hypothetical crime; paternity testing to reunite a hypothetical child with her parents; and genetic testing to identify and treat a hypothetical patient with cystic fibrosis. The workshops ran Monday-Friday, from 9 am to 3 pm; and concluded with Parent Participation Day when children became the teachers and explained the week's activities to their parents. These Summer sessions have received overwhelming response from children and parents alike from 2003 to present.

Field Trips. To reach a greater number of students, I also designed and implemented one-day field trips for K-12 grade students to visit the Weis Center for Research. These field trips allow students to form their own impression of scientists and the scientific enterprise. In addition, students can participate in various experiments targeted for their particular age group.

High School Internships. To provide opportunities for motivated high school students to perform hands-on research, I have also established research internships for 12<sup>th</sup> grade students from the Danville Area High School. Although requiring a tremendous commitment, the potential rewards for both students and mentors are great: 1) for students, the experience has the potential to influence their academic choices, career plans, and goals; and 2) for mentors, the opportunity exists to turn students onto science whether they pursue a career or not. In addition to organizing and implementing this program, I have also supervised the research training of the following talented high school students in my own laboratory:

2002-2004	Cong Luo, Danville Area High School
2004-2005	Alex Zhang, Danville Area High School
2009-2010	Amy Sudol, Danville Area High School
2019	Sophie Gorup, St. Andrews School, Boca Raton, FL
2020-	Marlie Kahan, Pine Crest School, Boca Raton, FL

## **2. Undergraduate and Graduate Students:**

As the Director of Research Education and Training, Weis Center for Research, Geisinger Clinic, I oversee a 10-week, summer research training program designed to expose talented undergraduate students to career opportunities in research, with > 90% of these students going on to pursue medical or graduate degrees in the 25 years since the inception of this program. The primary emphasis of the research training experience has been at the cellular, genetic, and molecular levels. In addition to providing leadership and oversight, I have personally supervised the following students in my own laboratory:

Selected from a List:

Kimberly Rose, Becknell University  
Kristen Mowed, University of Pennsylvania  
Laurence Beck, Princeton University  
Kellie Saxton, Indiana University  
Michelle Schley, Indiana University  
Kimberly Smyrna, Franklin and Marshall College  
Seem Shah, Bryn Mar College

Heidi Martinson, Dickinson College  
Janna Pawhuska, Lafayette College  
Amy Hoffman, Lycoming College  
Erin Crawl, University of Pittsburgh  
Renee Uncheck, King's College  
Elaine Sunderlin, James Madison University  
Angela Sabol, Bloomsburg University  
Hilary Hoffman, Pennsylvania State University  
Beth Carey, Lehigh University  
Lora Waldman, Becknell University  
Eric Horstick, Bloomsburg University  
Leanne Yearly, Bloomsburg University  
Rebecca Wert man, University of North Carolina  
Kristin McIntosh, Lock Haven University  
Lindsey Yurcaba, University of Pennsylvania  
Chase Parsons, Grove City College  
Kyle Bartol, Bloomsburg University  
Talora Steen, University of Pittsburgh  
Mikhail Attoar, Northwestern University  
Michelle Stipanovic, Bloomsburg University  
Nishikanta Elangbam, University of Wisconsin-Madison  
Amy Sudol, Cornell University  
Alek Keller, University of Pittsburg  
Lilian McKinley, University of Pennsylvania  
Laura Sprunt, Case Western  
Dillon Warr, Susquehanna University  
Marc Erdman, Pennsylvania State University  
Alexander Gitin, Florida Atlantic University  
Maddie Pung, Florida Atlantic University  
Sanjana Chandran, Florida Atlantic University  
Ty Roachford, Florida Atlantic University  
Oliver Pelletier, Florida Atlantic University (PhD candidate)

Previously, I have also mentored and served on the thesis committees for the following graduate students at Bloomsburg University.

1997-1998	Eric Balcueva, Candidate for MS degree, Biology, Bloomsburg University
2001-2002	Soniya Sinhu, Candidate for MS degree, Biology, Bloomsburg University
2003-2004	Amy Mawdry, Candidate for MS degree, Biology, Bloomsburg University

And, most recently, I have initiated an effort to develop a "Health Genomics and Sciences Certification" at Bloomsburg University with Dean Lincoln, Biology and Allied Health (George Davis, Judy Kipe-Nolt, Carl Hansen), Mathematics (John Polhill), Business (Hayden Wimmer). In addition, I have assisted in developing the first clinical internship for "Genetic Counseling" between Bloomsburg University and Geisinger.

### **3. Medical Students:**

During my time as a Tenured Professor at the Penn State College of Medicine, I was involved in teaching graduate and medical students.

1998	Organized and participated in the teaching of a graduate level course entitled "Molecular Basis of Inherited Diseases" that was offered at the Penn State College of Medicine. This course used examples from the literature to highlight conceptual and practical approaches to a) the discovery of genes underlying human diseases; b) the identification and functional characterization of gene products; and c) the possible opportunities for clinical intervention through gene therapy.
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1999-2000 Taught case-based learning to medical students.

Since my return to assume a leadership position at Geisinger, I have continued to participate in the teaching of graduate and medical students and serve on several thesis committees at Penn State College of Medicine and continue to hold an appointment as an Adjunct Professor there. I do this on a *voluntary* basis even though traveling to the Hershey campus requires a 3-hour commute.

- 2003-2006 Served on the thesis committees for the following graduate students at Penn State College of Medicine:
- Soniya Sinhu, Candidate for a PhD degree, Genetics Program, Penn State College of Medicine
- Meredith Hannan, Candidate for MD/PhD degree, Genetics Program, Penn State College of Medicine
- Jasper Humbert, Candidate for a PhD degree, Genetics Program, Penn State College of Medicine.
- 2004 Taught a graduate level course entitled "Genetic Approaches to Biomedical Problems" offered at the Penn State College of Medicine
- 2005 Served as facilitator for "Graduate Research Colloquium" at the Penn State College of Medicine
- 2016-2019 Mentored the following medical students at the Charles E. Schmidt College of Medicine at Florida Atlantic University:
- Sarah Palumbo  
Bailey Pierce  
Jonathan Freeman

#### **4. Post-doctoral Trainees:**

- 1987-1992 Dr. Karen Foster, Recipient of American Heart Association Fellowship
- 1991-1992 Dr. James Cali
- Dr. Karen Proulx
- 1992-1996 Dr. Mohammed Rahmatullah
- 1992-1996 Dr. Rownak Rahmatullah, Recipient of American Heart Association Fellowship
- 1993-1996 Dr. Kausik Ray, Recipient of American Heart Association Fellowship
- 1995-1996 Dr. Dean Wenham
- Dr. Mark Richardson, Recipient of American Heart Association Fellowship
- 1996-1999 Dr. Qin Wang, Recipient of American Heart Association Grant-in- Aid
- 1997-1998 Dr. Jeffrey Yu
- 1997-1999 Dr. Sujata Kanwal
- 1998-2001 Dr. Tatyana Ivanova-Nikolova, Recipient of American Heart Association Grant-in-Aid

1999-2001 Dr. Ding-Ji Wang  
1999-2001 Dr. Charlene McWhinney, Recipient of American Heart Association Grant-in-Aid  
2001-2006 Dr. Chonang Li  
2001-2008 Dr. Hui Chen  
2006-2009 Dr. TinChung Leung  
2001-2011 Dr. Bill Schwindinger  
2012-2013 Dr. Mike Liu  
2014-present Dr. Misha Chernovski  
2017-present Dr. Gloria Brunori  
2019-present Dr. Yingcai Wang

#### **5. Visiting Scientists:**

1988 Dr. Michael Pugh, Assistant Professor of Chemistry, Bloomsburg University  
1989 Dr. Andrei Scamrov, US-USSR Scientific Exchange Program  
1990 Dr. Igor Rybalkin, US-USSR Scientific Exchange Program  
2001-2018 Dr. Carl Hansen, Professor of Biology and Allied Health, Bloomsburg University

#### **6. Clinical Trainees/Collaborations:**

As the Director of Research Education and Training, I oversee the research training component of the Internal Medicine Residency Program at the Geisinger Clinic. As part of this responsibility, I developed and wrote a new curriculum for the research training of medical residents as part of their re-accreditation process in 2004. In addition, I supervised and/or collaborated with the following clinical associates:

1993-1996.2 Dr. Robert Klein, Associate, Endocrinology, Geisinger Clinic  
2002-present Dr. Mark Stecker, Associate, Neurology, Geisinger Clinic  
2003-2005 Dr. Ping Zhang, Associate, Pathology, Geisinger Clinic  
2004-2006 Dr. Ayoub Mirza, Associate, Internal Medicine, Geisinger Clinic  
2004-2007 Dr. Mark Stecker, Associate, Neurology, Geisinger Clinic  
2009-2016 Dr. Joe Boscarino, Investigator, Center for Health Research, Geisinger Clinic  
Dr. Chris Still, Bariatric Surgery, Geisinger Clinic  
Dr. Carole Ulloa, Neurology, Geisinger Clinic  
Dr. Dan Horwitz, Orthopedics, Geisinger Clinic

#### **7. Geisinger-Regeneron Project Development:**

Hypertrophic Cardiomyopathy Project (Geisinger-Regeneron)  
Obstructive Sleep Apnea (Geisinger-University of Pennsylvania)  
Pharmacogenetics Project (Geisinger-Regeneron, Pennsylvania State University)  
IL33 Project (Geisinger-Regeneron)  
Prescription Opioid Abuse (Geisinger-University of Pennsylvania)

## RESEARCH PROGRAM:

The identification of genetic variants associated with diseases and their successful application to the clinical setting represents a current bottleneck. From the growing number of examples that have successfully managed to bridge this gap, it is clear that research aimed at prioritizing and identifying the functional consequences of such genetic variants is absolutely required for “personalized” medicine to become a reality for most patients. For this reason, a major focus of my laboratory has been to identify and prioritize the genetic variants that have the highest clinical potential. Since our eventual goal is to develop better pharmacologic treatments for complex diseases, we focus on the most “druggable” part of the genome: G-protein coupled receptor signaling pathways that represent the targets of >60% of drugs currently on the market. Moreover, we further focus only on the subset of genes that encode the rate-limiting step in these pathways since their manipulation will offer the most efficacious treatment. Our successful use of this approach is exemplified by our recent identification of *Gng7* encoding the G- $\gamma_7$  protein for determining response to dopamine in mice. This result led to the subsequent identification of a genetic variant of *GNG7* significantly associated with prescription opioid abuse in a Geisinger patient cohort.

Another focus of my laboratory has been to move away from a gene-centric to a pathway-centric strategy for treatment of complex diseases. Our successful implementation of this strategy is illustrated by our identification of impaired GABA-ergic neurotransmission as a common feature of human epilepsies of polygenic origin. By recapitulating this defect in mice, we showed that genetically modified mice have no overt seizure phenotype. However, by crossing these mice onto different genetic backgrounds, we identified novel “modifier” genes that exacerbate the GABA-ergic defect, resulting in a severe seizure phenotype. Subsequently, by performing RNA Seq analyses of human epileptic tissues, we revealed that even though the individual genetic variants were unique to each patient, their net effect was an impairment of GABA-ergic neurotransmission. This provides the rationale for designing drugs that target key pathways/networks rather than the individual genes that appear to be unique to each patient, thereby providing the rationale for a planned NIH grant to be submitted in 2013.

Collectively, these two examples represent only a small portion of our research activities as can be seen from the list of active AND pending grants. Moreover, none of these projects would be possible without strong collaborative ties to the clinic and to Regeneron Pharmaceuticals that direct our research questions and provide the rationale and experimental materials to investigate them.

### 1. Funding History:

I have been funded by the National Institutes of Health (NIH) for 35 years (NIH pre-doctoral training grant, NIH post-doctoral fellowship, and multiple NIH investigator awards). In addition to NIH support, I have received research grants from the American Heart Association, educational program support from Pfizer and various endowments, and business grant support for SignalPlex from Life Sciences Greenhouse and Keystone Innovation Zone.

Altogether, I have successfully competed for more than \$15 million in grant funding and have an additional \$6 million in pending grants whose fates are being decided at this time. In addition, I am the Geisinger Site Leader for several programmatic grants with other institutions that are under review at this time.

**1a. Completed.** I was the PI on all of the following grants

1988-1993 NIH, R29 Award GM39867 entitled "*G Proteins: Significance of  $\beta$  and  $\gamma$  subunit heterogeneity*"

1993-1997	NIH, R01 Award GM39867 entitled " <i>G Proteins: Significance of <math>\beta</math> and <math>\gamma</math> subunit heterogeneity</i> "
1989-1994	American Heart Association, National Established Investigator Award entitled " <i>Structure/Function of G-proteins involved in neurohormonal control of heart</i> "
1990-1992	American Heart Association, Pennsylvania Grant-In-Aid entitled " <i>Regulation of expression and function of G-proteins involved in neurohormonal control of heart</i> "
1993	Eagle Award
1993-1998	NIH, R01 Award HL49278 entitled " <i>Diversity of <math>\alpha_1</math>-adrenergic signaling pathways in heart</i> "
1998-2004	NIH, R01 Award GM58191 entitled " <i>Elucidating G protein signaling systems in vivo</i> "
1997-2000	American Heart Association, National Grant-In-Aid Award entitled " <i>Spatial Segregation of G proteins</i> "
1997-2000	NIH, R01 Award GM39867 entitled " <i>G Proteins: Significance of <math>\beta</math> and <math>\gamma</math> subunit heterogeneity</i> "
1998-2004	NIH, R01 Award HL49278 entitled " <i>Diversity of <math>\alpha_1</math>-adrenergic signaling pathways in heart</i> "
2001-2005	NIH, R01 Award GM39867 entitled " <i>G Proteins: Significance of <math>\beta</math> and <math>\gamma</math> subunit heterogeneity</i> "
2004-2006	Pennsylvania Life Sciences "Greenhouse" Award entitled " <i>Functional Genomics of GPCR signaling using zebrafish model</i> "
2004	Pfizer, K-12 Science Education Award
2005-2012	NIH, R01 Award GM39867 entitled " <i>G Proteins: Significance of <math>\beta</math> and <math>\gamma</math> subunit heterogeneity</i> "
2004-2009	NIH, R01 Award GM58191 entitled " <i>Elucidating G protein signaling in vivo</i> "
2007-2009	Keystone Innovation Zone Business Grant awarded to SignalPlex
2009-2010	NIH, R01 Award GM39867 ARRA Supplement
2010-2012	NIH, R01 Award GM39867 Administrative Supplement
2011-2013	Geisinger Translational Grant Award entitled " <i>Networks in Neocortical Epilepsy</i> "
2012-2014	NIH, R03 Award NS080083 entitled " <i>Gng5 function in neural progenitor cells</i> "

**1b. Active.**

2015-2020	NIH, R01 Award GM114665 entitled " <i>Novel Aspects of <math>G_{olf}</math> Signaling in Brain</i> "; PI, Robishaw J. <i>This grant revolves around understanding the <math>G_{olf}</math> signaling pathways that normally control locomotion, motivation, and reward. When dysfunctional, these pathways contribute to Parkinson's, Huntington's, and addictive disorders. Our identification of a novel <math>G\text{-}\alpha\beta\gamma</math> combination acting downstream of the D1 dopamine and A2a adenosine receptors will open the door for more selective treatment of these diseases.</i>
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- 2015-2020 NIH, R01 GM111913 entitled “*An integrated approach to study GPCR variants associated with complex diseases*”; MPI, Robishaw JD and Mirshahi T.  
*Using genomic information to improve healthcare is an enormous undertaking that will require novel strategies to rapidly separate “the wheat from the chaff”. Offering an innovative approach to this problem, this grant application will combine a disease-based filtering algorithm with a functional testing platform to rapidly identify G protein-coupled receptor variants producing functional defects that could contribute to disease pathology or treatment response. Validation of this approach, including details of the workflow and critical factors necessary for success, will pave the way for other institutions to implement similar strategies focused on additional patient cohorts of varying race/ethnicity and other gene families of suspected clinical relevance.*
- 2016-2021 NIH, R01 HL134015 entitled “*Approaches to Genetic Heterogeneity of Obstructive Sleep Apnea*”; MPI, Pack A and Robishaw JD.  
*This grant uses a combination of GWAS, PheWAS, and machine learning to identify the genetic bases of sleep apnea in a community-based population.*
- 2017-2022 NIH, R01 DA044015 entitled “*Clinical and Genetic Study of Prescription Opioid Addiction*”; MPI, Troiani V, Berrettini W, Robishaw JD,  
*This grant uses a combination of GWAS, PheWAS, and machine learning to identify the clinical and genetic predictors of prescription opioid addiction.*

**1c. Pending.**

- 2019-2024 NIH, RO1, entitled “*Functional Genomics of GPR37L1 Receptor in Migraine*”, MPI, Robishaw JD, Breitwieser GE, Toll L, Pending review

**2. Publications (Selected from ~100 peer-reviewed papers, reviews, book chapters):**

**Sampling of Full length, peer reviewed articles**

1. Neely JR, **Robishaw JD** and Vary TC: Control of myocardial levels of CoA and carnitine. *J. Mol. Cell. Cardiol.* 14: 37-42, 1982.
2. **Robishaw JD** and Neely JR: Rate-limiting step and control of CoA synthesis in heart. *J. Biol. Chem.* 257: 10967-10972, 1982.
3. **Robishaw JD** and Neely JR: Pantothenate kinase and control of CoA synthesis in the heart. *Am. J. Physiol.* 246: H532-H541, 1984.
4. Chua B, Giger K, Paine B, **Robishaw JD** and Morgan H: Effect of cysteine availability on protein and coenzyme A synthesis in rat heart. *Am. J. Physiol.* 246: C99-C106, 1984.
5. Sternweis PC and **Robishaw JD**: Isolation of two proteins with high affinity for guanine nucleotides from membranes of bovine brain. *J. Biol. Chem.* 259: 13806-13813, 1984.
6. Hurley JB, Simon MI, Teplow DB, **Robishaw JD** and Gilman AG: Homologies between signal transducing G proteins and ras gene products. *Science* 226: 860-862, 1984.
7. **Robishaw JD** and Neely JR: Coenzyme A metabolism. *Am. J. Physiol.* 248: E1-E9, 1985.
8. Fisher M, **Robishaw JD** and Neely JR: The properties and regulation of pantothenate kinase from rat heart. *J. Biol. Chem.* 260: 15745-15751, 1985.
9. Harris B, **Robishaw JD**, Mumby SM and Gilman AG: Molecular cloning of cDNA for the  $\alpha$  subunit of G-protein that stimulates adenylate cyclase. *Science* 229: 1274-1277, 1985.



10. **Robishaw JD**, Russell DW, Harris BA, Smigel MD and Gilman AG: Deduced primary structure of the  $\alpha$  subunit of the GTP-binding stimulatory protein of adenylate cyclase. *Proc. Natl. Acad. Sci. USA* 83: 1251-1255, 1986.
11. **Robishaw JD**, Smigel MD and Gilman AG: Molecular basis for two forms of the G-protein that stimulates adenylate cyclase. *J. Biol. Chem.* 261: 9587-9590, 1986.
12. Gao B, Gilman AG and **Robishaw JD**: A second form of the  $\beta$  subunit of signal-transducing G-proteins. *Proc. Natl. Acad. Sci. USA* 84: 6122-6125, 1987.
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14. **Robishaw JD**, Kalman VK, Moomaw C and Slaughter CA: Existence of two  $\gamma$  subunits of the G proteins in brain. *J. Biol. Chem.* 264: 15758-15761, 1989.
15. **Robishaw JD** and Foster KA: Role of G proteins in the regulation of the cardiovascular system. *Ann. Rev. Physiol.* 51: 229-244, 1989.
16. Levine MA, Feldman AM, **Robishaw JD**, Ladenson PW, Ahn TG, Moroney JF and Smallwood PM: Influence of thyroid hormone status on expression of genes encoding G protein  $\beta$  subunits in the rat heart. *J. Biol. Chem.* 265: 3553-3560, 1990.
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18. Maltese WA and **Robishaw JD**: Isoprenylation of C-terminal cysteine in a G-protein  $\gamma$  subunit. *J. Biol. Chem.* 265(30): 18071-18074, 1990.
19. Miller BA, Foster KA, **Robishaw JD**, Whitfield CF, Bell L and Cheung JY: Role of pertussis-toxin sensitive GTP-binding proteins in the response of erythroblasts to erythropoietin. *Blood* 77(3): 486-492, 1991.
20. Foster KA, McDermott PJ and **Robishaw JD**: The effect of culture and membrane potential on  $G_{\alpha}$  expression in rat cardiac myocytes. *Mol. and Cell. Biochem.* 104: 63-72, 1991.
21. Foster KA and **Robishaw JD**: Effect of calcium and cAMP on  $G_o$  expression in neonatal rat cardiac myocytes. *Amer. J. Physiol.* 261: 15-20, 1991.
22. Graber S, Figler R, Kalman-Maltese V, **Robishaw JD** and Garrison JC: Expression of functional  $\beta\gamma$  dimers of defined subunit composition using a baculovirus expression system. *J. Biol. Chem.* 267: 13123-13126, 1992.
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24. Iniguez-Lluhi JA, Simon M, **Robishaw JD** and Gilman AG: G protein  $\beta\gamma$  subunits synthesized in Sf9 cells: Functional characterization and the significance of prenylation of . *J. Biol. Chem.*, 267: 23409-23417, 1992.
25. Cali JJ, Balcueva EA, Rybalkin I and **Robishaw JD**: Selective tissue distribution of four different forms of the G protein  $\gamma$  subunits including a new form identified by cDNA cloning. *J. Biol. Chem.*, 267: 24023-24027, 1992.
26. Peng YW, **Robishaw JD**, Levine MA and Yau KW: Retinal rods and cones have distinct  $\beta$  and  $\gamma$  subunits. *Proc. Natl. Acad. Sci. USA*, 89: 10882-10886, 1992.

27. **Robishaw JD** and Balcueva EA: A high temperature transfer procedure for detection of G protein  $\gamma$  subunits. *Anal. Biochem.*, 208: 283-387, 1993.
28. **Robishaw JD** and Hansen, CA: Structure and function of G proteins mediating signal transduction pathways in the heart. *Alcoholism: Clin. Exp. Res.*, 18: 115-120, 1994.
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36. Hansen CA, Schroering AG, and **Robishaw JD**: Subunit expression of signal transducing G proteins in cardiac tissue: Implications for phospholipase C- $\beta$  regulation. *J. Mol. Cell. Cardiol.* 27: 471-484, 1995.
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62. Cheng KC, Levenson R, and **Robishaw JD**. Functional genomic dissection of multimeric protein families in zebrafish. *Developmental Dynamics* 228: 555-567, 2003.

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### **Manuscripts in Preparation.**

1. Chen H, Leung TC, Humbert J, Stauffer A, Sinha S, Giger K, Hansen CA, and **Robishaw JD**. Critical role for the zebrafish G protein  $\gamma_{T1}$  subunit in melatonin production.
2. Schwindinger WF, Sheridan K, Boscarino J, Erlich P, Gerhard G, and **Robishaw JD**. The G-protein  $\gamma_7$  is a likely genetic contributor to opioid actions in humans and mice.
3. Veatch, OJ, Rauer, CR, Josyula, N, Mazzotti, DR, Keenan, BT, Bagai, K, Malow, BA, **Robishaw, JD**, Pack, AI, Pendergrass, SA. Characterization of Genetic and Phenotypic Heterogeneity of Obstructive Sleep Apnea Using Electronic Health Records. Under Review.

### **RECENT CONTINUING EDUCATION:**

- |      |   |
|------|---|
| 2001 | Intro to Clinical Research  |
| 2002 | ASPET Short Course, Behavioral Pharmacology for Gene Jockeys and Molecular Biologists, Orlando, FL                    |
| 2002 | Jackson Laboratory Workshop, Phenotyping New Mouse Models for Heart, Lung, Blood, and Sleep Disorders, Bar Harbor, ME |
| 2001 | Jackson Laboratories Workshop, Mouse Colony Management: Principles and Practices, Bar Harbor, ME                      |
| 2003 | Jackson Laboratories Symposium, Mouse Initiatives V: Genomics of Complex Systems in                                   |

Biomedical Research, Bar Harbor, ME

- 2010 Jackson Laboratories Workshop, Genetics of Addiction, Bar Harbor, ME
- 2011 Jackson Laboratories Workshop, Epilepsy, Bar Harbor, ME
- 2019 IACUC Re-Certification
- 2019 IRB Re-Certification
- 2019 Florida Atlantic University, College of Medicine  
Completed CITI Training
- 2019 University of Colorado, Awarded Certificate for "Implementing Pharmacogenomics in the Clinic"
- 2019 Advanced Course on "Chronic Pain", Neuroscience School of Advanced Studies, Venice, Italy
- 2019 Advances in Integrated Nutrition, Thomas Jefferson University, Philadelphia, PA
- 2020 AAMC Leadership Conference, Washington, DC

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**EDUCATION**

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- Ph.D. in Psychology**, Tulane University, LA 2007 – 2009  
Advisor: Dr. Jill M. Daniel  
Dissertation: Long-term cognitive and neurobiological consequences of transient estradiol exposure during middle age in ovariectomized rats.
- M.S. in Psychology**, Tulane University, LA 2003 – 2007  
Advisor: Dr. Paul J. Colombo  
Thesis: Memory-system specificity in mechanisms of spatial learning.
- B.S. in Psychology/Minor in Sociology**, University of Houston, TX 1999 – 2002
- B.S. in Physics/Minor in Computer Science**, University of Mumbai, India 1995 – 1998

**RESEARCH EXPERIENCE**

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- Assistant Professor**, ESHP, Florida Atlantic University, FL 2020 – now  
Research Topic 1: The role of physical exercise-hormone interactions in the modulation of neuroplasticity.  
Research Topic 2: The mechanisms of exercise-driven repair of the binge alcohol-damaged brain.  
Research Topic 3: The role of perineuronal nets in mediating exercise-induced plasticity during adolescence and aging.
- Research Assistant Professor**, Department of Psychology, University of Houston, TX 2015 – 2020  
Independent Research Topic: Physical exercise and estrogen therapy as midlife strategies to buffer against postmenopausal aging-related neurodegeneration and cognitive decline.  
Collaborative Research Topic 1: Binge alcohol-induced neurodegeneration as a function of sex and age.  
Collaborative Research Topic 2: Exercise as a targeted approach to regulate the neuroimmune response to pediatric cranial radiotherapy.  
Collaborative Research Topic 3: The impact of adolescent physical exercise on stress resilience in adulthood.
- Postdoctoral Fellow**, University of Houston/Baylor College of Medicine, TX 2011 – 2014  
PI: Dr. J. Leigh Leasure, Department of Psychology, University of Houston  
PI: Dr. M. Waleed Gaber, Department of Pediatrics, Baylor College of Medicine  
Research Topic: Therapeutic approaches to mitigate the long-term physiological, neural, and cognitive sequelae of pediatric cranial radiotherapy.
- Postdoctoral Fellow**, Baylor College of Medicine, TX 2009 – 2011  
PI: Dr. Joanna L. Jankowsky, Department of Neuroscience  
Research Topic: A novel combination therapy approach to maximize pathological and cognitive recovery in a transgenic mouse model of Alzheimer's disease.
- Research Technician**, Baylor College of Medicine, TX 2002 – 2003  
PI: Dr. Ronald L. Davis, Department of Molecular and Cellular Biology  
Role: Develop a novel ethanol delivery system and behavioral assays to study chronic alcoholism in *drosophila melanogaster*.

## CURRENT EXTRAMURAL SUPPORT

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R01 AA025380-01A1, Leasure (PI) Award amount: \$1,721,250 8/18 – 4/23  
NIH/National Institute on Alcohol Abuse and Alcoholism  
“Alcohol, Exercise & the Female Brain”  
Role: Co-I

R21 AG056039-01, Rodgers (PI) Award amount: \$401,250 9/17 – 05/21  
NIH/National Institute on Aging  
“Interactive Effects of Short-Term Estrogen Replacement and Long-Term Exercise on the Aging Brain and Cognition in a Rodent Model of Menopause”  
Role: PI

## PEER-REVIEWED PROFESSIONAL PUBLICATIONS

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- West, I., Rodgers, S.P., & Leasure, J.L. (2020). Neural perturbations associated with recurrent binge alcohol in male and female rats. *Alcoholism: Clinical and Experimental Research*.
- Cortez, I., Rodgers, S.P., Kosten, T.A., & Leasure, J.L. (2020). Sex and age effects on neurobehavioral toxicity induced by binge alcohol. *Brain Plasticity*. 6(1):5-25.
- Bettio, L.E., Thacker, J., **Rodgers, S.P.**, Brocardo, P.S., Christie, B.R., & Gil-Mohapel, J. (2020). Interplay between hormones and exercise on hippocampal plasticity across the lifespan. *BBA Molecular Basis of Disease*. Aug 1866(8):165821.
- Gaber, M.W., Rodgers S.P., Tang, T.T., Sabek, O.M., & Zawaski, J.A. (2020). Differentiation of heterogeneous radiation exposure using hematology and blood chemistry. *Radiation Research*. Jan 193(1):24-33.
- Perez, E.C., Bravo, D.R., Rodgers S.P., Khan, A.R., & Leasure, J.L. (2019). Shaping the adult brain with exercise during development: Emerging evidence and knowledge gaps. *International Journal of Developmental Neuroscience*. Nov 78:147-155.
- Perez, E.C., Rodgers S.P., Inoue, T., Pedersen, S.E., Leasure, J.L., & Gaber, M.W. (2018). Olfactory memory impairment differs by sex in a rodent model of pediatric radiotherapy. *Frontiers in Behavioral Neuroscience*, Aug 12:158.
- Sahnoune, I., Inoue, T., Kesler, S.R., Rodgers S.P., Sabek, O.M., Pedersen, S.E., et al. (2018). Exercise ameliorates neurocognitive impairments in a translational model of pediatric radiotherapy. *Neuro-Oncology*, 20(5):695-704.
- Rodgers, S.P.**, Zawaski, J.A., Sahnoune, I., Leasure, J.L., & Gaber, M.W. (2016). Radiation-induced growth retardation and microstructural and metabolite abnormalities in the hippocampus. *Journal of Neural Plasticity*, Vol (2016).
- Daniel, J.M., Witty, C.F., & Rodgers, S.P. (2015). Long-term consequences of estrogens administered in midlife on female cognitive aging. *Hormones and Behavior*, Aug 74: 77 85.
- Rodgers, S.P.**, Trevino, M., Zawaski, J.A., Gaber, M.W., & Leasure, J.L. (2013). Neurogenesis, exercise, and cognitive late effects of pediatric radiotherapy. *Journal of Neural Plasticity*, Vol (2013).
- Han, H.J., Allen, C.C., Buchovecky, C.M., Yetman, M.J., Born, H.A., Marin, M.A., Rodgers, S.P., et al. (2012). Strain background influences neurotoxicity and behavioral abnormalities in mice expressing the tetracycline transactivator. *Journal of Neuroscience*, 32(31): 10574-10586.
- Rodgers, S.P.**, Born, H., Das, P., & Jankowsky, J.L. (2012). Transgenic APP expression during postnatal development causes persistent locomotor hyperactivity in the adult. *Molecular Neurodegeneration*, Jun 18:7:28.
- Winsauer, P.J., Daniel, J.M., Filipeanu, C.M., Leonard, S.T., Hulst, J.L., Rodgers, S.P., Lassen-Greene, C.L., & Sutton, J.L. (2011) Long-term behavioral and pharmacodynamic effects of delta-9-tetrahydrocannabinol in female rats depend on ovarian hormone status. *Addiction Biology*, 16: 64-81.



**Rodgers, S.P.**, Bohacek, J. & Daniel, J.M. (2010). Transient estradiol exposure during middle-age in ovariectomized rats exerts lasting effects on cognitive function and the hippocampus. *Endocrinology*, 151:1194-203.

## **FELLOWSHIPS AND AWARDS**

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NIH Biology of Aging Postdoctoral Fellowship, Huffington Center on Aging Baylor College of Medicine, TX	2009 – 2011
Robert E. Flowerree Award for Summer Research Tulane University, LA	2004 – 2008
Greater New Orleans Society for Neuroscience Travel Award 17 <sup>th</sup> Annual LSU Neuroscience Center Retreat, LA	2005

## **INVITED TALKS AND POSTER PRESENTATIONS**

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Tulane Brain Institute Seminar Series, Neuroscience Program, Tulane University, LA, October 21, 2020: “Exercise & Hormones: Contributions to Neurobehavioral Plasticity.”

Health Tea Brown Bag, Department of Psychological Sciences, Rice University, TX, February 17, 2020: “Midlife Strategies to Promote Cognitive and Emotional Health in Aging Females.”

DCBN Colloquium Series, Department of Psychology, University of Houston, TX, March 9, 2018: “Midlife Strategies to Promote Healthy Cognitive Aging in Females.”

Department of Natural Sciences Colloquium Series, University of Houston-Downtown, TX, September 22, 2016: “Exercise and estrogen replacement effects on the postmenopausal brain and cognition.”

Biology of Behavior Institute Retreat, University of Houston, TX, May 7, 2016: “The benefits of exercise and postmenopausal estrogen replacement for the aging brain and cognition.”

Bravo, D.R., Rodgers, S.P., Perez, E.C., & Leasure, J.L. (2020). The effects of binge alcohol exposure in male and female rats on the five-choice serial reaction time task. *Gordon Research Conference*.

Gaber, M.W., Rodgers, S.P., Tang, T.T., Sabek, O.M., & Zawaski, J.A. (2019). Differentiation of heterogeneous radiation exposure using hematology and blood chemistry. *Radiation Research*.

Oldridge, E.K., Phu, D., Khan, A.R., Masood, T., Aickareth, J.V., Leasure, J.L., & **Rodgers, S.P.** (2019). Independent and interactive effects of short-term estrogen replacement and long-term physical activity post menopause on brain and behavior. *Society for Behavioral Neuroendocrinology Meeting*.

**Rodgers, S.P.**, Zawaski, J.A., Nelson, K.H., Leasure, J.L., & Gaber, M.W. (2014). Avoiding the pituitary/hypothalamic region and fractionating the dose during cranial radiotherapy mitigates radiation-induced growth retardation. *Society for Neuroscience Meeting*.

**Rodgers, S.P.**, Barsales, M., Gaber, M.W., & Leasure, J.L. (2012). Acute and long-term effects of fractionated and single-dose irradiation in a rodent model of pediatric radiotherapy. *Society for Neuroscience Meeting*.

**Rodgers, S.P.**, Das, P., Golde, T.E., & Jankowsky, J.L. (2010). Maximizing cognitive recovery in a mouse model of Alzheimer’s disease: Will arresting A $\beta$  suffice or will plaque clearance be required? *Huffington Center on Aging Research Symposium*.

**Rodgers, S.P.**, Peglar, L.M., Lipinski, R.L., & Daniel, J.M. (2008). Pre-exposure to estradiol replacement in middle-aged ovariectomized rats exerts lasting effects on working memory performance in a radial-arm maze. *Society for Neuroscience Meeting*.

**Rodgers, S.P.**, O’Malley, J., Neeland, M., & Colombo P.J. (2007). Context exposure-related increase in zif268 in area CA3 following fear conditioning. *Society for Neuroscience Meeting*.

**Rodgers, S.P.,** Eil, R., & Colombo, P.J. (2005). Place-learning is correlated with levels of phosphorylated cAMP response element-binding protein in hippocampal pyramidal cell layers one hour after acquisition. *Society for Neuroscience Meeting*.

## **TEACHING/MENTORING EXPERIENCE**

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<b>Lecturer</b> , University of Houston, TX Introduction to Psychological Statistics Introduction to Psychology	2017 – 2020
<b>Instructor</b> , Tulane University, LA Biological Psychology Lab	2004 – 2006
<b>Graduate Teaching Assistant</b> , Tulane University, LA Behavioral Neuroendocrinology Lab Psychopharmacology Lab Neuroscience Methods Lab	2005 – 2008
<b>Academic Committees</b> , University of Houston, TX <i>Dissertation committee member</i> Rebecca West - Department of Psychology, Ph.D., 2020. “Neural Effects of Weekly Binge Alcohol: Sex Differences?” <i>Master’s thesis committee member</i> Emma Perez – Department of Psychology, M.A., 2016. “Olfactory Deficits in a Rodent Model of Pediatric Radiotherapy.” Diana Bravo – Department of Psychology, expected 2021. “The Effect of Learning on Dendritic Arborization in the Prefrontal Cortex: Sex Differences?”	
<b>Undergraduates Mentored</b> University of Houston, TX Rhea Neycheril, Justin Aickareth, Delia Gomez, Roman Torres, Daniel Phu, Tayyaba Masood, Ali Khan, Reshma Jose, Raima Siddiqui, Briana Stephen, Uchenna Inoma Tulane University, LA Robert Eil, Jennifer O’Malley, Rebecca Lipinski, Lindsay Peglar	2018 – 2020  2006 – 2009

## **PROFESSIONAL SERVICE**

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Pharmacotherapies for Alcohol and Substance Abuse Consortium (PASA), grant reviewer	2018
PLOS One, ad hoc reviewer	2018 – now
Electronic Animal Medical Records System Selection Committee, University of Houston	2016

## **PROFESSIONAL AFFILIATIONS AND MEMBERSHIPS**

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Society for Behavioral Neuroendocrinology, Member	2019 – now
DCBN Program, Dept. of Psychology, University of Houston, Affiliate Faculty Member	2018 – now
Society for Neuroscience, Member	2004 – 2018
Baylor College of Medicine Postdoctoral Association, Secretary	2010 – 2011

**CURRICULUM VITAE**  
**(Updated Jan 2021)**

MÓNICA ROSSELLI  
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Charles E. Schmidt College of Science  
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Davie, Florida 33144

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E-mail: [mrossell@fau.edu](mailto:mrossell@fau.edu)

**EDUCATION**

B.A. in Psychology	<i>Pontificia Universidad Javeriana</i> Bogota (Colombia), 1980
M.A. Psychology	Ball State University (Muncie, Indiana, USA), 1982
Ph.D. Biomedical Sciences (Neuropsychology)	National Autonomous University of Mexico. Mexico D.F., Mexico, 1989

**PROFESSIONAL EXPERIENCE**

Professor of Psychology	Florida Atlantic University August 2007 - present
Associate Professor of Psychology	Florida Atlantic University August 1999 - 2007
Assistant Chair	Department of Psychology Charles E. Schmidt College of Science Florida Atlantic University July 2002 - present
Chair	Department of Psychology College of Liberal Arts Florida Atlantic University August 2000 - June 2002
Assistant Professor of Psychology	Department of Psychology Division of Science College of Liberal Arts Florida Atlantic University August 1996 - August 1999

Adjunct Assistant Professor of Neurology	University of Miami/ Jackson Memorial Hospital Miami, 1996 - 2004
Assistant Professor	Miami Institute of Psychology January 1994 -August 1996
Consultant Neuropsychologist	Division of Behavioral Neurology University of Miami\Jackson Memorial Hospital June 1995 - June 1996
Neuropsychologist	Department of Neurology San Juan de Dios Hospital Bogota, Colombia, 1990 - 1993

## **PROFESSIONAL ACTIVITIES**

Vice-President	Colombian Association of Neuropsychology 1983-1985
Secretary	Colombian Association of Neuropsychology 1991-1993
Associate Member	Centre de Recherche du Centro Hospitalier Cote-des-Neiges (Montreal, Canada)
Chair Scientific Program Committee	Latin American Society of Neuropsychology (SLAN), 1995-1997
Secretary	Latin American Association of Neuro- Psychology (ALAN). 1998 to 2003
Secretary and Treasurer	Hispanic Neuropsychological Society 2001-2006
Member	Task Force on Women in Neuropsychology. National Academy of Neuropsychology, 2006-2008
Member	Women in Leadership: National Academy of Neuropsychology, 2008, 2009
Chair, Scientific Program Committee	Latin American Association of Neuropsychology (ALAN) 2006-2007
President	Latin American Association of Neuropsychology (ALAN) 2006-2008, 2016-2018

Program Committee	38 <sup>TH</sup> Annual Meeting, International Neuropsychological Society, Acapulco, Mexico, February 2010
Chair, Scientific Program	IX Bi-annual Meeting Latin American Association of Neuropsychology (ALAN)- Guadalajara, Mexico, May 2016
Associate Editor	Journal "Neuropsicología, Neuropsiquiatría y Neurociencias" (Neuropsychology, Neuropsychiatry and Neuroscience) 1998 – present
Editorial Board	Child Neuropsychology -2012-present <i>Estudios de Psicología</i> /Psychology Studies -2012- present Psychological Assessment – 2014-2019 <i>Revista Mexicana de Comunicación, Audiología, Otoneurología Y Foniatría</i> – 2014-present <i>National Psychological Journal</i> - Russian Psychological Society 2016-present
Ad-hoc reviewer	Applied Neuropsychology, Archives of Clinical Neuropsychology, Assessment, Austrian Science Foundation, Brazilian Journal of Neurology, Developmental Neuropsychology, European Journal of Psychological Assessment, Journal of Black Psychology, International Psychogeriatrics, Journal of Clinical and Experimental Neuropsychology, Journal of Psychoneuroendocrinology, Journal of the International Neuropsychological Society, National Science Foundation, Neuropsychology Review, Neuropsychology, Netherland Organization for Scientific Research: Social Sciences, Psychological Reports, Psychological Sciences, The Clinical Neuropsychologist, Applied Psycholinguistics.

## MEMBERSHIPS

ASSOCIATION FOR PSYCHOLOGICAL SCIENCE

HISPANIC NEUROPSYCHOLOGICAL SOCIETY

INTERNATIONAL NEUROPSYCHOLOGICAL SOCIETY

LATIN AMERICAN ASSOCIATION OF NEUROPSYCHOLOGY

NATIONAL ACADEMY OF NEUROPSYCHOLOGY (fellow member)

## **AWARDS**

Fulbright Scholarship, 1980-1982

Neuroscience Research Award (Colombia), 1984

National Researcher (Colombia), 1994

Member of the research team receiving the National Prize of Research in Neurology, (Colombia), 1997

Science Award "Alejandro Angel Escobar" 1997. Given to the Familial Alzheimer Disease Colombian research team. Category: Science

Award for Excellence in Undergraduate Teaching -2000- Florida Atlantic University

Charles E. Schmidt College of Science Nominated Candidate for the FAU Distinguished Teacher of the Year Award- 2006

Clinical Neuropsychology Spanish Consortium: Hispano-American Neuropsychology Award – 2013

## **INVITED COLLOQUIA**

July, 1993	Universidad del Norte (Barraquilla, Colombia)
April, 1995	V Latin American Meeting of Neuropsychology Cartagena (Colombia)
September, 1996	VII National Meeting of the Venezuelan Neurological Society, Caracas (Venezuela)
May, 1998	University of Manizales, Manizales, Colombia
February, 2000	Institute of Neuroscience, Guadalajara, México,
March, 2001	University of Guadalajara, Guadalajara México
April 2001	International Meeting of the Latin American Neuropsychological Society, Cartagena, Colombia
July, 2002	International University of Andalucía, La Rabida, Spain
July 2002	III Iberoamerican Meeting of Psychology, Bogotá,

	Colombia
August 2002	Colombian Society of Psychology, Bogota, Colombia
October 2002	Department of Psychology, University of Guadalajara, Guadalajara, Mexico
July 2003	Department of Psychology, University of Santiago of Compostela, Spain
July 2003	Department of Psychology, University of Salamanca, Spain
December 2003	Neuroscience Institute, Guadalajara, México
July 2004	Department of Psychology, Complutense University, Madrid, Spain
March 2005	Latin-American Neuropsychological Society, Acapulco, Mexico
December 2005	Department of Psychology, University of Manizales, Colombia.
July 2006	Neuroscience Institute, Mexico
May 2007	Latin-American Neuropsychological Society, Manizales, Colombia
July 2007	Complutense University, Madrid, Spain.
July 2008	Department of Psychology, University of Salamanca, Salamanca, Spain
June 2009	Pontificia Universidad Católica, Santiago de Chile, Chile
July 2009	Complutense University, Madrid, Spain
August 2009	Universidad Central del Ecuador, Quito, Ecuador
November 2009	Universidad de Guadalajara, Guadalajara, Mexico
July 2010, 2011	Universidad de Salamanca
July 2010, 2011	Universidad Católica de Chile, Santiago, Chile
Noviembre 2010	Universidad Autónoma del Paraguay, Asunción, Paraguay

June 2010	Canberra Hospital/The Australian National University/ Canberra, Australia
March 2011	Asociación Mexicana de Neuropsicología Pediátrica- Mazatlán, México
November 2011	International Conference in Pediatric Neuropsychology, Madrid, Spain keynote speaker
December 2011	Neuroscience Institute, Guadalajara México
February 2012	University of Malaga, Malaga, Spain
March 2012	Universidad Católica de Chile, Santiago, Chile
April 2012	Cognitive Neuroscience Division of the Taub Institute for Research on Alzheimer Disease, Columbia University, New York City, NY, USA
May 2012	<i>Centro de Neurociencias</i> , La Habana, Cuba
January 2013	Universidad de Chile, Santiago, Chile
July 2013	Belgrade University, Belgrade, Serbia
July 2013	Complutense University, Madrid Spain
October 2013	Fundación de Neuropsicología, Buenos Aires, Argentina
February 2014	<i>Asociación Latinoamericana de Neuropsicología</i> , Barranquilla, Colombia
March, 2014	Universidad Católica de Chile, Santiago, Chile
June, 2014	St Petersburg State University, Saint Petersburg, Russia
July, 2014	Universidad Complutense, Madrid, Spain
July, 2014	University of Salamanca, Salamanca, Spain
August, 2014	Universidad de Chile, Santiago, Chile
September 2014	Lomonosov State University, Moscow, Russia
April 2015	Pontificia Universidad Católica, Santiago de Chile, Chile
May 2015	Department of Psychology, <i>Seconda Università degli Studi</i>



*di Napoli, Caserta, Italy*

July 2015	X Jornada Anual en Neuropsicología. Salamanca, Spain
October 2015	II Congreso Boliviano de Neuropsicología, Santa Cruz de la Sierra, Bolivia
October 2015	Department of Psychology, <i>Universidad Autónoma Gabriel René Moreno</i> , Santa Cruz de la Sierra, Bolivia
October 2015	Department of Speech Pathology, University of Patras, Greece
November 2015	V Congreso Internacional de Neuropsicología Clínica, Guadalajara, México
April 2016	Invited faculty, Department of Psychology, <i>Universidad Católica de Chile</i> , Santiago, Chile
May 2016 & 2017	Visiting faculty, Department of Psychology, Lomonosov Moscow State University, Moscow Russia
May 2016	Keynote Speaker. IX Bi-annual Meeting Latin American Association of Neuropsychology (ALAN)- Guadalajara, Mexico
August 2016	Invited faculty. Neurosciences Program, department of Psychology, University of Los Andes, Bogota, Colombia
September 2016	Visiting faculty Department of Pathology, Neuropsychology Doctorate Program, University of Asuncion, Asuncion, Paraguay
November 2016	Invited faculty, Universidad de Chile, Speech Pathology Program, Santiago, Chile
August 2017	Invited faculty, Universidad de Chile, Speech Pathology Program, Santiago, Chile
November 2017	Department of Psychology, Helsinki University, Helsinki, Finland
November 2017	Keynote speaker, International Conference on Peace, Conflict and Violence, Lahore, Pakistan
January 2018	Chair Workshop, Annual MCI Symposium, Miami Beach, FL

March 2018	Invited faculty, Catholic University of Chile, Santiago
April 2018	Visiting faculty, Department of Psychology, Lomonosov Moscow State University, Moscow Russia
June 2018	Keynote Speaker, Bi-annual meeting Latin American Association of Neuropsychology, Guatemala City, Guatemala
September 2018	Visiting faculty, Department of Neurology University of Cagliari, Sardinia, Italy
November, 2018	Keynote speaker- International Seminar on neuropsychological functions in children development. Santiago de Chile, Chile
January 2019	Chair/organizer workshop at Annual MCI meeting, Miami Beach, FL
March 2019	Keynote speaker Spanish Federation of Neuropsychology, Madrid.
April 2019	Invited faculty Catholic university of Chile, Santiago, Chile
May 2019	Invited faculty. Peoples's friendship University of Russia, Moscow, Russia
November 2019	Keynote speaker, International Conference of Neuropsychology, Guadalajara, Mexico
March 2020	Invited speaker via Zoom. Catholic University of Chile, Santiago, Chile

**PUBLICATIONS (current or previous student co-author in *bold italics throughout CV*)**

**Refereed Works**

**Journal publications:**

**Rosselli, M., Rosselli, A., Vergara, I., & Ardila, A. (1985).** Topography of the hemi-inattention syndrome. *International Journal of Neuroscience, 27*, 165-172.

Rosselli, D., **Rosselli, M., Penagos, B., & Ardila, A. (1986).** Huntington's disease in Colombia: A neuropsychological analysis. *International Journal of Neuroscience, 32*, 933-942.

**Rosselli, M., Lorenzana, P., Rosselli, A., & Vergara, I.** (1987). Wilson's disease: A reversible dementia. *Journal of Clinical and Experimental Neuropsychology*, 9, 399-406.

Ardila, A., **Rosselli, M., & Ardila, O.** (1988). Foreign accent: An aphasic epiphenomenon? *Aphasiology*, 2, 493-499.

Ardila, A., & **Rosselli, M.** (1988). Temporal lobe involvement in Capgras syndrome. *International Journal of Neuroscience*, 43, 219-224.

Ardila, A., Ardila, O., Bryden, M.P., Ostrosky, F., **Rosselli, M., & Steenhuis, R.** (1989). Effects of cultural background and education on handedness. *Neuropsychologia*, 27, 893-898.

Ardila, A., **Rosselli, M., & Rosas, P.** (1989). Neuropsychological assessment in illiterates: Visuospatial and memory abilities. *Brain and Cognition*, 11, 147-166.

Ardila, A., & **Rosselli, M.** (1989). Neuropsychological characteristics of normal aging. *Developmental Neuropsychology*, 5, 307-320.

**Rosselli, M., & Ardila, A.** (1989). Calculation deficits in patients with right and left hemisphere damage. *Neuropsychologia*, 27, 607-617

Ardila, A., & **Rosselli, M.** (1990). Acalculias. *Behavioral Neurology* 3, 39-48.

Ardila, A., & **Rosselli, M.** (1990). Conduction aphasia and verbal apraxia. *Journal of Neurolinguistics*, 5, 1-14.

**Coello, E., Ardila, A., & Rosselli, M.** (1990). Is there a cognitive marker in major depression? *International Journal of Neuroscience*, 50, 137-145.

**Rosselli, M., Ardila, A., Florez, A., & Castro, C.** (1990). Normative data on the Boston Diagnostic Aphasia Examination in a Spanish Speaking population. *Journal of Clinical and Experimental Neuropsychology*, 12, 313-322.

**Rosselli, M., Ardila, A., & Rosas, P.** (1990). Neuropsychological assessment in illiterates II: Language and praxic abilities. *Brain and Cognition*, 12, 281-296.

Ardila, A., **Rosselli, M., & Strumbasser, S.** (1991). Neuropsychological effects of cocaine abuse. *International Journal of Neuroscience*, 57, 73-79.

**Rosselli, M., & Ardila, A.** (1991). Effects of age, education and gender on the Rey-Osterrieth Complex Figure *The Clinical Neuropsychologist*, 5, 370-376.

Ardila, A., & **Rosselli, M.** (1992). Repetition in aphasia. *Journal of Neurolinguistics* , 7, 1-11.

Lowenstein, D.A., Ardila, A., **Rosselli, M., Hayden, S., Duara, R., Berkowitz, N., Linn-Fuentes, P., Mintzer, J., Norville, M., & Eisdorfer, C.** (1992). A comparative analysis of

functional status among Spanish and English-speaking patients with dementia. *Journal of Gerontology*, 47, 389-394.

Ardila, A., & **Rosselli**, M. (1993). Language deviations in aphasia: A frequency analysis *Brain and Language*, 44, 165-180.

Ardila, A., & **Rosselli**, M. (1993). Spatial agraphia. *Brain and Cognition*, 22, 75-95.

**Rosselli**, M. (1993). Neuropsychology of illiteracy. *Behavioral Neurology*, 6, 107-112.

**Rosselli**, M., & Ardila, A. (1993). Developmental norms for the Wisconsin Card Sorting Test in 5 - to 12-year-old children. *The Clinical Neuropsychologist*, 7, 145-154.

Ardila, A., & **Rosselli**, M. (1994). Averbia as a selective naming disorder: A single case report. *Journal of Psycholinguistic Research*, 23, 139-148.

Ardila, A., & **Rosselli**, M. (1994) Development of language, memory and visuospatial abilities in 5 -to 12-year-old children using a neuropsychological battery. *Developmental Neuropsychology*, 10, 97-120.

Ardila, A., & **Rosselli**, M. (1994). Spatial acalculia. *International Journal of Neuroscience*, 78, 177-184.

Ardila, A., & **Rosselli**, M. (1994). Spatial alexia. *International Journal of Neuroscience*, 76, 49-59.

Ardila, A., **Rosselli**, M., & Bateman, J.R. (1994). Factorial structure of cognitive activity. *Behavioural Neurology*, 7, 49-58.

Ardila, A., **Rosselli**, M. & Ostrosky, F. (1996). Agraphia in Spanish-language. *Aphasiology*, 10, 723-739.

Ardila, A. & **Rosselli**, M. (1996). Soft neurological signs in children: A normative study. *Developmental Neuropsychology*, 12, 179-198.

Ardila, A., & **Rosselli**, M. (1996). Spontaneous language production: Age and educational effects. *International Journal of Neuroscience*, 87, 71-78.

**Rosselli**, M., & Ardila, A. (1996). Cognitive effects of cocaine and polydrug abuse. *Journal of Clinical and Experimental Neuropsychology*, 18, 122-135.

Ardila, A., **Rosselli**, M., Arvizu, L., & Kuljis, R. (1997). Alexia and agraphia in posterior cortical atrophy. *Journal of Neuropsychiatry, Neuropsychology, and Behavioral Neurology*, 10, 52-59.

Lopera, F., Ardila, A., Martinez, Al., Madrigal, L., Arango-Viana, J.C., Lemere, C., Arango-Lasprilla, J.C., Hincapie, L., Arcos, M., Ossa, J.E., Behrens, I.M., Norton, J., Lendon,

C., Goates, A., Ruiz-Linares, A., **Rosselli, M.**, & Kosik, K.S. (1997). Clinical features of early-onset Alzheimer disease in a large kindred with an E280A presenilin-1 mutation. *JAMA*, *277*, 793-799.

Ardila, A., Galeano, L.M. & **Rosselli, M.** (1998). Toward a model of neuropsychological activity, *Neuropsychology Review*, *8*, 171-190.

Ostrosky, F., Ardila, A., **Rosselli, M.** López-Arango, G., & Uriel-Mendoza, V. (1998). Neuropsychological test performance in illiterates. *Archives of Clinical Neuropsychology*, *13*, 645- 660.

Pineda, D., Ardila, A., **Rosselli, M.**, Cadavid, C., Mancheno, S. (1998). Executive dysfunction in attention deficit hyperactivity disorder children. *International Journal of Neuroscience*, *96*, 177-196.

**Rosselli, M** & Ardila, A (1998) Acalculia. *Neurobase*. San Diego: Arbor Publishing Corporation.

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Ardila, A., **Rosselli, M., Arvizu, L., & Kuljis, R. (1997).** Alexia and agraphia in posterior cortical atrophy. *Eight Annual Meeting of the American Neuropsychiatric Association*. Orlando, Florida, U.S.A. (Paper resulted in publication)

Ardila, A., **Rosselli, M., Bateman, J.R. & Guzmán, M. (1997).** Perfil neuropsicológico de los niños con defectos motores en la producción del lenguaje (Neuropsychological profiles of children with motor defects in language production). *V Latin American Meeting of Neuropsychology*, Guadalajara, Mexico.

López-Arango, G., Mendoza, V., Ostrosky-Solis, F., Ardila, A., & **Rosselli, M. (1997).** Perfil neuropsicológico en el analfabetismo (Neuropsychology of illiteracy). *V Congreso de la*



*Sociedad Latinoamericana de Neuropsicología*, Guadalajara, Mexico. (Paper resulted in publication)

Ostrosky, F., Ardila, A., **Rosselli, M.**, & Gomez, C. (1997). Evaluación neuropsicológica: desarrollo de un instrumento para la evaluación de las funciones cognitivas (Neuropsychological assessment: An instrument for cognitive appraisal). *V Congreso Sociedad Latinoamericana de Neuropsicología*, Guadalajara (Mexico):.

Pineda, D., Ardila, A., **Rosselli, M.**, Cadavid, C., & Mancheno, S. (1997). Análisis discriminante de la evaluación neuropsicológica de niños con deficiencia atencional con hiperactividad {Discriminative analysis of ADHD children}. Guadalajara (Mexico): *V Congreso de la Sociedad Latinoamericana de Neuropsicología*. (Paper resulted in publication)

**Rosselli, M.**, Ardila, A., Arvizu, L., **Kretzmer, T.**, **Standish, V.**, **Lieberman, J.**, **Phillips, L.** & **Friedman, C.** (1997). Habilidades numéricas durante el envejecimiento normal y patológico (calculation abilities in normal and abnormal aging). *V Latin American Meeting of Neuropsychology.*, Guadalajara, Mexico.

**Rosselli, M.**, Ardila, A., Ostrosky, F., **Jaramillo, K.**, **Padilla, M.**, & **Palomino, J.** (1997). Interferencia manual verbal en sujetos bilingües Español-Inglés (Manual-verbal interference in Spanish-English bilinguals). *V Latin American Meeting of Neuropsychology*, Guadalajara, Mexico.

Ardila, A., **Rosselli, M.** & Galeano, L.M. (1998). What neuropsychological tests measure? A factor analytic study. *Twenty-First European Annual Mid-Year Meeting of the International Neuropsychological Society*. Budapest, Hungary.

Ostrosky-Solis, F., Ardila, A., & **Rosselli, M.** (1998). NEUROPSI: A brief neuropsychological test battery. *Twenty-First Annual Mid-Year Meeting of the International Neuropsychological Society*. Budapest, Hungary.

Ostrosky, F., Ardila, A., **Rosselli, M.**, Gómez, C., Jiménez, S., Araiza, A. & Gallegos, X. (1998). Brief neuropsychological test battery in Spanish with norms by age and educational level. *Twenty-Sixth Annual International Neuropsychological Society Conference*. Honolulu, Hawaii, U.S.A. (Paper resulted in publication)

**Rosselli, M.**, Ardila, A., **Buttermore, J.**, **Lubomski, M.**, & **Hill, C.** (1998). Neuropsychological and psychological profile of cocaine abusers. *Ninth Annual Meeting of the American Neuropsychiatric Association*. Honolulu, Hawaii, U.S.A. (Paper resulted in publication).

**Rosselli, M.**, Ardila, A., **Kretzmer, T.**, **Standish, V.**, & **Lieberman, J.** (1998). Constructional abilities in Alzheimer's Disease. *Twenty-First Annual Mid-Year Meeting of the International Neuropsychological Society*. Budapest, Hungary.

**Rosselli, M., Ardila, A., Ostrosky, F., Jaramillo, K., Padilla, M., Standish, V., Berrío, L., & Palomino, J.** (1998). Verbal-motor interference in Spanish-English bilinguals. *Twenty-Sixth Annual International Neuropsychological Society Conference*. Honolulu, Hawaii, U.S.A.

Ardila, A. & **Rosselli, M.** (1999). Assessing Hispanic patients with neuropsychological instruments: The impact of culture and language on performance. Workshop. *19<sup>th</sup> Annual Meeting of the National Academy*, San Antonio, Texas. (Paper resulted in publication).

Lopera, F., Ardila, A., **Rosselli, M.**, Moreno, S., & Arango- Lasprilla, J.C. (1999). Perfil neuropsicológico de una Extensa Familia con Enfermedad de Alzheimer Familiar causada por la mutación E280A de la presenilina 1. *Spanish Nacional Conference on Alzheimer's Disease*. Bilbao, Spain. (Paper resulted in publication)

Ostrosky, F., Ardila, A., **Rosselli, M.** & Castillo, G. (1999). Age-related cognitive decline: Effects of education. *Twenty-Seventh Annual Meeting International Neuropsychological Society Conference*. New Orleans, Louisiana, U.S.A. (Paper resulted in publication)

Pineda, D., Mejia, S., **Rosselli, M.**, Ardila, A., Romero, M.G., & Perez, C. (1999) Variability in the Boston Diagnostic Aphasia Examination in a healthy Colombian worker population. *10th Annual Meeting American Neuropsychiatric Association*, New Orleans. (Paper resulted in publication).

**Rosselli, M., Ardila, A., Marquez, M., Matos, L., Salvatierra, J. L., Weekes, V. A. & Ostrosky, F.** (1999). Linguistic organization in verbal fluency tests among English and Spanish speakers and Spanish-English bilinguals. *19<sup>th</sup> Annual meeting of the National Academy of Neuropsychology*, San Antonio, Texas, U.S.A.. (Paper resulted in publication)

**Rosselli, M., Lopera, F., Ardila, A., Moreno, S., & Standish, V.** (1999) Cognitive decline in patients with familial Alzheimer's disease associated with a single preseniline 1 mutation: A longitudinal study. *19<sup>th</sup> Annual meeting of the National Academy*, San Antonio, Texas, U.S.A. (Paper resulted in publication).

**Rosselli, M., Ardila, A., Lubomski, M., Murray, S. & Buttermore, J.** (2000). Personality profile and neuropsychological test performance in chronic cocaine abusers. *Eleventh Annual Meeting American Neuropsychiatric Association*, Fort Myers, Florida, U.S.A. (Paper resulted in publication).

**Rosselli, M., Ardila, A., Santini, M., Areco, C., Conde, A., Lenny, B., & Salvatierra, J.** (2000). The Stroop test in Spanish-English bilinguals. *20<sup>th</sup> Annual Meeting of the National Academy*, Orlando, Florida, U.S.A.. (Paper resulted in publication)

**Rosselli, M., Ardila, A., Santisi, M., Bojan, D., Wolowitz, B., & Delaney, R.** (2000). ADHD symptoms and neuropsychological test scores in a non-clinical college population. *20<sup>th</sup> Annual Meeting of the National Academy*, Orlando, Florida, U.S.A.

Ardila, A. & **Rosselli, M.** (2001). Evaluación Neuropsicológica en la Población Latinoamericana. Pre-Congreso. Cartagena, Colombia: *2o. Internacional Meeting Brain and Mind*.

**Rosselli, M.** (2001) Developmental dyscalculia. *2o. Internacional Meeting Brain and Mind*. Cartagena, Colombia

**Rosselli, M.,** & Ardila, A. (2001). Neuropsychological test performance in a Spanish speaking children sample from Bogotá (Colombia). *21<sup>st</sup> Annual Meeting National Academy of Neuropsychology*. San Francisco, California, U.S.A. (paper resulted in publication)

**Rosselli, M.** Ardila, A., Murray, C., Walsh, C., King, K., & Gualdoni, S. (2001). Neuropsychological differences of cocaine abusers with and without alcohol dependence. *29<sup>th</sup> Annual Meeting International Neuropsychological Society*, Chicago, Illinois, U.S.A. (Paper resulted in publication).

**Stringer, K., McCabe, A., Lenis, B., Rosselli, M.,** & Ardila, A (2001). Verbal Fluency and Quantitative EEG in Spanish-English bilinguals. *Twelfth Annual Meeting American Neuropsychiatric Association*, Fort Myers, Florida, U.S.A.

**Taft, JR., Fernandez, M.L., Rosselli, M.** (Nov 2001) Genetics and Neuropsychology of Alzheimer Disease: preliminary Results of a Meta-analysis. *Society of Neuroscience*, San Diego, California, U.S.A.

Gómez, E., Ostrosky-Solis, F., Ardila, A., & **Rosselli, M.** (2002). Neuropsychological batteries for the assessment of Spanish-speaking subjects. *30<sup>th</sup> Annual Meeting International Neuropsychological Society*. Toronto, Ontario, Canada..

**Justice, A. & Rosselli, M.** (2002). Executive functions in chronic cocaine users. *22<sup>nd</sup> Annual National Academy of Neuropsychology Conference*, Miami Beach, Florida, U.S.A.

Pineda, D., Merchán, M., **Rosselli, M.** & Ardila, A. (2002). Executive functions in Colombian young university students. *30<sup>th</sup> Annual Meeting International Neuropsychological Society*, Toronto, Ontario, Canada.

**Rosselli, M.** (2002). The impact of bilingualism on the diagnosis and rehabilitation of language disorders. Invited workshop. *National Academy of Neuropsychology Conference*, Miami Beach, Florida, U.S.A.

**Rosselli, M.** & Ardila, A. (2002). The influence of education and culture in nonverbal neuropsychological measurements. *30<sup>th</sup> Annual Meeting International Neuropsychological Society*. Toronto, Ontario, Canada.

Matute, E. **Rosselli, M.** Ardila, A. Morales, G. (2002). Verbal and non-verbal fluency in six to 15-year-old Spanish speaking children. *22<sup>nd</sup> Annual National Academy of*

*Neuropsychology Conference*. Miami Beach, Florida, U.S.A (paper resulted in publication)

**Rosselli, M.** & Matute, E. (2002) Factores lingüísticos y ambientales en el desarrollo de problemas de lectura. *II International Meeting in Reading and Development*. Guadalajara, Mexico, Diciembre

**Justice, A. & Rosselli, M.** (2003). Neuropsychological differences in abstinent cocaine and cocaine and alcohol abusers. *23rd Annual National Academy of Neuropsychology Conference*, Dallas, Texas, U.S.A.

Matute, E., **Rosselli, M** & Ardila A. (2003). Reading, Writing, spelling and phonemic skills across ages in Spanish Speaking Children. *Thirty First Annual International Neuropsychological Society Conference*, Honolulu, Hawaii, U.S.A.

**Rosselli, M.**, Matute E., & Ardila A. (2003). Verbal and non-verbal learning in 6-to 16-year-old children. *23rd Annual National Academy of Neuropsychology Conference*, Dallas, Texas, U.S.A. (paper resulted in publication)

**Rosselli, M.**, Matute, E., Ardila, A. & Montiel, T. (2003). The effects of age over children's perceptual skills. *Thirty First Annual International Neuropsychological Society Conference*, Honolulu, Honolulu, Hawaii, U.S.A

**Taft, J.R., Massa, M., Matos, F.N., Yasin, A.R. & Rosselli, M.** (2003). Famous faces naming ability with and without semantic interference using a Stroop-like paradigm. *23rd Annual National Academy of Neuropsychology Conference*, Dallas, Texas, U.S.A.

**Rosselli, M.**, Matute, E. & Ardila, A. (2003). Características neuropsicologicas y aprendizaje de la lectura en escolares hispanohablantes. *III International Meeting in Reading and Development*. Guadalajara, Mexico, Dicember

Matute, E. **Montiel T.**, **Rosselli, M** & Ardila A (2004). Arithmetic tasks performances in six to 16 year old Latin American children. *Mid-Annual International Neuropsychological Society Conference*, Brisbane, Australia.

Matute, E. **Rosselli, M** & Ardila, A. A (2004). Neuropsychological Battery for Spanish Speakers. 24<sup>th</sup> Annual Meeting, National Academy of Neuropsychology, Seattle, Washington. *Abstract Published in Archives of Clinical Neuropsychology*, 19, 881-882.

**Salvatierra, J. & Rosselli, M.** (2004). Verbal fluency in bilingual Alzheimer's patients. *Thirty second Annual International Neuropsychological Society Conference*, Baltimore, U.S.A.

**Taft, J.R., Massa, M & Rosselli, M.** (2004). Face Name Interference in Alzheimer's Disease. 24<sup>th</sup> Annual Meeting , *National Academy of Neuropsychology*, Seattle, November 2004. *Abstract Published in Archives of Clinical Neuropsychology*, 19, 931-932.

**Rosselli, M., Matute, E., Ramirez, M.C., Rodriguez, E., Molina, P. & Arcila, L.** (2005) Metalinguistic awareness and verbal fluency in Spanish-English bilingual and Spanish monolingual children. *Annual Meeting National Academy of Neuropsychology*, Tampa Florida, U.S.A.

**Rosselli, M & Matute, E.** (2005). Normal and Abnormal development of calculation abilities. Symposium. IV International Meeting on Brain and Mind. *Latinoamerican Association of Neuropsychology*. Acapulco, Mexico, March.

Matute, E. **Rosselli, M. & Pinto, N.** (2005). Developmental Dyscalculia IV International Meeting on Brain and Mind. *Latinoamerican Association of Neuropsychology*. Acapulco, Mexico, March.

**Rosselli, M., Simmers, C., Shehadeh, N., Osorio, K., & Sadkin, B.** (2005). Personality characteristics and drug recovery. *Annual Meeting National Academy of Neuropsychology*, Tampa Florida, U.S.A.

**Salvatierra, J. L., Rosselli, M., Tappen, R., Williams, C & Naar B.** (2005). The Influence of Education on the Mini-Mental State Examination in a Hispanic Elderly Population. *Thirty Third Annual International Neuropsychological Society Conference*, St. Louise, Missouri, U.S.A. (Paper resulted in publication)

Tappen, R. **Rosselli, M., Williams, C.** (2005). Backward Spelling vs. Serial Sevens: Effect on MMSE Scores in Hispanic and European American Samples. *The Gerontological Society of America's 58th Annual Scientific*. Orlando, Florida, U.S.A.

Matute, E. & **Rosselli, M.** (2006) Child Neuropsychological Evaluation. *Thirty fourth meeting of the International Neuropsychological Society*. Symposium. Boston, Massachusetts, U.S.A.

Matute, M., **Rosselli, M., Ardila, A., & Ostrosky-Solís, F. A** (2006). Neuropsychological battery for Spanish-speaking children. *34th Annual Meeting Internacional Neuropsychological*, Boston, Massachusetts, February

**Rosselli, M., Matute, E., Navarrete, G., Arcila, L., Jones, I., Mejia, M. & Acosta, N.** (2006). Clustering and Verbal and Non-Verbal Learning in 5- to 14-Year-Old Hispanic Children. *Association for Psychological Science. 18<sup>th</sup> Annual Convention*. New York, New York, U.S.A.

**Rosselli, M., Simmers, C., Osorio, K., Sterne, R., Joy-Reyes, G., Maharaj, R. Foulkes, E. & Talbott, C.** (2006). The Influence of Alcohol in the Improvement of Memory Among Cocaine Dependents. *Association for Psychological Science. 18<sup>th</sup> Annual Convention*. New York, New York, U.S.A..

**Rosselli, M & Matute, E.** (2006). Factores lingüísticos y ambientales de la dislexia (linguistic and environmental factors of dyslexia). *VI International Meeting in Reading and*

*Development*. Guadalajara, Mexico, Diciembre.

**Mendrano, A.P.**, Matute, E., Zarabozo, D., & **Rosselli, M.** (2006). The effects of the Spanish orthographic system on reading and spelling in Reading disabled children. *Mid-year Meeting of the International Neuropsychological Society*. Zurich, July, 2006.

Tappen, R. Williams, C., **Rosselli, M.**, & **Keane, F.** (2006) African American and Afro Caribbean older adults' reported health status and acculturation. *Meeting of the Gerontological Society of America*, Dallas, Texas, U.S.A..

Williams, C , Tappen, R. **Rosselli, M.**, & **Keane, F.** (2006). Depression and mood in African American, Afro Caribbean and European American elders: A cross cultural comparison. *Gerontological Society of America*, Dallas, Texas, U.S.A..

Matute, E., Montiel, T., **Rosselli, M.** & Hernández-Ramírez, C. (2007). Phonological awareness and reading skills in Spanish-speaking children. *Joint Mid-Year Meeting of: INI-FSSN-SNP-SEP*. Bilbao, España.

Matute, E., **Rosselli, M.**, **Pinto N.**, & Ardila A. (2007) Memory skills in Mexican Children with dyscalculia. *Annual Meeting of the International Neuropsychological Society*. Portland, Oregon, U.S.A.

**Zoller, Y., Salvatierra J., Rosselli, M.**, Tappen, R. & Williams C. (2007). The effects of education on different types of verbal fluency tasks among Hispanic elders. *Annual Meeting of the International Neuropsychological Society*. Portland, Oregon, U.S.A.

**Rosselli, M.** (2007). cultural measurement issues related to neuropsychological assessment. *60<sup>th</sup> annual meeting of the gerontological society of america*. san francisco,

**Rosselli, M.** & Matute, E. (2007). Desarrollo cognoscitivo y maduración cerebral: una perspectiva neuropsicológica. *VII International Meeting in Reading and Development*. Guadalajara, Mexico, December.

Sanz-Martin, A. Matute, E.; Gumá-Díaz, E., **Rosselli, M.** (2007). influencia del sexo, escuela y escolaridad paterna en la atención y memoria. *V International Meeting Brain and Mind*. Manizales, Colombia, May

**Jurado, M.B. & Rosselli, M.** (2008). Age-related changes in executive function and the influence of processing speed. *National Academy of Neuropsychology 28<sup>th</sup> Annual Meeting*, New York, NY, October

**Rosselli, M.** (2008). Cultural measurement issues in minority American elders. *National Academy of Neuropsychology 28<sup>th</sup> Annual Meeting*, New York, NY, October.

**McIntosh, R. & Rosselli, M.** (2008). Head posture and visual memory span. *National Academy of Neuropsychology 28<sup>th</sup> Annual Meeting*, New York, NY, October.

Matute, M., & **Rosselli, M.** (2009). Age effect on writing a story in school age Mexican children: a cluster analysis. *37<sup>th</sup> Annual Meeting of the International Neuropsychological Society*. Atlanta, Georgia, U.S.A.

Tartar, J., **McIntosh, R., Rosselli, M.,** & Nash, A.J. (2009). Emotional Influences on Cognitive Processing in HIV-Infected Women. *Society for Neuroscience*, Chicago, Ill,

**Rosselli, M.** (2009) Ventajas y desventajas del bilingüismo: Una perspectiva neuropsicológica. *IX International Meeting on Reading*, Institute of Neuroscience/University of Guadalajara, November.

**Jurado, M, Monroy, M, Eddinger, K, Serrano, M, Rosselli, M** (2010). Aging and Executive Function: Behavioral and Cognitive Changes. *Archives of Clinical Neuropsychology*. Abstract accepted . 30<sup>th</sup> Annual Neuropsychology, Meeting, Vancouver, Canada

**McIntosh, R. Rosselli, M** , Tartar J & Nash, AJ.(2010) Electrophysiological response to emotion and executive functions. *Neuroscience Meeting Planner*. San Diego, CA: Society for Neuroscience

Berent, I., Lennertz, T & **Rosselli, M.** (2011- April 13th). Universal phonological restrictions and language-specific repairs: Evidence from Spanish" has been selected for an ORAL presentation at the 10th International Symposium of Psycholinguistics. Donostia - San Sebastián, Spain,

**McIntosh, R. C., Tartar, J. L Rosselli, M.** Nash, A. J. (2011). Emotional Dysfunction in Women with HIV: An ERP Analysis. *Annual meeting International neuropsychological Society*, Boston, MA, February.

**Lalwani, L.N., Serrano, M.A., Monroy, M., Lopez, J., Quispe, R., Jurado, M.B., Rosselli, M.** (2011). The Effects of Age and Gender on Differential Strategy Usage in Addition Problems: Preliminary Results. *Annual Meeting International Neuropsychological Society*, Boston, MA, February.

**Jurado, M.B., Serrano, MA, Monroy, M., Lopez, J. & Rosselli, M.** (2011). The Relationship Between Executive Functions and Processing Speed Across the Adult Lifespan. *Annual Meeting International Neuropsychological Society*, Boston, MA, February.

**McIntosh, R.M., Rosselli, M.R.,** Tartar, J.L (2012) Neuropsychological Correlates of Cognitive Reappraisal in HIV. *Annual Meeting International Neuropsychological Society*. Montreal, February

**Beltrán, B.,** Matute, E. Ardila, A & **Rosselli, M.** (2012). Language development across the preschool years. *Mid-year Meeting International Neuropsychological Society*. Oslo, Norway.

**Lalwani, L.N. & Rosselli, M** (2012). Bilingual Proficiency and Task Type on Executive Function and Working Memory Performance". *APS Annual Convention*, May, Chicago, IL, USA

**McIntosh, R.M., Rosselli, M.R., Tartar, J.L** (2012) "Electrophysiological Correlates of Experiential Avoidance in an Emotion Regulation Paradigm" *APS Annual Convention*, May, Chicago, IL, USA

**Lalwani, L & Rosselli, M.** (2012) Effects of Bilingual Proficiency and Task Type on Executive Function and Working Memory Performance. *32<sup>nd</sup> Annual Neuropsychology of the National Academy of Neuropsychology*, Nashville, Tennessee, November.

**Velez-Urbe, I., & Rosselli, M.** (2013). Word Retrieval in Confrontation Naming and Verbal Fluency Tasks in Normal Aging. *25<sup>th</sup> Annual Meeting of the Association for Psychological Science*, Washington, DC, May

**Nishat, T., Perez, G. & Rosselli, M.** (2013). Bilingualism and Arithmetic. *25<sup>th</sup> Annual Meeting of the Association for Psychological Science*, Washington, DC, May.

**Lalwani, L & Rosselli, M.** (2013). The Effects of BMI on Behavioral Inhibition and Working Memory. *25<sup>th</sup> Annual Meeting of the Association for Psychological Science*, Washington, DC, May.

**Paz, A., & Rosselli, M.** (2014). Inhibición y uso compulsivo de alcohol. *Biannual Meeting of the Latinamerican Association of Neuropsychology*. Barranquilla, Colombia, February

**Vanegas S, Bernal, M., Rosselli, M., Matute, E** (2014) Neuropsychological development of Spanish/English bilingual and Spanish monolingual pre-school children, *26<sup>th</sup> Annual Meeting of the Association for Psychological Science*, San Francisco, CA, May

**Keim, C.A., Paz, AL., Gonzalez, B., Avila, R.R & Rosselli, M** (2014). Epidemiology of Alcohol Use Among Ethnically Diverse South Florida College Students *26<sup>th</sup> Annual Meeting of the Association for Psychological Science*, San Francisco, CA, May

**Nishat, T., Rosselli, M., Perez, G. & Diaz, K.** (2014) Influence of bilingualism on simple arithmetic. . *26<sup>th</sup> Annual Meeting of the Association for Psychological Science*, San Francisco, CA, May.

**Paz, AL., Gonzalez, B., Keim, C.A., Avila, RR & Rosselli, M** (2014). Associations Between Alcohol and Drug Use Among Collegiate Young Adults: Preliminary Findings. *26<sup>th</sup> Annual Meeting of the Association for Psychological Science*, San Francisco, CA, May.

**Reale, A., Schmit, C & Rosselli, M.** (2014). Mirror Neurons: Imitation and Emotional Differences Among Males and Females, Preliminary Results. . *26<sup>th</sup> Annual Meeting of the Association for Psychological Science*, San Francisco, CA, May.



**Peacock, B.J., Perez, G., Rosselli, M.,** Tappen, R.M., Williams, C. (2014). Daily living complaints in Mild Cognitive Impairment (MCI) and early Alzheimer Disease (AD). . 26<sup>th</sup> Annual Meeting of the Association for Psychological Science, San Francisco, CA, May.

**Vanegas, S., Bernal, M. Rosselli, M &** Matute, E. (2014). A Neuropsychological Battery for Pre-School Spanish/English Bilingual Children. 24<sup>th</sup> meeting National Academy of Neuropsychology, Fajardo, Puerto, November.

**Paz, A.L. Conniff, J.W., Gonzalez, B., & Rosselli, M.** (2015). *Inhibitory Processing in Relation to Age of First Substance Use and Age of First Regular Substance Use*. Abstract for poster presentation, 77<sup>th</sup> Annual Research College on Problems of Drug Dependence meeting, Phoenix, AR, June

**Paz, A.L., Conniff, J.W., Gonzalez, B., & Rosselli, M.** (2015). *Alcohol Consumption Habits Among Young Adult Marijuana Smokers*. Abstract for poster presentation, 38<sup>th</sup> Annual Research Society on Alcoholism meeting, San Antonio, TX, June

**Paz, A.L., Gonzalez, B., Conniff, J.W., Keim, C.A., Renneinsen, A. & Rosselli, M.** (2015). *Inhibitory Processing in Relation to Drinking Behaviors: A Negative Impact on Male Drinkers*. Abstract for poster presentation, 38<sup>th</sup> Annual Research Society on Alcoholism meeting, San Antonio, TX, June

**Velez-Uribe, I., & Rosselli, M.,** (2015, May), Do Bilinguals Evaluate Emotion Laden Words Equally in Both Languages? 27<sup>th</sup> Annual Meeting of the Association for Psychological Sciences (APS), New York.

**Gonzalez, K., Velez-Uribe, I., & Rosselli, M.,** (2015, May), A Cross-Linguistic Analysis of Language Effects on Personality Measures in Spanish-English Bilinguals. 27<sup>th</sup> Annual Meeting of the Association for Psychological Sciences (APS), New York.

**Peacock, B., Manotas, A., Perez, G., Rosselli, M.,** Tappen, R. Williams, & Ordoñez, M. (2015, May), A logistic regression analysis of the Mini-Mental State Examination subtests on Mild Cognitive Impairment (MCI) and early Alzheimer's Disease (AD). 27<sup>th</sup> Annual Meeting of the Association for Psychological Sciences (APS), New York

**Conniff, J.W. , Paz, A.L., Gonzalez, B., & Rosselli M.,** (2015 May), Drinking Behavior in Relation to Age of College Students. 27<sup>th</sup> Annual Meeting of the Association for Psychological Sciences (APS), New York.

**Lang, M., Torres, V. Ardila, A., Rosselli, M.,** (2016, May), Language abilities in young Spanish-English bilinguals. 28<sup>th</sup> Annual Meeting of the Association of Psychological Sciences (APS), Chicago.

**Stebbins, L., Bordt, P., Castro, M.,** Tappen, R., Williams, C & **Rosselli, M. (2016)** Daily living complaints in Mild Cognitive Impairment (MCI) and early Alzheimer Disease (AD28<sup>th</sup> Annual Meeting of the Association of Psychological Sciences (APS), Chicago.

**Torres, V., Lang, M.,** Ardila, A., **Rosselli, M.,** (2016, May), Habilidades de lenguaje de bilingües jóvenes de segunda generación. IX Bi-annual Meeting Latin American Association of Neuropsychology (ALAN)- Guadalajara, Mexico.

**Velez-Uribe, I & Rosselli, M.** (2016, May). Diferencias en la evaluación de palabras emocionales en bilingües español/inglés. IX Bi-annual Meeting Latin American Association of Neuropsychology (ALAN)- Guadalajara, Mexico

**Rosselli, M** (2016, May). La plasticidad cerebral en neuropsicología: el bilingüismo como ejemplo (Brain plasticity in neuropsychology: bilingualism as an example). IX Bi-annual Meeting Latin American Association of Neuropsychology (ALAN)- Guadalajara, Mexico

**Paz, A.L., Conniff, J.W., Ferrato, D., Rosselli, M., & González, R.** (2016, June). *Inhibitory processing predicts increases in binge drinking behavior: A six-month longitudinal design.* Poster session presented at 78<sup>th</sup> Annual Research College on Problems of Drug Dependence meeting, Palm Springs, CA.

**Ferrato, D., Paz, A.L Conniff J.W., Rosselli M., & Gonzalez. R.** (2016). *Alcohol Consumption Habits Among Acculturated Latin Americans.* Abstract for poster presentation, 39th Annual Research Society on Alcoholism meeting, New Orleans LA, June. Published in *Alcoholism-Clinical And Experimental Research* (Vol. 40, pp. 128A-128A).

**Conniff, J.W., Paz, A.L, Ferrato, D., Rosselli, M., & González, R.** (2016). *Alcohol Consumption Habits Among College Students from Different Socio-Economic Groups in South Florida.* Abstract for poster presentation, 39th Annual Research Society on Alcoholism meeting, New Orleans LA, June. Published in *Alcoholism-Clinical and Experimental Research* (Vol. 40, pp. 129A-129A).

**Vélez -Uribe, I, Arana, V., Conniff, J., Rosselli, M.,** (2017). Testing a Predictive Model for the Appraisal of Valence of Emotion Words in Spanish-English Bilinguals. Accepted to be presented at the conference of the International Neuropsychological Society, New Orleans, February, 2017.

**Torres, V., Lang, M., Vélez -Uribe, I., Christopher, D., Rosselli, M., Arruda., F.** (2017). The Big Five Inventory (BFI) and Emotion Word Valence: Does Personality Influence the Appraisal of Emotion Words in Bilinguals? Accepted to be presented at the conference of the International Neuropsychological Society, New Orleans, February, 2017.

**Conniff, J. W., Lang, M., Torres, V., Christopher, D., Vélez-Uribe, I., Sanchez, A.,** Ardila, A., **Rosselli, M.** . *Eye Movements When Reading in Two Orthographic Systems: English and Spanish.* Annual Meeting of the National Academy of Neuropsychology, Boston, MA., October, 2017.

**Torres, V., Arruda, F., Vélez-Uribe, I., Lang, M.,** Duara, R., Curiel, R.,

Loewenstein, D. & **Rosselli, M.** *Bilingualism and Memory in Mild Cognitive Impairment (MCI)*. Annual Meeting of the National Academy of Neuropsychology, Boston, MA., October, 2017.

**Merike, L & Rosselli, M.** *La depresión en el diagnóstico del deterioro cognitivo leve y la demencia en una muestra multicultural de los Estados Unidos (Depression in MCI and dementia in a multicultural diverse sample in the US)* . X bi-Annual meeting Mind and Brain: The Interaction. *Bi-Annual Meeting Latin-American Association of Neuropsychology*. Ciudad de Guatemala, Guatemala., June, 2018

Mendoza, L. , Rodriguez, M., Dahlin, P., Garcia, P., Duara, R, **Rosselli, M.**, Loewenstein, D., Greig-Cusco, & Barker, W. A comprehensive evaluation of acculturation level among cognitively normal and cognitively impaired Hispanic older adults, Annual Meeting of the National Academy of Neuropsychology, New Orleans , LA., October, 2018.

**Ahne, E., Velez-Uribe, I., & Rosselli, M.** Understanding the Effect Length of Exposure to a Second Language has on Personality and Alexithymia in Spanish-English Bilinguals. International Neuropsychology Society, New York City, New York in February 2019.

**Montero, C., Ahne, E., Velez-Uribe, I., Rosselli, M.** Emotion Word Processing in English Monolinguals and Spanish-English Bilinguals: An ERP Study. International Neuropsychology Society, New York City, New York in February 2019.

**Torres, V., Rosselli, M.,** Loewenstein, D., Curiel. R.E., **Vélez-Uribe, I., Lang, M., Arruda, F.,** Penate, A., Vaillancourt, D., Greig, M.T., Bauer, R., & Duara, R., Types of Errors on a Novel Semantic Interference Task in Mild Cognitive Impairment and Alzheimer's Disease *47<sup>th</sup> Annual Meeting of the International Neuropsychological Society*, New York, February 2019.

**Lang M., Rosselli, M.,** Greig , MT., **Torres V., Vélez-Uribe I., Arruda, F** Barker, WW., Garcia, P., Loewenstein D.A., Curiel, R.E., Duara, R. Depressive Symptoms in the Diagnosis of MCI and Dementia in a Culturally Diverse Sample of the United States. *47<sup>th</sup> Annual Meeting of the International Neuropsychological Society*, New York, February 2019.

**Conniff, J., Lang, M., Torres, V. L., Vélez-Uribe, I., Arruda, F., Christopher, D., Rosselli, M., & Ardila, A.** (2019, February). A comparison in eye movements between two orthographic systems: English and Spanish. Poster presentation at INS 2019, New York City, New York.

**Ospina, D., Lang, M., Arca, A., Camero, A., Torres, V.,** Chirino, C., **Robayo, C.,** Greig, M.T., Barker, W.W., Loewenstein, D.A. Duara, R., & **Rosselli, M.** (April 2019). Influence of Anxiety and Depression on Nonverbal and Verbal Memory Measures in MCI and Dementia.

*Latinos and Alzheimer's Disease Symposium: Understanding risk, prevention and care strategies* San Juan, Puerto Rico.

**Lang, M., Rosselli, M.,** Greig-Custo, M.T., **Torres, V.L., Vélez-Uribe, I., Arruda, F.,** Loewenstein, D.A., Curiel, R.E. Chirinos, C., Barker, W.W. Duara **(April 2019)**. Depressive Symptoms Predicting Nonverbal and Verbal Abilities in Normal and Abnormal Aging for a Cross-Cultural Sample. *Latinos and Alzheimer's Disease Symposium: Understanding risk, prevention and care strategies* San Juan, Puerto Rico.

**Arruda, F., Torres, V., Velez-Uribe, I., Lang, M.,** & Greig, M.T., Barker, W.W., Loewenstein, D.A. Duara, R., & **Rosselli, M.** (April 2019). The Assessment of Functional Abilities in the Diagnosis of MCI and Dementia Disease in a Culturally Diverse Sample. *Latinos and Alzheimer's Disease Symposium: Understanding risk, prevention and care strategies* San Juan, Puerto Rico.

Burke, S. L., Barker, W., **Rosselli, M.,** Rodriguez, M., **Robayo, C.,** Grudzien, A., Chirinos, C., Behar, R., & Greig-Custo, M. T. Predictors of Attrition in the Multi-Ethnic 1FloridaADRC Clinical Core. Gerontological Society of America, 2019 Annual Scientific Meeting, Austin, TX. November 15, 2019.

Chirinos, C., Garcia, P., Duara, D., Loewenstein, D., **Robayo, C.,** Greig-Custo, M.T. Curiel Cid, R., **Rosselli, M.,** & Rodriguez, M. Concordance of Functional and Neuropsychological Performance among Hispanics versus White Non- Hispanics. National Academy of Neuropsychology, Nov 2019, San Diego, California

Morar, U., Martin, H., Izquierdo W., Forouzaneshad, P., Zarafshan, E., Curiel, R. E., **Rosselli, M.,** Loewenstein, D., Duara, R., & Adjouadi, M. A Deep-Learning Approach for the Prediction of Mini-Mental State. The 2020 International Conference on Computational Science and Computational Intelligence (CSCI'20: December 16-18, 2020, Las Vegas, USA

## **Non-Refereed Works**

### **Neuropsychological tests: Co-Authored.**

Ostrosky, F., Ardila, A. & **Rosselli, M.** (1997). *Neuropsi: Un examen neuropsicológico breve en Español* (Neuropsi: A brief neuropsychological test battery in Spanish). Mexico: Bayer.

Ostrosky, F., Gomez, M.E., Matute, E., **Rosselli, M.,** Ardila, A. & Pineda, D. (2003). *Neuropsi Atención y Memoria 6 a 85 años*. Mexico D:F: Mexico: Biblioteca Teletón.

Matute, E., **Rosselli, M.,** Ardila, a. & Ostrosky, F. (2007) *Evaluación Neuropsicológica Infantil* (ENI). Manual Moderno/Universidad de Guadalajara: Guadalajara, México.

Matute, E., **Rosselli, M.**, Ardila, a. & Ostrosky, F. (2013) *Evaluación Neuropsicológica Infantil* (ENI)-2nd Edition. Manual Moderno/Universidad de Guadalajara: Guadalajara, México

Matute, E., Ostrosky, F., Ardila, **A., Rosselli, M.**, López, R., López, M., Ontiveros, J.A., Huidor, C., García, J.A., Mendoza, V. & Ventura, L. (2012). *Modelo de Evaluación Neuropsicológica Estándar para Pacientes Adultos Hospitalizados*. –ENE-A. Guadalajara: Hospital Civil de Guadalajara Dr. Juan I. Menchaca – Instituto de Neurociencias, Universidad de Guadalajara.

Matute, E., **Rosselli, M.**, Ardila, A., López, R., López, M., Ontiveros, J.A., Huidor, C., García, J.A., Mendoza, V. & Ventura, L. (2012). *Modelo de Evaluación Neuropsicológica Estándar para Pacientes Pediátricos Hospitalizados*. –ENE-P. Guadalajara: Hospital Civil de Guadalajara Dr. Juan I. Menchaca – Instituto de Neurociencias, Universidad de Guadalajara.

### **Grants Awarded**

PI: **Rosselli, M.**, (1986). Neuropsychological characteristics of normal aging. Three million Colombian pesos (US\$9,000) awarded by Colombian Fund for the Scientific and Technological Development -Colciencias.

PI: **Rosselli, M.** (1991). Neuropsychological development of language, memory, and spatial abilities in five to-12 year old Colombian children. Three million Colombian pesos (US\$6,000) awarded by Colombian Fund for the Scientific and Technological Development - Colciencias.

PI: **Rosselli, M.** (1992). Structure of cognitive activity: A neuropsychological perspective. Twelve million Colombian pesos (US\$10,000) awarded by Colombian Fund for the Scientific and Technological Development -Colciencias.

PI: **Rosselli, M.**, (1993). Specific learning disabilities in Bogota (Colombia). Thirteen million Colombian pesos (US\$12,000) awarded by Colombian Fund for the Scientific and Technological Development -Colciencias.

PI: **Rosselli, M.** (1993). Neuropsychological profile of chronic cocaine-abusers. Ten million Colombian pesos (US\$10,000) awarded by Colombian Fund for the Scientific and Technological Development -Colciencias.

PI: **Rosselli, M** (1997). Neuropsychological profile as predictor of treatment outcome in chronic cocaine-abusers. \$4,800 awarded by FAU Research Initiation Award.

**Rosselli, M.** (1997). International Travel Award, \$700, awarded by Florida Atlantic University,

PI: Tappen, R., Co-PI **Rosselli**, M. (2001-2005 Extended to 2006). Cultural Bias in Testing Expressive Ability in Dementia. RO1-National Institute of Nursing Research. (\$767,123).

PI: **Rosselli**, M. Cognitive decline in familial Alzheimer's disease. Presidential Developmental Award Honorable Mention. \$2,500. Florida Atlantic University

PI: R. Tappen. Co-PI: **M. Rosselli**. (2002) Driving Cessation in Alzheimer Disease. Florida Department of Transportation (2002). \$116,557

PI: R. Tappen. Co-PI: **M. Rosselli**. (2001-2003) Integrating Care Management into Dementia Specific Primary Care. US Department of Health and Human Services, Administration on Aging. \$987,000

PI: R. Tappen. Co-Pi: **M. Rosselli**. (2004-2007).Cognitive Rehabilitation in Early Stage Alzheimer Disease. Alzheimer's Association. \$240,000

PI; **M. Rosselli**. (2004-2005). Neuropsychological Assessment of Hispanic children in the US. National Academy of Neuropsychology. \$10,500.

PIs: Williams C.& **Rosselli, M** (2008-2009). Culture and evaluation in dementia Johnnie Byrd Alzheimer's Center and Research Institute.. \$ 49,969

PIs: J. Tartar. Co-PIs M. **Rosselli** & A. Nash. (2009-2010). Emotional Influences on Cognitive Processing in HIV-Infected Women, Nova Southeastern University. \$10,000

PI: **R. McIntosh**. Co-PIs **M. Rosselli** & J. Tartar. (2010-2011). Neuropsychological and Electrophysiological Correlates of Emotion Regulation in Women with HIV, Nova Southeastern University. \$10,000

PIs: **M. Rosselli** & R. Tappen (2013-2014). Development and Testing of a Functional Scale for Mild Cognitive Impairment. Seed grant program Florida Atlantic University \$7,000

PI: T Golden & R Duara; Co-I: **M. Rosselli** (2015-2020). Alzheimer Disease Research Center. National Institutes of Health/National Institute of Aging. \$1.700.000

PI: D Hain. Co-I: **M. Rosselli**. (2019-2021) Cognitive Support Strategies to Improve Medication Adherence in Older Adults Undergoing Hemodialysis. Keryx Pharmaceutics (\$176,300)

PI: **M Rosselli** (2019-2021). Neuro-imaging, and Sensitive Novel Cognitive Measures in Detection of Early Alzheimer's Disease in Bilingual and Monolingual Hispanic Americans Florida Department of Health- Ed and Ethel Moore Alzheimer's Disease Research Program (\$236.000).

PI Tappen. Co-I: **M. Rosselli** (2019-2021). Fit2Drive: Development and Testing of a Driver Risk Predictor for Individuals with AD Florida Department of Health- Ed and Ethel Moore Alzheimer's Disease Research Program (\$236,000).

PI: M. Armstrong (UF). Co-I **M. Rosselli** (2020 – 2023). Communication of Dementia Diagnoses: Investigating Patient, Family, and Physician Experiences and Developing Best Practices. Florida Department of Health- Ed and Ethel Moore Alzheimer's Disease Research Program (\$374,660).

PI: R. Tappen. Co-I: **M. Rosselli** (2020-2025) In-Vehicle Sensors to Detect Cognitive Change in Older Drivers. National institutes of Health. National Institute of Aging (\$6,130,807).

PI. T.Golde (UF). Co-I: **M. Rosselli** (2020-2025). 1Florida Alzheimer's Disease Research Center. National institutes of Health. National Institute of Aging (\$2,000,000).

PI: **M Rosselli**. Postdoctoral Research Fellowship in Neuropsychology and Brain Biomarkers of Abnormal Aging Florida Department of Health- Ed and Ethel Moore Alzheimer's Disease Research Program (\$99,051).

## **TEACHING**

### **Undergraduate:**

Neuropsychology  
Developmental Neuropsychology  
Research Methods in Psychology  
Biological Bases of Behavior  
Laboratory in Neuropsychology  
Abnormal Psychology

### **Graduate:**

Developmental Neuropsychology  
Neuropsychology  
Neuropsychological Assessment  
Seminars in different topics in Neuropsychology  
Neuropsychology of Aging

# CURRICULUM VITAE

Wen Shen, Ph.D.

## INSTITUTIONAL ADDRESS

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## EDUCATION

- 1983** B.S. in Electrical Engineering, Shanghai University, P.R. China  
**1998** Ph.D. in Physiology and Biophysics, School of Medicine and Biomedical Science, State University of New York (SUNY) at Buffalo, Buffalo, New York

## ACADEMIC APPOINTMENTS

- 1983-1988** **Engineer**, Research Institute of Environmental Control and Protection, Shanghai Municipal Bureau of Chemical Industry, Shanghai, PR China  
**1988-1993** **Research Assistant**, Shanghai Institute of Physiology, Chinese Academy of Science, Shanghai, PR China  
**1993-1998** **Graduate Research Assistant**, Department of Physiology and Biophysics, SUNY at Buffalo, Buffalo, New York.  
**1998-1999** **Research Associate**, Department of Physiology and Biophysics, SUNY at Buffalo, Buffalo, New York.  
**1999-2003** **Research Assistant Professor**, Department of Physiology and Biophysics, SUNY at Buffalo, Buffalo, New York.  
**2003-2007** **Assistant Professor (tenure track)**, College of Biomedical Science, Florida Atlantic University (FAU), Boca Raton, Florida.  
**Adjunct Assistant Professor**, Department of Physiology and Biophysics, University of Miami Miller School of Medicine, Miami, Florida.  
**2007-present** **Associate professor (with tenure)**, College of Medicine (formerly College of Biomedical Science), Florida Atlantic University (FAU), Boca Raton, Florida.  
**2010-present** **Adjunct Associate Professor**, Center for Complex System and Brain Science, FAU  
**2010-2014** **Summer Visiting Investigator**, Whitman Center, the Marine Biological Laboratory (MBL), Woods Hole, Massachusetts.  
**2017-present** **Adjunct Associate Professor**, FAU Brain Institute



## **HONORS AND AWARDS**

- 1998** Mark Diamond Research Award
- 1998** Dean's Award for Outstanding Thesis Dissertation, SUNY at Buffalo Medical School
- 2000** ARVO-Retinal Research Foundation-Lawrence Fellowship Grant
- 2001** Postdoctoral research fellowship award, Fight for Sight, Prevent Blindness America
- 2002** International Congress of Eye Research (ICER) Travel Fellowship, Invited speaker, Geneva, Switzerland
- 2003** FESAB Summer Conference Travel Fellowship, Vermont
- 2004** Research Travel Award, Florida Atlantic University
- 2006** The 6<sup>th</sup> Congress Federation of Asian and Oceanian Physiology Societies (FAOPS) Travel Award, Plenary speaker, Seoul, Korea
- 2009** The 17th International Conference of Taurine Travel Award, Plenary speaker, Miami, Florida
- 2010-2011** The Best Graduate Mentor award, Charles E Schmidt College of Medicine (finalist)
- 2010-2011** Researcher of the Year Award, Charles E Schmidt College of Medicine
- 2010-2011** Researcher of the Year Award, Florida Atlantic University
- 2011-2012** Teacher of the Year Award, Charles E Schmidt College of Medicine (finalist)

## **MEMBERSHIPS**

- 2003-present Member of the Society for Neuroscience
- 1994-present Member of the Association for Research in Vision and Ophthalmology

## **RESEARCH GRANTS**

- 2017- 2021 National Institute of Health (NIH) R15, Co-Investigator  
"Activators of MsrA and MsrB: potential use for diseases of the retina"
- 2017-2018 FAU Brain Institute Pilot Award, Principle Investigator  
"The role of Na-K-2Cl co-transporter in light adaptation"
- 2017-2019 Collaborative project between FAU and the Sancilio Co., Major Collaborator  
"Evaluation of potential role of DHA in slow down of retinitis pigmentosa progression in mouse model"
- 2010-2015 National Science Foundation research grant, IOS-1021646, Principle Investigator  
"The function of glycine in modulation of cone visual sensitivity"
- 2013-2015 Neuroscience Priority Research Award, FAU, Principle Investigator  
"Identification and Characterization of a Novel Taurine-Sensitive Receptor"

- 2002-2008 NIH R01, Principle Investigator  
EY14161, National Eye Institute (NEI), NIH  
“Function of Interplexiform Cells”
- 2006-2007 New project development award, Florida Atlantic University, Principle Investigator  
“Neuroprotection by Growth Factor in Retina”
- 2001-2003 Grant-in-Aid, Fight for Sight, Prevent Blindness of America, Principle Investigator  
“Neuroprotective effect of TGF- $\beta$  Superfamily of Growth Factors in Human Retina”
- 2000-2001 Postdoctoral research fellowship, Fight for Sight, Prevent Blindness of America  
Principle Investigator  
“Kainate-Preferring Glutamate Receptors in Human Retinal Function and Disease”

## **INVITED PRESENTATIONS AT INTERNATIONAL CONFERENCES AND SYMPOSIUMS**

- 2001 Paper presentation “Glutamate receptor subtypes in horizontal cells of the human retina”  
*ARVO Annual Conference, Ft Lauderdale, May.*
- 2002 Invited Speaker, “GABA-induced synaptic facilitation by reciprocal modulation”  
*XV International Eye Research Congress, Geneva, Switzerland, October.*
- 2002 Paper presentation “Glycinergic interplexiform cells modulates the synapses between photoreceptors and bipolar cells” *ARVO Annual Conference, Ft Lauderdale, May*
- 2004 Invited Speaker, “Neural modulation by GABA and glycine network feedback”  
*International Conference on Physiology and Biophysics, Shanghai, China, November 11<sup>th</sup>.*
- 2004 Invited Speaker, “A feedback system encoding dim light signals” *Institute of Neurology, Fudan University, Shanghai, China, November, 14<sup>th</sup>.*
- 2004 Plenary speaker “Positive control of the distal retinal signals by glycine interplexiform cells” *Shanghai International Conference on Physiology and Biophysics, Shanghai, China, November 12<sup>th</sup>.*
- 2006 Paper presentation “Enhancing distal synapse by glycinergic interplexiform cells”  
*ARVO Annual Meeting, Ft Lauderdale, USA, May 2<sup>nd</sup>.*
- 2007 Invited Speaker, “Function of glycinergic feedback in distal retinal signaling”  
*The 6th Congress Federation of Asian and Oceanian Physiology Societies (FAOPS), Seoul, Korea, October 17<sup>th</sup>.*
- 2008 Invited Speaker, “The centrifugal feedback neuron enhances visual sensitivity in twilight”.  
*The Basic and Clinic Vision Research Symposium IX, Shanghai, China, September 5<sup>th</sup>.*
- 2009 Plenary speaker, “A new role of taurine in retina”.  
*The 17th International Taurine Conference, Miami, USA, December 14<sup>th</sup>.*

- 2011 Plenary speaker, “The therapeutic value of taurine in protection of cell death from glutamate toxicity” *International Symposium on “Ion Channels, Cardiac arrhythmias, Diabetes and its complications”*, Nanjing, China, October 29<sup>th</sup>.
- 2011 Plenary speaker, “Glutamate transporter EAATs mediate cone synaptic plasticity in retinal dark and light adaptation” *International Symposium on Brain Function and diseases*, Shanghai, China, October 18<sup>th</sup>.
- 2012 Invited speaker, “The function of taurine in the retinal neurons”. *XX Biennial Meeting of the International Society for Eye Research (ISER) 2012*, Berlin, Germany, July 25<sup>th</sup>.
- 2013 Invited speaker, “Metabotropic effect of taurine regulates potassium channels via 5-HT<sub>2A</sub> serotonin receptors”. *The 18<sup>th</sup> International Taurine Conference*, Marrakech, Morocco, April 11<sup>th</sup>.
- 2016 Guest speaker, “Cation-chloride cotransporter in brain health and diseases”. University of Miami, Neuroscience Seminar Series, May 11<sup>th</sup>.
- 2017 Invited speaker, “Regulation of Synaptic Transmission at the Photoreceptor Terminal: A Novel Role for the Cation-Chloride Cotransporter NKCC1”, *2017 ISN Satellite Conference*, Maintenon, France, August 26<sup>th</sup>.

## PEER-REVIEWED PUBLICATIONS

1. X.L.Yang, T.X.Fan and **W. Shen** (1994) Effects of prolonged darkness on light responsiveness and spectral sensitivity of cone horizontal cells in carp retina in vivo. *J Neurosci.* 14(10):326-334.
2. J. Zhang, **W. Shen** and M.M. Slaughter (1997) Two metabotropic GABA receptors differentially modulated calcium currents in retinal ganglion cells. *J Gen. Physiol.* 110:45-58.
3. **W. Shen** and M.M. Slaughter (1998) Metabotropic and ionotropic glutamate receptors regulate calcium channel currents in salamander retinal ganglion cells. *J Physiol.(London)*, 510(3): 815-828. *(Corresponding Author)*
4. **W. Shen** and M.M. Slaughter (1999) Metabotropic GABA receptors facilitate L-type and inhibit N-type calcium channels in single salamander retinal neurons. *J Physiol.(London)*, 516(3):711-718.
5. **W. Shen** and M.M. Slaughter (1999) Internal calcium modulates apparent affinity of metabotropic GABA receptors. *J Neurophysiol.* 82:3298-3306.
6. **W. Shen** and M.M. Slaughter (2001) Multireceptor GABAergic regulation of synaptic communication in amphibian retina. *J Physiol.(London)*, 530(1):55-67. *(Corresponding Author)*
7. **W. Shen** and M.M. Slaughter (2002) A non-excitatory paradigm of glutamate toxicity. *J Neurophysiol.* 87:1629-1634. *(Corresponding Author)*

8. **W. Shen** and S.G Finnegan, M.M Slaughter (2004) Glutamate receptor subtypes in human retinal horizontal cells. *Vis. Neurosci.* 21(1): 89-95.
9. **W. Shen**, S.G. Finnegan, P. Lein, S. Sullivan, M.M. Slaughter and D Higgins (2004) Bone morphogenetic proteins regulate ionotropic glutamate receptors. *Europ J Neurosci.* 20:2031-2037.
10. **W. Shen** (2005) Repetitive light stimulation inducing glycine receptor plasticity in the retinal neurons. *J Neurophysiol.* 94:2231-2238 (*Corresponding Author*)
11. **W Shen** and Z Jiang (2007) Characterization of glycinergic synapse in vertebrate retina. *J Biomed. Sci.* 14:5-13. (*Corresponding Author*)
12. BQ Li and **W Shen** (2007) Cation Cl<sup>-</sup> cotransporters in the dendrites of goldfish bipolar cells. *NeuroReport* 18(7)625-630. (*Corresponding Author*)
13. Z Jiang, BQ Li, F Jursky and **W Shen** (2007) Differential distribution of glycine transporters in Müller cells and neurons in amphibian retinas. *Vis. Neurosci.* 24:157-168. (*Corresponding Author*)
14. BQ Li, KA McKernan and **W Shen** (2008) Spatial and temporal distribution patterns of Na-K-2Cl<sup>-</sup> cotransporter in adult and developing mouse retinas. *Vis. Neurosci.* 25:109-123. (*Corresponding Author*)
15. **W Shen**, Z Jiang and BQ Li (2008) Glycinergic input induces the synaptic facilitation in amphibian photoreceptors. *J Biomed Sci.* 15: 743-754. (*Corresponding Author*)
16. Z Jiang and **W Shen** (2010) Role of neurotransmitter receptors in mediating light-evoked response of retinal interplexiform cells. *J Neurophysiol.* 103:924-933. PMID: PMC2822699 (*Corresponding Author*)
17. S Bulley and **W Shen** (2010) Reciprocal regulation between taurine and glutamate response via Ca<sup>2+</sup>-dependent pathways in retinal third-order neurons. *J Biomed Sci.* 17 (Suppl I):55. (*special issue*). PMID: PMC2994392 (*Corresponding Author*)
18. M JM Rowan, H Ripps and **W Shen** (2010) Fast glutamate uptake via EAAT2 shapes the cone-mediated light offset response in bipolar cells. *J Physiol.(London)*, 588(20): 3943-3956. PMID: PMC3000584 (*Corresponding Author*)
19. H Ripps and **W Shen** (2012) Taurine: An exceedingly ‘Essential’ amino acid. *Mol. Vision.* 18:2673-2686. PMID:PMC3501277 (*Co-corresponding Author*)
20. Z Jiang, S Bulley, J Guzzone, H Ripps and **W Shen** (2012) The modulatory role of taurine in retinal neurons. Chapter 5 in “Taurine 8” Book. PMID:23392924 (*Corresponding Author*)

21. M JM Rowan, S Bulley, L Purpura, H Ripps and **W Shen** (2012) Taurine regulation of voltage-gated channels in retinal neurons. Chapter 7 in “Taurine 8” Book. PMID:23392926 (*Corresponding Author*)
22. S Bulley, YF Liu, H Ripps, and **W Shen** (2013) Taurine activates delayed rectifier K<sub>v</sub> channels via a metabotropic pathway in retinal neurons. *J Physiol. (London)*, 591:123-132. PMID: PMC3630776 (*Corresponding Author*)
23. **W Shen**, LA Purpura, BQ Li, CL Nan, IJ Chang and H Ripps (2013) Regulation of synaptic Transmission at the photoreceptor terminal: A novel role for the cation-chloride cotransporter NKCC1. *J Physiol. (London)*, 591:133-147. PMID: PMC3630777 (*Corresponding Author*)
24. I Anastassov, **W Shen**, H Ripps, RL Chappell (2013) Zinc modulation of calcium activity at the photoreceptor terminal: a calcium imaging study. *Exp Eye Res*, 112:37-44. PMID: PMC3700670
25. Z Jiang, JN Yang, LA Purpura, YF liu, H Ripps, **W Shen** (2014) Glycinergic feedback enhances synaptic gain in the distal retina. *J Physiol. (London)*, 592 (7) 1479-1492. PMID: PMC3979606. (*Corresponding Author*)
26. J Yang, CL Nan, H Ripps, **W Shen** (2015) Destructive Changes in the Neuronal Structure of the FVB/N Mouse Retina. PLoS ONE 10(6): e0129719.doi:10.1371/journal.pone.0129719. PMID: PMC4475023. (*Corresponding Author*)
27. Xiaoqin Wang, Zhengyu Zhang, Gang Wu, Changlong Nan, **Wen Shen**, Yimin Hua and Xupei Huang (2016) Green tea extract catechin improves internal cardiac muscle relaxation in RCM mice. *J. Biomed. Sci.* 23:51, DOI 10.1186/s12929-016-0264-1
28. Liu Xiaoyan., Lei Zhang, Daniel Pacciulli, Jianquan Zhao, Changlong Nan, **Wen Shen**, Junjun Quan, Jie Tian, Xupei Huang (2016) Restrictive cardiomyopathy caused by troponin mutations: application of disease animal models in translational studies. *Front. Physiology*, 7:629, doi: 10.3389/fphys.2016.00629.
29. Yan Xiaochen, Bo Pan, Tiewei Lv, Lingjuan Liu, Jing Zhu, **Wen Shen**, Xupei Huang, Jie Tian (2017) Inhibition of histone acetylation by curcumin reduces alcohol-induced fetal cardiac apoptosis. *J. Biomed. Sci.*; 24(1):1. doi: 10.1186/s12929-016-0310-z.
30. **Wen Shen**, Changlong Nan, Peter T Nelson, Harris Ripps & Malcolm M Slaughter (2017) GABA(B) receptor attenuation of GABA(A) currents in neurons of the mammalian central nervous system. *Physiol Reports*. 5(6) e13129 DOI: 10.14814/phy2.13129. (*Corresponding Author*)
31. Baoqin Li, Sylvia Gografe, Alcira Munchow, Miguel Lopez-Toledano, Zhuo-Hua Pan, **Wen Shen** (2019) Sex-related differences in the progressive retinal degeneration of the rd10 mouse. *Exp Eye Res.*; 187: 107773, <https://doi.org/10.1016/j.exer.2019.107773>. (*Corresponding Author*)

## **PUBLISHED ABSTRACTS**

- 1. W. Shen** and M.M. Slaughter (1995) Glutamate receptor regulation of high voltage activated  $\text{Ca}^{2+}$  currents in amphibian retinal neurons. *ARVO* 36:4 1322.
- 2. W. Shen** and M.M. Slaughter (1996) Glutamate modulation of voltage activated  $\text{Ca}^{2+}$  currents in retinal RGCs. *FASEB Summer Research Conference, ABS: 17*.
- 3. W. Shen** and M.M. Slaughter (1997) Internal Ca release modulates the affinity of metabotropic GABA receptors. *ARVO* 38:4 5420. **(platform presentation)**
- 4. W. Shen** and M.M. Slaughter (1998) High and low affinity baclofen-sensitive, metabotropic GABA receptors modulate different Ca channels. *ARVO* 39:4 3144. **(platform presentation)**
- 5. W. Shen** and M.M. Slaughter (1998) Metabotropic GABA receptors regulate two high voltage-activated Ca channels through two transduction pathways. *FASEB Summer Research Conference, ABS:47*.
- 6. W. Shen** and M.M. Slaughter (1999) Ca-permeable Non-NMDA glutamate receptors in retinal RGCs. *ARVO* 40:4 4296.
- 7. W. Shen** and M.M. Slaughter (2000) GABAergic amacrine cell regulation of the bipolar to RGC synapse. *ARVO* 41:4 3284.
- 8. W. Shen** and M.M. Slaughter (2001) Glutamate receptor subtypes in horizontal cells in the human retina. *ARVO* 42:4 2745. **(platform presentation)**
- 9. W. Shen** and M.M. Slaughter (2002) GABA-induced synaptic facilitation by reciprocal modulation. *XV International Congress of Eye Research, pp.92. (invited speaker)*
- 10. W. Shen** and M.M. Slaughter (2002) Modulations of glutamate receptors by TGF-beta superfamily of growth factor in human retinal cells. *FASEB Summer Research Conference, ABS:33*.
- 11. W. Shen** and M.M. Slaughter (2002) The glycinergic interplexiform cell modulates the photoreceptor synapse. *ARVO website 2002:2932. (platform presentation)*
- 12. W. Shen** (2003) Effect of light adaptation on glycine sensitivity in horizontal cells. *ARVO website 2003:2007. (platform presentation)*
- 13. W. Shen** (2004) Positive control of the distal retinal signal by glycine interplexiform cells. *Shanghai International Conference in Physiology and Biophysics. (invited speaker)*
- 14. W. Shen** (2004) Glycine receptor plasticity in light adaptation. *Society for Neuroscience 34<sup>th</sup> annual meeting*.

15. **W. Shen** (2004) Glycinergic interplexiform cells regulate spatial sensitivity in the distal retina. *ARVO website 2004:1318. (platform presentation)*
16. Z. Jiang and **W. Shen** (2005) Functional expression of glycine transporter 2 (GlyT2) in amphibian retina. *ARVO website 2005:3453.*
17. B.Q. Li and **W. Shen** (2005) Regulation of glycine response by Na<sup>+</sup>-K<sup>+</sup>-2Cl<sup>-</sup> cotransporter (NKCC) on amphibian rods. *ARVO website 2005:3452.*
18. Z. Jiang, BQ Li and **W Shen** (2006) Differential distribution of glycine transporters in Müller cells and Neurons in amphibian Retinas. *FASEB Summer Research Conferences, Indian Wells. ABS No. 77.*
19. BQ Li and **W Shen** (2006) Developmental expression of chloride transporters in mouse retina. *ARVO, website:5392.*
20. **W Shen** and BQ Li (2006) Enhancing distal synapses by glycinergic interplexiform cells. *ARVO, website:2309. (platform presentation)*
21. Z Jiang and **W Shen** (2006) Metabotropic effect of glycine on bipolar cells synapse. *ARVO, website:393. (platform presentation)*
22. **W Shen** (2006) "Function of glycinergic feedback in distal retinal signaling" *FAOPS International Congress, Seoul, Korea. Online Abstract. (invited speaker)*
23. BQ Li and **W Shen** (2007) Preferential distribution of cation Cl<sup>-</sup> cotransporters in the dendrites of goldfish bipolar cells, *ARVO, website: 4589.*
24. M. Rowan and **W Shen** (2007) Immunocytochemical study of the properties of On- and Off-Bipolar cells of tiger salamander retinas, *ARVO, website: 4593.*
25. Z Jiang and **W Shen** (2007) Excitatory responses in ganglion cells evoked by glycine input in the distal retina. *ARVO, website:3620. (platform presentation)*
26. S Bulley and **W Shen** (2008) Neuromodulatory role of taurine in glutamate transmission in retina. *ARVO, website: 5790.*
27. Z Jiang and **W Shen** (2008) Excitatory and inhibitory synaptic inputs in interplexiform cells. *ARVO, websit:1514. (platform presentation)*
28. M Rowan and **W Shen** (2009) Glycine feedback enhances cone synapses through regulation of excitatory amino acid transporter, EAAT2. *ARVO, website: 5174. (platform presentation)*
29. Z Jiang and **W Shen** (2009) The function of glycine in regulation of rod-to-Off bipolar cell synapses in amphibian retina, *ARVO. website:4559.*

30. S Bulley and **W Shen** (2009) Taurine regulation of glutamate currents through activation of a new receptors. *ARVO. Website: 1033.*
31. W Shen (2010) A new role of taurine in retina. *17<sup>th</sup> International Taurine Conference, Miami, FL, USA. (plenary presentation)*
32. M Rowan and W Shan (2010) Transient Light -adaptation Enhances Cone Signaling by Suppression of Excitatory Amino Acid Transporter II (EAAT2). *ARVO (platform presentation)*
33. Matthew JM Rowan and Wen Shen (2011) Light Suppresses the Glutamate Transporter EAAT2 Activation in Cones via a Proton-sensitive Mechanism. *ARVO (platform presentation)*
34. YuFei Lu, Harris Ripps and Wen Shen (2011) Localization of Pannexin-Mediated Electrical Coupling in the Amphibian Retinal Cone Pathway. *ARVO.*
35. Joseph Guzzoni, Harris Ripps and Wen Shen (2011) Glycine Positive Control of the Distal Retinal Signals by a NKCC-Mediated Mechanism. *ARVO*
36. Simon Bulley, Matthew MJ Rowan and Wen Shen (2011) New Function and Action Site of Taurine in Regulation of Potassium Channels in the OFF-Bipolar Cells. *ARVO.*
37. Matthew JM Rowan and Wen Shen (2011) Transient Light -adaptation Enhances Cone Signaling by Suppression of Excitatory Amino Acid Transporter II (EAAT2) in the Retina. *Southeast Neuroscience Conference. (win the First Place Award)*
38. Wen Shen, Laurine A Purpura, Changlong Nan, Irene Chang, Harris Ripps (2012) Regulation of Synaptic Transmission at the Photoreceptor Terminal: A Novel Role for the Cation-Chloride Cotransporter NKCC1. *ARVO. (platform presentation)*
39. Wen Shen (2012) Metabotropic effect of taurine regulation of potassium channels via 5-HT<sub>2A</sub> serotonin receptors. *18<sup>th</sup> International Taurine Conference, Marrakesh, Morocco. (Invited Speaker)*
40. Wen Shen (2012) The Function of metabotropic effects of taurine in the retinal neurons. *ISER 2012, Berlin, Germany. (Invited Speaker)*
41. Lauren A Purpura, Harris Ripps and Wen Shen (2013) Fast Glutamate Uptake by EAAT2 Prevent Glutamate Depletion in Rod Photoreceptors. *ARVO*
42. W Shen, Y Liu, RL Chappell, H Ripps (2014) A Pannexin-mediated purinergic pathway in the vertebrate retina. *ARVO poster.*
43. J Yang, H Ripps, W Shen (2014). Neural remodeling in the FVB/N mouse retina. *ARVO poster.*
44. W Shen (2016) Na-K-2Cl cotransporter deficiency in the retinas affects the visual contrast sensitivity. *ARVO abstract*



45. W Shen (2017) Regulation of Synaptic Transmission at the Photoreceptor Terminal: A Novel Role for the Cation-Chloride Cotransporter NKCC1. *ISN Satellite Conference*.

46. James Sullivan, Malcolm Slaughter, Wen Shen (2019) Evidence for metabotropic glycine receptor regulation of voltage-gated channels in mouse retina. *ARVO abstract*

## **TEACHING EXPERIENCES**

### **Mentoring Post-Doctoral Fellows**

- Dr. Baoqin Li (2004-2007)      Research projects: Chloride transporters in retinal function” and “Neuroprotection against glaucoma disease”
- Dr. Jinnan Yang (2012-2015)      Research project: Role of NKCC transporter in visual adaptation”
- Dr. Chunglong Nan (2010-2016)      Research project: Molecular biological approach towards functional role of taurine in the CNS.
- Dr. Desheng Chen (2016-2018)      Research project: Deficiency of the bone morphogenetic protein related retinal degeneration.

### **Training Ph.D Students**

- Zheng Jiang (2004 - 2009), Ph.D student , Graduated  
Dissertation title: “Function of Glycine in Retina”.  
Current position: Assistant Professor, Department of Ophthalmology at Baylor College of Medicine
- Simon Bulley (2007 – 2010), Ph.D student , Graduated  
Dissertation title: “New insights of the potential neuromodulatory role and activation site of taurine in retina”  
Current position: Assistant Professor, College of Pharmacy, Western University of Health Science.
- Matthew Rowan (2006 - 2011), Ph.D student, Graduated  
Dissertation title: “Chemical synapses in retinal adaptation”  
Current position: Assistant Professor, Department of Cell Biology, Emory University School of Medicine
- Lauren Purpura (2010-2014), Ph.D student, Graduated  
Dissertation project: Function of Cl co-transporter in retinal physiology and disease.  
Current position: Professor in the Biological Sciences Department at Broward College
- James Sullivan (2018- present), Ph.D candidate

### **Training Medical Students in Research**

Irene Chang (M2), 2010

John Rollo (M2), 2010

Lisa Sonnenblick (M1), 2012

Minh Quan le (M1), 2015

Andrew Fahmy (M1), 2019

### **Training Master's Students**

Karie McKernan (2007-2008), graduated with non-Thesis Master's Degree

Paper published "Spatial and temporal distribution patterns of Na-K-2Cl<sup>-</sup> cotransporter in adult and developing mouse retinas. *Visual Neuroscience*. 25:109-123.

Joseph Guzzone (2010 –2011), graduated with non-Thesis Master's Degree

Abstract published "Glycine Positive Control of the Distal Retinal Signals by a NKCC-Mediated Mechanism", ARVO, 2011

Yufei Lu (2009- 2011). Graduated with Thesis Master's Degree

Master Thesis "Immunocytochemical study of electrical and chemical synapses in retinal circuitry"

Nick Libian (2019-2020) Graduated with non-Thesis Master's Degree

Matthew Nguyen (2019- present) Master thesis student

### **Training Undergraduate Students**

Heejab Bhatti (2007-2008) FAU

Michael Appelbatt (2008) FAU

Tassia Kostopoulos (2008) FAU

Omar Olyar (Spring- Summer 2009) FAU

Claudia Zapata (2009) FAU

Samuel Drysen (Summer 2011) Princeton University

Miguel Moreno (2015-2016)

Leyla Ali (2016)

Layal Dabbas (2016)

Angie Fontaine (2016)

Brain Nudelman (2017-2019)

Joshua Chatoo, NSF T-LEARN program, FAU, (2017-2018)

Alejandra Mejia, NSF T-LEARN program, FAU, (2017-2018)

John Kit, FAU (2018-2019)

Nicole Nudelman (2020)

Omar Saad (2020)

**Ph.D Student Advisory Committee:**

Claudia Prada, (2005) Ph.D. Dissertation defense -Department of Physiology and Biophysics, SUNY at Buffalo  
Zheng Jiang, (2004-2009), Chair of the Committee, Integrative Biology Ph.D Program  
Manas Biswal, (2006-2008), Committee Member, integrative Biology Ph.D Program  
Matthew Rowan, (2006-2011), Chair of the Committee, Integrative Biology Ph.D Program  
Yujing Li (2006-2011), Committee Member, Integrative Biology Ph.D Program  
Simon Bulley, (2007-2010) Chair of the Committee, Integrative Biology Ph.D Program  
Pierre Jean-Charles (2007-2012), Committee Member, Integrative Biology Ph.D Program  
Chandana Buddhala, (2006-2012), Committee Member, Integrative Biology Ph.D Program  
Stacey Caplan, (2009-2014), Committee Member, Integrative Biology Ph.D Program  
Lauren Purpura, (2010-2014), Chair of the Committee, Integrative Biology Ph.D Program  
Arunodoy Sur, (2011- 2014) Committee Member, Integrative Biology Ph.D Program  
Szu-Yu Chen, (2017-2018), Committee Member, University of Miami  
Dustin Gerber, (2017 – 2020) Committee Member, Master These  
James Sullivan, (2018-present), Chair of the Committee, Brian &Complex System Ph.D

**Master Student Advisor Committee:**

Matthew Nguyen, Master thesis (2019- present), Biomedical Science Master  
Yufei Lu, Master thesis, (2009-2011), Chair of the Committee, Biomedical Science  
Joseph Guzzone, (2010-2011), Chair of the Committee, Biomedical Science Master  
Karie McKernan, (graduated in 2008), Committee membrane, Biomedical Science  
Ying Jin (2004-2005) Master's thesis – College of Biomedical Science  
Tracy Cowell (2004) Master's thesis - College of Biomedical Science  
Percy Tumbale (2004) Master's degree – College of Biomedical Science

**Courses Taught at FAU**

*Medical Program-*

- Lecture for Neuroscience (M1 Medical Students), 2007-present
- Facilitation for a student-centered, problem-based learning (PBL) group in the Fundamental Neuroscience and Behavior module, 2007- present
- Facilitation for PBL in the Cardio-Vascular System and Renal System module, 2011-2013
- Facilitation for PBL in the Digestive System module, 2011- 2014
- Facilitation for M2 medical Students, Inquiry Cases (IQ), 2017 – present

*Graduate instruction-*

- Advanced Cell Physiology (Course director), 2007 – present
- Biomedical Science Core Technologies (Course co-director), 2018- present
- Biomedical Concepts & translation al applications (instructor), 2018-present
- Physiology of the Heart (Instructor), 2010-2014
- Neuroscience II (Instructor), 2009-2011

- Brain and Complex System Pro-seminar (Instructor), 2013- present

*New course development*

- Cellular Function and Physiology for M1 medical students
- Neurotransmission in the CNS for M1 medical students
- Visual System for M1 medical students
- Advanced Cell Physiology (graduate course, also registered by undergraduates)
- Neural Function and Degeneration (M1 students)
- Biomedical Science Topic I (course for both graduate and undergraduate)
- Biomedical Science Core Technologies

## **PROFESSIONAL SERVICE**

### **Journal Reviewer for**

Vision Neuroscience  
 European Journal of Neuroscience  
 Journal of Physiology  
 ISRN – Physiology (Editorial Board)  
 Journal of Neurosignal  
 JSM Cell (Editorial Board)  
 Journal of Neuroscience  
 Journal of Neurophysiology  
 PLoS One

### **Grant Reviewer**

National Science Foundation (NSF, *ad hoc*)

## **SERVICE**

### **Committee Service**

2005 Member of Annual Review Committee - Department of Biomedical Science  
 2005-2007 Member of Infrastructure Committee - College of Science  
 2006 Junior Faculty Search Committee - College of Biomedical Science  
 2006-2010 Neuroscience Program Seminar Committee - University  
 2008-2011 Graduate Committee - College of Medicine  
 2008-2012 University Honor and Award Committee  
 2010-2012 Promotion & Tenure Committee – Department of Biomedical Science  
 2011-2012 University Promotion & Tenure Committee  
 2011-2012 Chair of the College Promotion & Tenure Committee  
 2011-2013 Advisor for Student Journal Club - College of Medicine  
 2014- 2018 Research Committee –College of Medicine  
 2014- present Horner and Award Committee - University  
 2017- present Graduate Committee – College of Medicine

**Summer Sheremata, Ph.D.**

Assistant Professor  
Florida Atlantic University University  
777 Glades Road BS 207  
Boca Raton, FL 33431  
Telephone: 561-297-3362  
Email: ssheremata@fau.edu

**Education/Employment History:**

2015-present Assistant Professor, Psychology Department, Florida Atlantic University  
2013-2015 Postdoctoral Researcher, Psychology Department, George Washington University  
2010-2013 Postdoctoral Researcher, Vision Science & Neuroscience Programs, UC Berkeley  
2009, Ph.D. Psychology, Boston University, Boston, MA  
2000, B.A. Psychology, Northwestern University, Evanston, IL

**Scholarship/Research/Creative Activity**

**Publications in print:**

Journal Articles:

Byrne, K.N., McDevitt, E.A., Sheremata, S.L., Peters, M.W., Mednick, S.C., Silver, M.A. (2020) Transient cholinergic enhancement does not significantly affect either the magnitude or selectivity of perceptual learning of visual texture discrimination. *Journal of Vision* 20 (6) 5: 1-17.

Sheremata, S.L., Somers, D.C., Shomstein, S. (2018) Visual short-term memory acitivity in parietal cortex reflects cognitive processes beyond attentional selection. *Journal of Neuroscience* 38 (6):1511-1519.

Sheremata, S.L., Shomstein, S. (2017) Task set induces dynamic reallocation of resources in visual short-term memory. *Psychonomic Bulletin and Review* 24 (4): 1113-1120.

Sheremata, S.L., Silver, M.A. (2015) Hemisphere-dependent attentional modulation of human parietal visual field representations. *Journal of Neuroscience* 35 (2): 508-517.

Sheremata, S.L., Shomstein, S. (2014) Hemifield asymmetries differentiate VSTM for single- and multiple-feature objects. *Attention, Perception, & Psychophysics* 76 (6): 1609-1619.

Yoon, J., Sheremata, S.L., Rokem, A., Silver, M.A. (2013) Windows to the soul: Vision science as a tool for studying biological mechanisms of information processing deficits in schizophrenia. *Frontiers in Psychopathology* 4(681).

Somers, D.C., Sheremata, S.L. (2013) Attention maps in the brain *WIREs Cognitive Science: Cognitive Science* 4(4): 327-40.

Kong, L., Michalka, S.W., Rosen, M.L., Sheremata, S.L., Swisher, J.D., Shinn-Cunningham, B.S., Somers, D.C. (2014) Auditory spatial attention representations in the human cerebral cortex *Cerebral Cortex* 24(3): 773-84.

Kosovicheva, A.K., Sheremata, S.L., Rokem, A., Landau, A.N., Silver, M.A. (2012) Cholinergic enhancement reduces orientation-specific surround suppression but not visual crowding *Frontiers in Behavioral Neuroscience* 6(61).

Sheremata, S.L., Bettencourt, K.C., Somers, D.C. (2010) Hemispheric asymmetry in visuotopic posterior parietal cortex emerges with visual short-term memory load *Journal of Neuroscience* 30(38):12581-8.

Sheremata, S.L., Sakagami M. (2006) Increasing distractor strength improves accuracy *Perceptual and Motor Skills* 102(2): 509-516.

Chen, Y., Levy, D.L., Sheremata, S.L., Holzman, P.S. (2006) Bipolar and schizophrenic patients differ in patterns of visual motion discrimination *Schizophrenia Research* 88(1-3):208-216.

Sheremata, S.L., Chen, Y. (2004) Co-administration of atypical antipsychotics and antidepressants disturbs contrast detection in schizophrenia. *Schizophrenia Research* 70(1):81-89.

Chen, Y., Levy, D.L., Sheremata, S.L., Holzman, P.S. (2004) Compromised late-stage motion processing in schizophrenia *Biological Psychiatry* 55(8):834-41.

Chen, Y., Levy, D.L., Sheremata, S.L., Nakayama, K., Matthysse, S., Holzman, P.S. (2003) Effects of typical, atypical, and no antipsychotic drugs on visual contrast detection in schizophrenia. *American Journal of Psychiatry* 160(10): 1795-801.

Book Chapter:

Sheremata S. (2019) Topographic Mapping of Parietal Cortex. In: Neuromethods. Humana Press

### **Works currently under review**

Names in bold denote trainee.

Sheremata, S.L., **Shin, Y.** (under review) Mapping sequences affect reliability of parietal retinotopic map structure.

Sheremata, S.L., Silver, M.A. (under review) Interactions between handedness and the locus of attention on visual representations in topographic parietal cortex.

**Shin, Y.**, Sheremata, S.L. (under review) When remembering less is more: unfiltered items reduce memory fidelity in visual short-term memory.

Sheremata, S.L., **Minore, M.**, **Shin, Y.** (under review) Visual short-term memory is asymmetrically represented across the visual field.

Sheremata, S.L., Malcolm, G.L., Shomstein, S. (under review) Retinotopic hemifield asymmetries characterize VSTM performance.

## **Refereed Presentations and Proceedings (all International):**

Names in bold denote trainee. \* Denotes resulted in a manuscript under review. \*\* Denotes article published in refereed journal

\*\*Byrne, K.N., McDevitt, Sheremata, S.L. Peters, M.W., Mednick, S.C., Silver, M.A. (2019) Transient cholinergic enhancement does not significantly affect either the magnitude or selectivity of perceptual learning of visual texture discrimination. *presented at the Vision Sciences Society annual meeting*

\***Shin, Y.S.**, Sheremata, S. (2019) We are not all the same: Different memory limits reveal different memory processes. *presented at the Vision Sciences Society annual meeting- Currently under review for publication*

Annicchiarico, I., Sheremata S.(2018) The role of feature binding in the relationship between visual attention and visual short-term memory *presented at the Vision Sciences Society annual meeting*

\*Sheremata, S., **Loftus, S.** (2017) Fidelity of VSTM representations across the visual field reflects right-hemisphere specialization *presented at the Vision Sciences Society annual meeting- Currently under review for publication*

**Pytel, P.**, Sheremata, S. (2017) Longer Memory Delay Reveals Demands for Maintaining Multiple Features *presented at the Vision Sciences Society annual meeting*

\*Sheremata, S.L., Silver, M.A. (2016) Handedness-dependent hemispheric asymmetries in parietal spatial attention maps. *presented at the Society for Neuroscience annual meeting.*

\*\*Sheremata, S.L., Carter, B., Somers, D.C., Shomstein, S. (2016) Divergence and convergence of attention network activity in visual attention and short-term memory. *presented at the Vision Sciences Society annual meeting.-*

Sheremata, S.L., Carter, B., Somers, D.C., Shomstein, S. (2014) Divergence and convergence of attention network activity in visual attention and short-term memory. *presented at the Society for Neuroscience annual meeting.*

\*\*Sheremata, S.L., Malcolm, G.L., Shomstein, S. (2014) Hemispheric asymmetries in visual short-term memory occur in a retinotopic, not spatiotopic, coordinate frame. *presented at the Object Perception, visual Attention, and visual Memory annual meeting.*

Sheremata, S.L., Shomstein, S. (2014) Dynamic reallocation of resources in visual short-term memory. *Cognitive Science Association for Interdisciplinary Learning annual meeting.*

Silver, M.A., Sheremata S.L. (2013) Covert attention results in whole field representations in right, but not left, parietal cortex. *Society for Neuroscience annual meeting.*

Sheremata, S.L., Alvarez, B.D., Zertuche, L.E., Silver, M.A., Robertson, L.C. Visuotopic (2013) mapping of the parietal cortex distinguishes areas involved in synesthetic feature binding. *Vision Sciences Society.*

Sheremata, S.L., Silver, M.A. (2012) Spatial attention shifts visual field representations in topographic parietal cortex in the left but not the right hemisphere. *Cognitive Science Association for Interdisciplinary Learning*.

Sheremata, S.L., Somers, D.C., (2006) Attention to features affects visual short-term memory representations. *Society for Neuroscience*.

Sheremata, S., Sakagami, M., Watanabe, T. (2004) Unguarded signals influence motor behavior. *Society for Neuroscience*.

**Grants:**

**External:**

-Not Funded

2015 Searle Scholars Program

2016 NSF Co-PI The role of scene memory in object recognition (PI Elan Barenholtz)

2017 NSF Co-PI The role of scene memory in peripheral object recognition (PI Elan Barenholtz)

2018 1Florida ADRC The neurological basis of VSTM binding deficits in Alzheimer's Disease.

**Internal:**

-Funded:

2020	OURI Spring/Summer Research Grant program Manal Imran, Dayna Roth	\$1,200
2016-2017	Faculty Research Mentoring Grant Mentor Steven Bressler, Florida Atlantic University	\$4,000
2016-2017	OURI Peer Mentor Program	\$600

**Courses Taught at FAU**

Cognition (Fall 2015, Fall 2017, Fall 2018, Fall 2019)

Neuropsychology (Spring 2020)

Neuroimaging in Cognitive Neuroscience

Attention and Consciousness (Spring 2020)

**Graduate Advisees:**

Youngseon Shin (5<sup>th</sup> year)

Expected completion: 2021

Dissertation: Neuroimaging comparison of working memory and visual attention representations

Kenton MacDowell (5<sup>th</sup> year)

Expected completion: 2021

Dissertation: Neuroimaging of audio-visual binding of emotional expression

Joshua Conniff (3<sup>rd</sup> year)



Expected completion (MAL) 2020

Thesis: Investigations of distractor strength on attentional processing in a mixed block design

**Undergraduate advisees:**

\*Denotes OURI award \*\*Denotes Presentation at an international conference\*\*\*Denotes Co-Author on Publication

**Honors Students:**

Hadis, Syntia S.- Honor's Thesis (2017)

Title: Memory Delay Differentially Affects Features and Objects

Lespinace, Loissa- Honor's Thesis (2017)

Title: Visual Memory Processing Beyond Individual Visual Short-Term Memory Capacity

\*\* ,\*\*\* Minore, Mary C.- Honor's Thesis (2019)

Title: Hemifield Asymmetries in Precision of VSTM Representations

\* Imran, Manal- Honor's Thesis (2020)

Electroencephalography Signals of Distractor Strength

\* Roth, Dayna J.- Honor's Thesis (2020)

Title Effects of Randomization on Distractor Inhibition

**Directed Independent Study/Research students who did not complete an honors thesis:**

Academic Year 2015/2016:

Alvarez, Shainy A.

Contrelli, Michael A.

Dukov, Denis Y.

\*Loftus, Sabrina N.

Moyses, Katherine L.

Pineda, Juan C.

\*\*Pytel, Paige J. Completed Master's Degree in Psychology Department

Academic Year 2016/2017:

Durosier, Marthe V.

Peterson, Kacey A.

Wensel Orbik, Julie A.

Academic Year 2017/2018:

Rose, Amber

Rodriguez Cardona, Manuela

Carter, Brooke

Omer, Chelsea L.

Rech, Hailee J.

Rosen, Amber R.

Hernandez, Natalia

Mair, Keitrina

Academic Year 2018/2019:

Cardinale, Michael

Lacroix, Rochelle N.

Osorio, Monica A.  
Umar, Hadiza

Academic Year 2019/2020:

Doan, Van  
Rohack, Devin  
Droira, Joshua  
Severin, Zachary A.

Graduate Committees (thesis or dissertation completed only):

2015/2016

Seifert Matthew PhD  
Cox Dustin MALW  
Kleiman Michael MALW  
Schlangen Derrick PhD

2016/2017

Islam Mohammed MALW  
Perez Nicole MALW

2017/2018

LaCombe Daniel PhD  
Velez Uribe Idaly PhD

2018/2019

Christopher Deven MALW  
Cox Dustin PhD  
Kelly Roshawn MA  
Islam Mohammed PhD  
Ray Subhosit MALW

2019/2020

Pytel Paige MA

Torres Valeria MALW  
Perez Nichole PhD  
Datta Debarshi PhD  
Ray Subhosit MALW

**Service and Professional Development**

**Service to the Institution :**

Departmental

Website Committee	2015-2018
Cognitive Neuroscience Search Committee, Psychology Department	2015-2016
Cognitive Neuroscience Search Committee, Center for Complex Systems & Brain Sciences	2015-2017

Behavioral Neuroscience Search Committee, Psychology Department	2016-2017
Computational Neuroscience Search Committee, Center for Complex Systems & Brain Sciences	2017-2018
Colloquium Committee	2019-2020
Graduate Recruitment Committee	2019-2020
Social Psychology Search Committee, Psychology Department	2019-2020
Curriculum Committee, Center for Complex Systems and Brain Sciences	2019-2020
Instructor Search Committee	2019-2020
	College of Science
Dean's Strategic Planning Committee	2016-2018
	University Service
Human Imaging Core Steering (renamed FAU Human and Animal Imaging) Committee	2016-2020
Graduate Research Day Judge	2017-2018

**Service to the Discipline/Profession:**

NSF adhoc grant reviewer, CogNeuro Section

Reviewer for numerous journals: Journal of Neuroscience, Journal of Cognitive Neuroscience, Neuroimage, Journal of Neurophysiology, Neuroscience, Brain and Behavior, Current Opinion in Psychology, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Human Perception and Performance, Journal of Experimental Psychology: Memory and Learning, Attention Perception and Psychophysics, Psychonomic Bulletin and Review, Cognitive Psychology, Journal of Vision

Review Editorial Board: Frontiers in Neuroscience

**Honors and Awards**

Louise Hanson Marshall Special Recognition Award, Nominated June 2020, Society for Neuroscience

Description: Honors an individual who has significantly promoted the professional development of women in neuroscience through teaching, organizational leadership, public advocacy, or other efforts that are not necessarily research-related.

## ROBERT W. STACKMAN, JR. | Dean of the Graduate College

Florida Atlantic University

Location: Boca Raton, FL

Email: [rstackma@fau.edu](mailto:rstackma@fau.edu)

Telephone: 561,297,2313

### Work Experience

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#### **DEAN, The Graduate College**

**06/2019 - PRESENT**

##### ***Florida Atlantic University, Boca Raton, FL***

- Provide high standard of professionalism in leadership and service of the university's graduate educational system; ensure that programs are delivered at high academic standards that seek to celebrate student, staff and faculty achievements.
- Promote efficiency by utilizing data-driven decision making whenever possible; assist leadership with graduate admissions and enrollment management; provide oversight and guidance to graduate degree completion processes.
- Ensure policies and programs of the university's Graduate College adhere to the standards set by the Board of Governors and the State University System; ensure that policies and programs are carried out appropriately by all students, staff and faculty.
- Provide oversight and leadership regarding administration of the financial support package for all graduate assistants; coordinate recruitment practices to align with academic colleges' strategic areas of emphasis.
- Deliver effective professional development workshops and training to graduate students, staff and faculty.
- Assist university's executive leadership to meet strategic goals, state metrics and key performance indicators for institutional advancement and performance-based funding.

#### **ASSOCIATE DEAN of Graduate Studies, College of Science**

**06/2018 – 06/2019**

##### ***Florida Atlantic University, Boca Raton, FL***

- Promoted efficiency in the use of the college graduate tuition waiver budget to enable growth in student support within programs in spite of flat budgets.
- Worked directly with department chairs and faculty to ensure that graduate students received high standard of support, guidance, and advising.
- Assisted the Dean of the College of Science to work with all department chairs to develop effective plans, programs and tools to meet or exceed key performance indicator and metrics goals.

#### **INTERIM CHAIR, Department of Psychology, College of Science**

**07/2016 – 01/2018**

##### ***Florida Atlantic University, Boca Raton, FL***

- Worked directly with eighteen department faculty, and seven staff to supervise academic degree programs delivery to over 2,000 undergraduate students and 65 graduate students.
- Directed annual faculty review process; carried out supervisory responsibilities in accordance with faculty promotion and tenure process.
- Oversaw departmental budget; employed a democratic process for the distribution of office and laboratory space for faculty and students.
- Responsibilities included interviewing, hiring and training staff, appraising performance, addressing opportunities for advancement, complaints and resolving problems.

**EDUCATION**

- 1995 Ph.D. in Psychology (Program in Biopsychology and Behavioral Neuroscience), Rutgers, The State University of New Jersey
- 1990 M.S. in Psychology (Program in Biopsychology and Behavioral Neuroscience), Rutgers, The State University of New Jersey
- 1986 B.S. *with honors* in Psychology, Allegheny College

**EMPLOYMENT**

- 2019 – *present* Dean, The Graduate College, Florida Atlantic University, Boca Raton, FL
- 2018– 2019 Associate Dean of Graduate Studies, College of Science, Florida Atlantic University, Boca Raton, FL
- 2016 – 2018 Interim Chair, Department of Psychology, Florida Atlantic University, Boca Raton, FL
- 2016 – *present* Professor, Department of Psychology, Florida Atlantic University, Jupiter, FL
- 2006 – 2016 Associate Professor (*tenured May 2010*), Florida Atlantic University, Boca Raton, FL
- 1998 – 2005 Assistant Professor (*non-tenure track*), Oregon Health & Science University, Portland, OR
- 1998 – 1998 Visiting Assistant Professor, Department of Psychology, Dartmouth College, Hanover, NH
- 1995 – 1998 Post-Doctoral Fellow, Dartmouth College  
Advisor: Jeffrey S. Taube, Ph.D.  
*In vivo* recording of neuronal representations of spatial information in the rodent limbic brain.
- 1992-1994 Lecturer, Department of Psychology, Rutgers, the State University of New Jersey
- 1988 – 1994 Doctoral Researcher, Rutgers, The State University of New Jersey, Piscataway, NJ  
Advisor: Thomas J. Walsh, Ph.D.  
Contribution of septohippocampal cholinergic and GABAergic circuits to spatial memory in rats.
- 1987-1992 Graduate Teaching Assistant, Dept of Psychology, Rutgers, the State University of New Jersey
- 1987 – 1988 Doctoral Researcher, Rutgers, The State University of New Jersey, Piscataway, NJ  
Advisor: Larissa Pohorecky, Ph.D.  
Contribution of beta-endorphin receptors to expression of behaviors in rats after acute or chronic alcohol administration.
- 1986 – 1987 Research Technician, Medical College of Wisconsin, Milwaukee, WI  
Supervisor: Liang F. Tseng, M.D., Ph.D.  
*In vivo* mapping rat brainstem sites mediating the analgesic effects of mu opioid receptor agonists.

**HONORS AND AWARDS**

- 2020 Initiated into the Phi Kappa Phi Honor Society, Florida Atlantic University chapter
- 2011 Distinguished Teacher of the Year award, College of Science, Florida Atlantic University
- 2010 Researcher of the Year award at the Associate Professor level, Florida Atlantic University
- 1986 Alden Scholar, Allegheny College

**PROFESSIONAL ACTIVITIES**

- 2017-*present* Selection Committee Member, Int'l Max Planck Research School (IMPRS) for Brain & Behavior
- 2016-2019 Co-Director, Neuroscience & Behavior B.S. degree program, Florida Atlantic University
- 2015-*present* Faculty Member, International Max Planck Research School (IMPRS) for Brain & Behavior
- 2013-2015 Associate Director of Neuroscience, Jupiter Life Science Initiative, Florida Atlantic University
- 2013-*present* Faculty Member, Jupiter Life Science Initiative, Florida Atlantic University
- 2009-2010 Co-organizer, "FAU Neuroscience Seminar" with Dr. Kenneth Dawson-Scully, Biological Sciences

**GRANT SUPPORT****Active**

- 2020-2023 NSF, REU 1852175, *Summer Intensive Neuroscience Experience in Jupiter*. Role: Co-PI (with A. Keene – FAU). Total costs: \$387,457
- 2017-2020 Max Planck Florida Institute for Neuroscience, Subcontract for collaborative project to provide *Behavioral phenotyping of transgenic mouse models*. Role: Co-PI (PI: Ryohei Yasuda – Max Planck Florida Institute).

**Completed**

- 2018-2019 FAU, College of Science Seed Grant, *Probing the neural circuitry and molecular mechanisms supporting long-term memory for objects*. Role: PI (with S. Puthanveetil – TSRI (Co-PI)). Total costs: \$18,000
- 2018-2019 FAU, Brain Institute Pilot Award, *Rescuing attention and memory in a mouse model of schizophrenia via manipulation of SK channels*. Role: PI, Total costs: \$15,000
- 2013-2017 NIH, NIMH 1 R15 MH099590, *Role of midline thalamus in arousal, attention and cognition*. Role: Consultant (PI: Vertes)
- 2009-2016 NIH, NIMH, 1 R01 MH086591, *Memory modulation by SK channels*. Role: PI. Total costs: \$1,502,200
- 2013-2014 FAU, Division of Research Seed Grant, *Selective manipulation of hippocampal PKG activity to modulate memory processes*. Role: PI (with Dawson-Scully (Co-PI). Total costs: \$25,000
- 2012-2013 FAU, Division of Research, Research Priority Grant Parent Award: Blanks and Murphey (PIs), Pilot Project: *Selective manipulation of PKG pathway activity in the hippocampus of C57BL/6J mice to modulate memory processes*. Role: PI (with Dawson-Scully (Co-PI). Total costs: \$5,000
- 2009-2010 NIH, American Recovery and Reinvestment Act (ARRA), Stimulus Supplemental Award to 1 R21 AA014407. Role: PI. Total costs: \$6500
- 2005-2009 NIH, NIAAA, 1 R21 AA014407, *Ethanol's influence on neural mechanisms of navigation*. Role: PI. Total costs: \$407,000
- 2005-2010 NSF, IOS 0630522, *Influence of SK channels on hippocampal memory*, Role: PI. Total costs: \$676,123
- 2004-2008 NIH, NINDS 2 R01 NS038880, *Molecular physiology of SK2 channels in CA1 neurons*. Role: Co-Investigator (PI: Adelman)
- 2004-2005 NIH, NIMH 1F31 MH070124, *SK channels and hippocampal function*. Role: Sponsor (PI: R.S. Hammond)
- 1999-2005 NIH, NIAAA T32 AA07468, *Biological bases of alcoholism*, Role: Training Faculty (PI: Cunningham)
- 1999-2005 NIH, NIDA T32 DA07262, *Biological bases of drug-seeking behavior*, Role: Training Faculty (PI: Neve)
- 2003-2005 NIH, NIAAA 2 P50 AA10760-09, *Behavioral genomics of alcohol neuroadaptation*. (PI: Crabbe), Pilot Project, *Ethanol and hippocampal function*. Role: Pilot project PI. Total costs: \$25,000
- 2003-2005 Beaufour IPSEN Pharma S.A.S Contractual Agreement, *Effects of ginkgo biloba extract (EGb 761) on hippocampal memory and physiology*. Role: PI. Total costs: \$26,490
- 2003-2004 NIH, NCAM 5 P50 AT000066-04, *Oregon Center for CAM in Neurological Disorders*, PI: Oken. Project Title: *Chronic ginkgo treatment and age-related cognitive impairment in mice*, Role: Project PI. Total costs: \$20,000

**GRANT SUPPORT (continued)**

- 2000-2001 NIH, NIAAA 2 P50 AA10760, *Behavioral genomics of alcohol neuroadaptation*. (PI: Crabbe), Pilot Project, *Ethanol and hippocampal function across inbred strains of mice*. Role: Pilot project PI. Total costs: \$25,000
- 2000-2001 Alzheimer's Research Alliance of Oregon, *Beta-amyloid vaccination in an animal model of Alzheimer's disease*. Role: Co-I (PI: Quinn)
- 1999-2001 Alzheimer's Research Alliance of Oregon, *Spatial coding by hippocampal neurons: Role of vestibular system*. Role: PI. Total costs: \$25,000
- 1999-2001 Medical Research Foundation of Oregon Seed Grant, *Interaction of the vestibular system and spatial cognition*, Role: PI. Total costs: \$25,000
- 1999-2000 Oregon Health Sciences Foundation, OHSU, *Research Equipment Fund Award*, Role: PI, Total costs: \$12,500
- 1997-2000 NASA, NSBRI, Neurovestibular Team Grant: Visual orientation in unfamiliar gravito-inertial environments. Project title: *Head direction cell activity under microgravity conditions*. Role: Co-I (PI: Oman)
- 1995-1998 NIH, NIDCD, 1 F32 DC00236-01, *Vestibular influences upon head direction cell activity*, Role: PI. Sponsor: J.S. Taube. Total costs:

**PEER-REVIEWED PUBLICATIONS (in chronological order)**

1. Chrobak JJ, Spates MJ, **Stackman RW** and Walsh TJ (1989) Hemicholinium-3 prevents the working memory impairments and the cholinergic hypofunction induced by ethylcholine aziridinium ion (AF64A). *Brain Research*. **504**, 269-275.
2. Chrobak JJ, **Stackman RW** and Walsh TJ (1989) Intraseptal administration of muscimol produces dose-dependent memory impairments in the rat. *Behavioral and Neural Biology*. **52**, 357-369.  
\*\* cover illustration
3. Tseng LF, Tang R, **Stackman RW**, Camara A and Fujimoto JM (1990) Brainstem sites differentially sensitive to  $\beta$ -endorphin and morphine for analgesia and release of met-enkephalin in anesthetized rats. *Journal of Pharmacology & Experimental Therapeutics*. **253**, 930-937.
4. **Stackman RW** and Walsh TJ (1992) Chlordiazepoxide-induced working memory impairments: Site specificity and reversal by flumazenil (RO15, 1788). *Behavioral and Neural Biology*. **57**, 233-243.
5. Walsh TJ, **Stackman RW**, Emerich DF and Taylor LA (1993) Intraseptal injection of GABA and benzodiazepine receptor ligands alters high-affinity choline transport in the hippocampus. *Brain Research Bulletin*. **31**, 267-271.
6. Opello KD, **Stackman RW**, Ackerman S and Walsh TJ (1993) AF64A (Ethylcholine mustard aziridinium) impairs acquisition and performance of a spatial, but not a cued water maze task: Relation to cholinergic hypofunction. *Physiology and Behavior*. **54**, 1227-1233.
7. Wöertwein G, **Stackman RW** and Walsh TJ (1994) Vitamin E prevents the place learning deficit and the cholinergic hypofunction induced by AF64A. *Experimental Neurology*. **125**, 15-21.
8. **Stackman RW** and Walsh TJ (1994) Baclofen produces dose-related working memory impairments after intraseptal injection. *Behavioral and Neural Biology*. **61**, 181-185.
9. Walsh TJ, Kelly RM and **Stackman RW** (1994) Strategies to limit brain injury and promote recovery of function. *Neurotoxicology*. **15**, 467-476.

**PEER-REVIEWED PUBLICATIONS: *continued***

10. Janis LS, Glasier MM, Martin G, **Stackman RW**, Walsh TJ and Stein DG (1995) A single intraseptal injection of nerve growth factor facilitates radial maze performance following damage to the medial septum in rats. *Brain Research*. **679**, 99-109.
11. **Stackman RW** and Walsh TJ (1995) Anatomical specificity and time-dependence of chlordiazepoxide-induced spatial memory impairments. *Behavioral Neuroscience*. **109**, 436-445.
12. **Stackman RW** and Walsh TJ (1995) Distinct profile of working memory impairment induced by either intraseptal chlordiazepoxide or intraventricular ethylcholine aziridinium ion (AF64A). *Neurobiology of Learning and Memory*. **64**, 226-236.
13. Walsh TJ, Kelly RM, Dougherty KD, **Stackman RW**, Wiley RG and Kutscher CL (1995) Behavioral and neurobiological alterations induced by the immunotoxin 192-IgG-saporin: Cholinergic and non-cholinergic effects following i.c.v. injection. *Brain Research*. **702**, 233-245.
14. **Stackman RW**, Brucato F, Walsh TJ and Swartzwelder HS (1996) Medial septal benzodiazepine receptors modulate hippocampal evoked responses and long-term potentiation. *Brain Research*. **717**, 12-21.
15. Walsh TJ, Herzog CD, Gandhi C, **Stackman RW** and Wiley RG (1996) Injection of IgG 192-saporin into the medial septum produces cholinergic hypofunction and dose-dependent working memory deficits. *Brain Research*. **726**, 69-79.
16. Taube JS, Goodridge JP, Golob EJ, Dudchenko PA and **Stackman RW** (1996) Processing the head direction signal: A review and commentary. *Brain Research Bulletin*. **40**, 477-486.
17. Herzog CD, **Stackman RW** and Walsh TJ (1996) Flumazenil enhances, while diazepam binding inhibitor impairs, performance in a working memory task. *Neurobiology of Learning and Memory*. **66**, 341-352.
18. Smith ST, **Stackman RW** and Clark AS (1996) Spatial working memory is preserved in rats treated with anabolic-androgenic steroids. *Brain Research*. **737**, 313-316.
19. **Stackman RW**, Blasberg ME, Langan CL and Clark AS (1997) Stability of spatial working memory across the estrous cycle of Long-Evans rats. *Neurobiology of Learning and Memory*. **67**, 167-171.
20. **Stackman RW** and Taube JS (1997) Firing properties of head direction cells in the rat anterior thalamic nucleus: Dependence upon vestibular input. *Journal of Neuroscience*. **17**, 4349-4358.
21. **Stackman RW**, Bartolomeo AC and Walsh TJ (1997) Vitamin E attenuates the effects of both reversible and irreversible inhibitors of high-affinity choline transport *in vivo*. *Restorative Neurology and Neuroscience*. **11**, 83-89.
22. Walsh TJ, Gandhi C and **Stackman RW** (1998) Amnesic effects following temporary inactivation of the rat medial septum and nucleus basalis: Dissociation of memory and performance. *Behavioral Neuroscience*. **112**, 1114-1124.
23. **Stackman RW** and Taube JS (1998) Firing properties of rat lateral mammillary single units: Head direction, head pitch, and angular head velocity. *Journal of Neuroscience*. **18**, 9020-9037.
24. **Stackman RW**, Tullman ML and Taube JS (2000) Maintenance of rat head direction cell firing during locomotion in the vertical plane. *Journal of Neurophysiology*, **83**, 393-405.
25. Golob EJ, **Stackman RW**, Wong AC and Taube JS (2001) On the behavioral significance of head direction cells. Neural and behavioral dynamics during spatial memory tasks. *Behavioral Neuroscience*, **115**, 285-304.
26. **Stackman RW** and Herbert AM (2002) Rats with lesions of the vestibular system require visual landmark for spatial navigation. *Behavioural Brain Research*, **128**, 27-40.



**PEER-REVIEWED PUBLICATIONS: *continued***

27. **Stackman RW**, Clark AS and Taube JS (2002) Hippocampal spatial representations require vestibular input. *Hippocampus*, **12**, 291-303.
28. **Stackman RW**, Hammond RS, Linardatos E, Gerlach A, Maylie J, Adelman J and Tzounopoulos T (2002) Small conductance Ca<sup>2+</sup>-activated K<sup>+</sup> channels modulate synaptic plasticity and memory encoding. *Journal of Neuroscience*, **22**, 10163-10171.
29. Calton JL, **Stackman RW**, Goodridge JP, Archey WB, Dudchenko PA and Taube JS (2003) Hippocampal place cell instability following lesions of the head direction cell network. *Journal of Neuroscience*, **23**, 9719-9731.
30. **Stackman RW**, Golob EJ, Bassett J and Taube JS (2003) Passive transport disrupts directional path integration by rat head direction cells. *Journal of Neurophysiology*, **90**, 2862-2874.
31. **Stackman RW**, Eckenstein F, Frei B, Kulhanek D, Nowlin J and Quinn JF (2003) Prevention of age-related spatial memory deficits in a transgenic mouse model of Alzheimer's disease by chronic *Ginkgo biloba* treatment. *Experimental Neurology*, **184**, 510-520.
32. Tzounopoulos T and **Stackman RW** (2003) Enhancing synaptic plasticity and memory: A role for small conductance Ca<sup>2+</sup>-activated K<sup>+</sup> channels. *The Neuroscientist*, **9**, 434-439.
33. Hammond RS, Tull LE and **Stackman RW** (2004) On the delay-dependent involvement of the hippocampus in object memory. *Neurobiology of Learning and Memory*. **82**, 26-34.
34. Bond CT, Herson PS, Strassmaier T, Hammond RS, **Stackman RW**, Maylie J, Adelman JP (2004) Small conductance Ca<sup>2+</sup>-activated K<sup>+</sup> channel knock-out mice reveal the identity of calcium-dependent afterhyperpolarization currents. *Journal of Neuroscience*, **24**, 5301-5306.
35. Taube JS, **Stackman RW**, Calton J and Oman CM (2004) Rat head direction cell responses in 0-G parabolic flight. *Journal of Neurophysiology*. **92**, 2887-2997.
36. Quinn JF, Kaye J, Montine T and **Stackman RW** (2004) Polyphenolics in Alzheimer's disease: The development of clinical trials. *Pharmaceutical Biology*. **42 (Suppl. 1)**, 64-73.
37. Quinn JF, Kulhanek D, Nowlin J, Jones R, Praticò D, Rokach J and **Stackman RW** (2005) Chronic melatonin therapy fails to alter amyloid burden or oxidative damage in old Tg2576 mice: Implications for clinical trials. *Brain Research*. **1037**, 209-213.
38. Hammond RS, Bond CT, Ngo-Anh TJ, Adelman JP, Maylie J and **Stackman RW** (2006) Small-conductance Ca<sup>2+</sup>-activated K<sup>+</sup> channel 2 (SK2) overexpression impairs hippocampal learning, memory, and synaptic plasticity. *Journal of Neuroscience*. **26(6)**: 1844-1853.
39. Quinn JF, Bussiere JR, Hammond RS, Montine TJ, Henson E, Jones RE and **Stackman RW** (2007) Chronic dietary  $\alpha$ -lipoic acid reduces deficits in hippocampal memory of aged Tg2576 mice. *Neurobiology of Aging*. **28(2)**: 213-225.
40. **Stackman RW**, Bond CT and Adelman JP (2008) Contextual memory deficits observed in mice overexpressing small conductance Ca<sup>2+</sup>-activated K<sup>+</sup> type 2 (K<sub>Ca</sub>2.2, SK2) channels are caused by an encoding deficit. *Learning & Memory*. **15(4)**: 208-213.
41. Yang D, Kim KH, Phimister A, Ward TR, **Stackman RW**, Mervis R, Wisniewski AB, Klein S, Kodavanti PRS, Anderson KA, Wayman G, Pessah IN and Lein PJ (2009) Developmental exposure to polychlorinated biphenyls (PCBs) interferes with experience-dependent dendritic plasticity and ryanodine receptor expression in weanling rats. *Environmental Health Perspectives*. **117(3)**: 426-435.
42. Vick KA, Guidi M and **Stackman RW** (2010) *In vivo* pharmacological manipulation of small conductance Ca<sup>2+</sup>-activated K<sup>+</sup> channels (K<sub>Ca</sub>2, SK) influences motor behavior, object memory and fear conditioning. *Neuropharmacology*. **58(3)**: 650-59.

**PEER-REVIEWED PUBLICATIONS: *continued***

43. Allen D, Bond CT, Luján R, Ballesteros-Merino C, Lin MT, Wang K, Watanabe M, Shigemoto R, **Stackman RW**, Maylie J and Adelman JP (2011) The SK2-Long isoform directs synaptic localization and function of SK2-containing channels. *Nature Neuroscience*. **14(6)**: 744-49.
44. **Stackman RW**, Lora JC and Williams SB (2012) Directional responding of C57BL/6J mice in the Morris water maze is influenced by visual and vestibular cues and is dependent upon the anterior thalamic nuclei. *Journal of Neuroscience*. **32(30)**: 10211-10225.
45. Zhang G, Ásgeirsdóttir HN, Cohen SJ, Munchow AH, Barrera MP and **Stackman RW** (2013) Stimulation of serotonin 2A receptors facilitates consolidation and extinction of fear memory in C57BL/6J mice. *Neuropharmacology*. **64**: 403-413. Epub available 09/2012.
46. Cohen SJ, Munchow A, Rios LM, Zhang G, Ásgeirsdóttir HN and **Stackman Jr RW** (2013) The rodent hippocampus is essential for non-spatial object memory. *Current Biology*. **23**: 1685-1690. \*\*
- \*\* **Highlighted in *Current Biology* Dispatch article: Clark RE (2013) Recognition memory: an old idea given new life. *Current Biology* 23, R725-727.**
47. Rabinowitz A, Cohen SJ, Finn DA and **Stackman Jr RW** (2014) The neurosteroid allopregnanolone impairs hippocampal-dependent object memory and contextual fear memory in C57BL/6J mice. *Hormones & Behavior*, **66(2)**: 238-246.
48. Cohen SJ and **Stackman Jr RW** (2015) Assessing rodent hippocampal involvement in the novel object recognition task. A review. *Behavioural Brain Research*, **285**: 105-117.
49. Zhang G and **Stackman Jr RW** (2015) The role of serotonin 2A (5-HT<sub>2A</sub>) receptors in memory and cognition. *Frontiers in Pharmacology, Section Neuropharmacology*, **Oct 6;6**: 225. doi 10.3389/fphar.2015.00225.
50. Wu X, Pang G, Zhang Y-M, Dong L, **Stackman Jr RW** and Zhang G (2015) Activation of serotonin 2C receptor suppresses behavioral sensitization and naloxone-precipitated withdrawal symptoms in heroin-dependent mice. *Neuroscience Letters*, **607**: 23-28.
51. Zhang G, Cinalli Jr D, Cohen SJ, Knapp KD, Rios LM, Martínez-Hernández J, Luján R and **Stackman Jr RW** (2016) Examination of the hippocampal contribution to serotonin 5-HT<sub>2A</sub> receptor-mediated facilitation of object memory in C57BL/6J mice. *Neuropharmacology*, **109**: 332-340.
52. **Stackman Jr RW**, Cohen SJ, Lora JC and Rios LM (2016) Temporary inactivation reveals that the CA1 region of the dorsal hippocampus plays an equivalent role in the retrieval of long-term object memory and spatial memory. *Neurobiology of Learning and Memory*, **133**: 118-128.
53. Pang G, Wu X, Tao X, Mao R, Liu X, Zhang Y-M, Li G, **Stackman Jr RW**, Dong L and Zhang G (2016) Blockade of serotonin 5-HT<sub>2A</sub> receptor suppresses behavioral sensitization and naloxone-precipitated withdrawal symptoms in morphine-treated mice. *Frontiers in Pharmacology, Section Neuropharmacology*, **7**: 514 doi: 10.3389/fphar.2016.00514
54. Rizzo V, Touzani K, Raveendra B, Swarnkar S, Lora JC, Kadakkuzha BM, Liu X-A, Zhang C, Betel, D, **Stackman Jr RW** and Puthanveetil S (2017) Encoding of contextual fear memory requires de novo proteins in the prelimbic cortex. *Biological Psychiatry: Cognitive Neuroscience & Neuroimaging*, **2(2)**: 158-169.
55. Zhang G, Cinalli Jr D and **Stackman Jr RW** (2017) Effect of a hallucinogenic serotonin 5-HT<sub>2A</sub> receptor agonist on visually guided hippocampal-dependent spatial cognition in C57BL/6J mice. *Hippocampus*, **27(5)**: 558-569.

**PEER-REVIEWED PUBLICATIONS: *continued***

56. Song Y, Zhu J-S, Hua R, Du L, Huang S-T, **Stackman Jr RW**, Zhang G and Zhang Y-M (2018) Small conductance Ca<sup>2+</sup>-activated K<sup>+</sup> channel 2 in spinal dorsal horn participates in visceral hypersensitivity induced by neonatal colorectal distension in rats. *Frontiers in Pharmacology*, 9(840) <https://doi.org/10.3389/fphar.2018.00840>.
57. **Ásgeirsdóttir HN**, Cohen SJ and **Stackman Jr RW** (2020) Object and place information processing by CA1 hippocampal neurons of C57BL/6J mice. *Journal of Neurophysiology*, 123(3): 1247-1264. <http://doi:10.1152/jn.00278.2019> Epub 2020 Feb 5.
58. Cinalli Jr DA, Cohen SJ, Guthrie K and **Stackman Jr RW** (2020) Object recognition memory: Distinct yet complementary roles of the mouse CA1 and perirhinal cortex. *Frontiers in Molecular Neuroscience*, 13(192) [10.3389/fnmol.2020.527543](https://doi.org/10.3389/fnmol.2020.527543)
59. Szatmari E, Moran C, Cohen SJ, Jacob A, Parra-Bueno P, Kamasawa N, Guerrero-Given D, Klein M, **Stackman Jr RW** and Yasuda R (2020) ADAP1/Centaurin-a1 negatively regulates dendritic spine function and memory formation in the hippocampus. *eNEURO*, 8(1) [ENEURO.0111-20.2020](https://doi.org/10.1523/ENEURO.0111-20.2020).

**MANUSCRIPTS IN PREPARATION**

60. Rice-Kuchera C and **Stackman Jr RW** (in preparation). Selective activation of the small conductance calcium-activated potassium channel subunit, SK1 impairs hippocampal-dependent object memory and Pavlovian fear memory in C57BL/6J mice.
61. Cohen SJ, Cinalli Jr, D, **Ásgeirsdóttir HN**, Barenholtz E and **Stackman Jr RW** (*under revision*) Every picture tells a story: Evidence for picture-object equivalence in mice. *Learning & Memory*.

**BOOKS**

1. Electrophysiological Recording Techniques. (2010) (Eds: R.P. Vertes and **R.W. Stackman, Jr.**). Neuromethods Series, Vol. 54. Humana Press, Totowa, NJ.

**CHAPTERS**

1. Walsh, T.J. and **Stackman, R.W.** (1992). Modulation of memory by benzodiazepine-acetylcholine interactions. In: Neurotransmitter Interactions and Cognitive Function. (Eds: E.D. Levin, M.W. Decker, L.L., Butcher). Birkhäuser, Boston, 312-328.
2. Blair H.T., Sharp P.E., Cho J., Goodridge J.P., **Stackman R.W.**, Golob E.J. and Taube J.S. (1998). Path integration in the rat head-direction circuit. In Computational Neuroscience: Trends in Research. (Ed. J.M Bower). Plenum Press, New York, NY. pp. 579-584.
3. **Stackman, R.W.** and Zugaro, M.B. (2005). Influences of self-motion cues on head direction cell responses, and outcomes of intermodality cue conflicts. In: Head Direction Cells and the Neural Mechanisms of Spatial Orientation. (Eds: S.I. Wiener and J.S. Taube), MIT Press, Boston, MA. pp. 137-162.
4. **Stackman, R.W.** and Quinn, J.F. (2007) Chronic antioxidant treatments and memory in a transgenic mouse model of Alzheimer's disease. In: Research Progress in Alzheimer's Disease and Dementia. Vol. 1. (Ed. M.-K. Sun). Nova Science Publishers, New York, NY. pp. 319-341.

**CHAPTERS: *continued***

5. **Stackman Jr., R.W.** (2010) Behavioral correlates of neuronal activity acquired as single-units. Promises and pitfalls as illustrated by the rodent head direction cell signal. In: Electrophysiological Recording Techniques. (Eds: R.P. Vertes and **R.W. Stackman Jr.**). Neuromethods Series, Vol. 54. Humana Press, Totowa, NJ, pp 127-167.

**INVITED TALKS**

- 1990 Intraseptal infusion of GABA and benzodiazepine agonists and antagonists: Behavioral and neurochemical correlates. *Allegheny Neuroscience Alumni Symposium*, Allegheny College, Meadville, PA.
- 1994 Medial septal benzodiazepine receptors and spatial memory: Behavioral and electrophysiological determinants. *Dept of Physiology, State Univ. of New York Health Sciences Center*, Brooklyn, NY
- 1997 Neurophysiological correlates of spatial cognition: Dependence upon vestibular input. Department of Behavioral Neuroscience, Oregon Health Sciences University, Portland, OR
- 1999 Limbic spatial representations require vestibular input: Evidence from single-unit recording studies. *Portland Citywide Cognitive Neuroscience Group*, Portland, OR
- 2000 Hippocampal spatial representations require vestibular input. *International Society for Behavioural Neuroscience*, Cannon Beach, OR
- 2001 Calcium-activated potassium channels and hippocampal-dependent spatial learning. Celebration Symposium *Department of Behavioral Neuroscience, School of Medicine, Oregon Health & Science University*, Portland OR.
- 2002 Distinct influence of vestibular and motor cues on head direction cell activity: *Fondation des Treilles Meeting, Brain Basis of Spatial Orientation*. Tourtour, Provence, France
- 2002 The neurobiology for a sense of direction: An update from on the ground, upside-down, and space-bound. *6<sup>th</sup> NASA Symposium on the Role of the Vestibular Organs in the Exploration of Space*, Portland, OR
- 2002 Protective influence of chronic *Ginkgo biloba* extract in a transgenic mouse model of Alzheimer's disease. Beaufour Ipsen Sponsored Symposium: *Ginkgo biloba extract: from traditional medicine to a medicine of the future*. Berlin, Germany
- 2003 Small conductance calcium-activated K<sup>+</sup> channels constrain hippocampal-dependent memory. *International Society for Behavioural Neuroscience*, Prague, Czech Republic
- 2004 SK channels: A constraint on hippocampal memory and physiology. Department of Biology, William Paterson University, Wayne, NJ
- 2005 Neural mechanisms of navigation and their disruption by ethanol. Department of Psychology, Florida Atlantic University, Boca Raton, FL
- 2005 Ethanol's influence on the neural mechanisms of spatial navigation. Department of Psychology, Arizona State University, Tempe, AZ
- 2007 Memories of the hippocampus: Influences of S(pecial)K<sup>+</sup> channels. *FAU Neuroscience Seminar Series*
- 2008 Memories of the hippocampus: The influence of S(pecial)K<sup>+</sup> channels. "*Plastic Brain*" Neuroscience Symposium in honor of Dr. Eric Kandel, Nova Southeastern University, Davie, FL
- 2009 Was Tolman wrong? Behavioral and brain mechanisms of spatial navigation. *Department of Psychology Seminar Series*, Florida Atlantic University, Boca Raton, FL
- 2010 Modulating memory encoding by hippocampal SK channels. *FAU/MPFI Neuroscience Symposium*, Boca Raton, FL
- 2011 SK channels modulate hippocampal physiology. University of Göttingen, Göttingen, Germany
- 2011 Mixing alcohol with navigation: Lessons from the rodent brain. *Keynote Address: Annual Broward Psychology Association Fair*, Davie, FL
- 2011 A short story of the long form of the SK2 channel's influence on long-term memory. *25<sup>th</sup> Anniversary Mini-Symposium of the Center for Complex Systems and Brain Sciences*, Boca Raton, FL

- 2011 Firing patterns of head direction cells have a well-characterized behavioral correlate. But do these neurons guide navigation? Max Planck Florida Institute, Jupiter, FL
- 2013 Hippocampal memory: Modulation by SK channels and a map for objects. Department of Psychology, Temple University, Philadelphia, PA
- 2014 Basic research to discover novel treatments of Alzheimer's disease-related memory deficits. Plenary Lecture at the *2014 Alzheimer's Educational Conference*, West Palm Beach, FL
- 2014 The mouse hippocampus, it isn't just for space anymore. Department of Psychology, Tulane Univ., New Orleans, LA
- 2015 Modulation of long-term memory processes by neuronal SK channels. Where to now, SK channels? *Tri-Institutional Neuroscience Seminar Series*, Max Planck Florida Institute, Jupiter, FL
- 2015 Contribution of mouse hippocampal CA1 region in object-context memory: behavioral and in vivo neurophysiological correlates. *Spring Hippocampal Research Conference*, Taormina, IT
- 2015 An object memory map in the mouse hippocampus. Department of Biology and the Neuroscience Institute, University of Texas San Antonio, TX
- 2016 Memory for events: neural circuit and neuronal representations. Department of Psychology, Florida Atlantic University, Boca Raton, FL

## PUBLISHED ABSTRACTS

1. Merritt B, Stackman RW, Pitkin R, Cross JD (1986) Etiology of stress ulcers: The role of the sympathetic nervous system. *Annual Meeting of the American Society of Zoologists, American Microscopical Society, Animal Behavior Society, The Crustacean Society, International Association of Astacology, and the Society of Systematic Zoology*, Nashville, TN.
2. Emerich DF, Stackman RW and Walsh TJ (1989) Ganglioside AGF2 promotes behavioral and neurochemical recovery without minimizing the extent of cholinergic cell loss following AF64A. *Conference on Molecular and Cellular Mechanisms of Neuronal Plasticity in Aging and Alzheimer's Disease*, Bethesda, MD.
3. Stackman RW, Emerich DF, Taylor LA, and Walsh TJ (1989) Intraseptal administration of GABA and benzodiazepine agonists and antagonists: Alterations in hippocampal choline uptake and cognitive behavior. *Society for Neuroscience*, Phoenix, AZ.
4. Emerich DF, Stackman RW and Walsh TJ (1989) Comparison of the effects of intradentate versus intraventricular colchicine: Neurobiological and behavioral correlates. *Society for Neuroscience*, Phoenix, AZ.
5. Stackman RW, Wöertwein G and Walsh TJ (1990) A developmental model of cholinergic hypofunction. *New Jersey Neuropsychopharmacology Society*, Princeton, NJ.
6. Wöertwein G, Stackman RW and Walsh TJ (1990) Neuroprotectant effects of Vitamin E in a model of cholinergic hypofunction. *New Jersey Neuropsychopharmacology Society*, Princeton, NJ.
7. Walsh TJ and Stackman RW (1990) Potential site and mechanism of action of benzodiazepine-induced amnesia. *Conference on the Neurobiology of Learning and Memory*, Irvine, CA.
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96. Cinalli Jr D, Cohen SC and Stackman Jr RW (2017) DREADD inactivation of dorsal hippocampus impairs object recognition memory in C57BL/6J mice. *Society for Neuroscience*, Washington, DC.
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98. Cinalli Jr D, Cohen SC and Stackman Jr RW (2018) DREADD inactivation inhibits spatial and object memory recall. *Annual meeting of the Florida Consortium on the Neurobiology of Cognition*, Gainesville, FL.
99. Rice-Kuchera C and Stackman Jr RW (2018) Selective activation of SK1 channels impairs hippocampal memory. *Annual meeting of the Florida Consortium on the Neurobiology of Cognition*, Gainesville, FL.
100. Rice-Kuchera C and Stackman Jr RW (2018) Efficacy of selective activators of SK channels to rescue attention and memory in a mouse model of schizophrenia. *Society for Neuroscience*, San Diego, CA.
101. Hindman BL, Baran JV and Stackman Jr RW (2019) Consolidation of long-term object memory in C57BL/6J mice is enhanced by systemic administration of a dopamine D1 agonist or post-training exposure to a novel context. *Society for Neuroscience*, Chicago, IL.
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103. Cinalli Jr DA, Cohen SJ, Gajewski-Kurdziel P and Stackman Jr RW (2019) Arc mRNA quantification in CA1 and perirhinal/lateral entorhinal cortex during weak and strong object memory consolidation in male C57BL/6J mice. *Society for Neuroscience*, Chicago, IL.

## PROFESSIONAL AFFILIATIONS

- 1988-pres Member, Society for Neuroscience  
 1990-2000 Member, New York Academy of Sciences  
 1994-2000 Member, Sigma Xi, The Scientific Research Society  
 2000-2006 Member, International Society of Behavioural Neuroscience  
 2006-2012 Member, Research Society on Alcoholism  
 2008-pres Member, Faculty for Undergraduate Neuroscience  
 2009-pres Member, International Behavioral Neuroscience Society  
 2009-pres Member, Molecular and Cellular Cognition Society  
 2018-pres Member, Florida Consortium on the Neurobiology of Cognition

## TEACHING

### Administration relevant to Teaching:

- 2018-present FAU representative to the Selection Committee and Steering Committee of International Max Planck Research School (IMPRS) for Brain & Behavior, Jupiter FL and Bonn, Germany.  
 2016-2019 Co-Director (with Alex Keene) Neuroscience & Behavior B.S. degree program, College of Science, Florida Atlantic University  
 2015-present Faculty Member, International Max Planck Research School (IMPRS) for Brain & Behavior, Jupiter FL and Bonn, Germany.

### Florida Atlantic University

- 2019- **Biological Bases of Behavior I**, PSB 3002, 3 credit hrs, Spring, Course Director  
 2019- **Neuroscience 2**, PSB 6346, 3 credit hrs, Spring, Co-Director with Dr. Carmen Varela  
 2018- **Neuroscience 1**, PSB 6345, 3 credit hrs, Fall, Course Director  
 2016 **Discoveries in Neuroscience**, PSY 4930, 3 credit hr, Summer, Course Director  
 2016-2018 **Neuroscience 2**, PSB 6346, 3 credit hrs, Spring, Co-Director with Dr. Robert Vertes  
 2015, 2018 **Neurobiology of Learning & Memory**, PSB 4810, 6930, 3 credit hr, Fall, Course Director  
 2014-2017 **Neuroscience 1**, PSB 6345, 3 credit hrs, Fall, Co-Director with Dr. Robert Vertes  
 2014-2015 **Biological Bases of Behavior I**, PSB 3002, 3 credit hrs, Fall and Summer, Course Director  
 2014 **Memory & the Hippocampus**, EXP 6930, 3 credit hrs, Fall, Co-Director with Dr. Alan Kersten  
 2012-2013 **Advanced Neurophysiology Lab**, BSC 6936, 3 credit hrs, Co-Directors Murphey and Dawson-Scully  
 2011-2018 **Neuroscience 2**, PSB 6346, 3 credit hrs, Spring, Co-Director with Dr. Janet Blanks  
 2011 **Neuroscience Seminar**, EXP 6908, 1 credit hr, Fall, Spring, Co-Director with Dr. Dawson-Scully  
 2010-2013 **Neuroscience 1**, PSB 6345, 3 credit hrs, Fall, Co-Director with Dr. Ken Dawson-Scully  
 2010-2011 **Research in Psychobiology**, PSY 4930, 3 credit hrs, Fall, Course Director  
 2010 **Hippocampal Damage & Amnesia**, PSY 6930, 3 credit hrs; Spring, Co-Director with Dr. Kersten  
 2009-2010 **Neuroscience Seminar**, EXP 6908, 1 credit hr, Fall, Spring, Co-Director with Dr. Dawson-Scully  
 2009 **Principles of Neuroscience**, PSB 6037, 3 credit hrs, Spring, Course Director  
 2008 **Current Topics in Neurobiology of Learning & Memory**, PSY 4930, 6930, 3 credit hr, Spring  
 2007-2010 **Neuroscience 2**, PSB 6346, 3 credit hrs, Spring, Co-Director with Dr. Robert Vertes  
 2006-2009 **Neuroscience 1**, PSB 6345, 3 credit hrs, Fall, Co-Director with Dr. Robert Vertes  
 2006-2009 **Biological Bases of Behavior I**, PSB 3002, 3 credit hrs, Fall, Course Director  
 2006 **Biological Bases of Behavior I**, PSB 3002, 3 credit hrs, Spring, Course Director

**Oregon Health & Science University**

- 2001 **Seminar: Issues in Behavioral Neuroscience**, BEHN 607, 1 credit hr, Fall, Co-Director  
 2000-2004 **Current Topics Neurobiology of Learning & Memory**, BEHN 616, 4 credit hrs, Fall, Co-Director  
 2000-2004 **Learning and Cognition**, BEHN 615, 4 credit hrs, Winter, Co-Director  
 2000-2001 **Molecular Strategies in Behavioral Research**, BEHN 619, Winter, Lecturer  
 1999-2000 **Topics in Neuroscience Research**, NEUS 635, 3 credit hrs, Fall, Lecturer

**Dartmouth College**

- 1998 **Physiology of Behavior**, PSY 65, 3 credit hrs, Spring, Course Director

**Rutgers, The State University of New Jersey**

- 1992-1993 **Physiological Psychology**, 830:313; 3 credit hrs, Fall, Course Director  
 1992-1993 **Neuropsychopharmacology**, 830:412; 3 credit hrs, Summer, Course Director

**SUPERVISION in the LABORATORY****High School Student Internship**

- 2018 **Lylybell Zhou**, Dreyfoos School of the Arts, West Palm Beach, FL  
 2018 **Jessica Baran**, Florida Atlantic University HS, Boca Raton, FL  
 2013 **Jeffrey Herr**, Weinbaum Yeshiva HS, Boca Raton, FL  
 2012 **Faye Drucker**, Coral Springs Charter School, Coral Springs, FL  
 2011 **Faye Drucker**, Coral Springs Charter School, Coral Springs, FL  
 2009 **Joshua Stadlan**, Weinbaum Yeshiva HS, Boca Raton, FL  
 2003 **Di Fan**, Lake Oswego HS, Lake Oswego, OR  
 2003 **Laura Dodd**, Benson HS, Portland, OR  
 2002 **Julia Back**, Cascade Locks HS, Cascade Locks, OR  
 2001 **Sophie Davis**, Jesuit HS, Beaverton, OR  
 2000 **Georgina Jackson**, Jefferson HS, Portland, OR

**Undergraduate Student Research Supervised**

- 2020-2021 **Camila Barvo**, OUR1\* research grant recipient, College of Science, Florida Atlantic Univ.  
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**Jessica Baran**, OUR1\* research grant recipient, College of Science, Florida Atlantic Univ.  
**Isabella Martin**, Wilkes Honors College, Florida Atlantic University  
**Pedro Millan**, Wilkes Honors College, Florida Atlantic University  
**Karah Melvin**, Wilkes Honors College, Florida Atlantic University  
 2017-2018 **Ronithe Senatus**, OUR1\* research grant recipient, College of Science, Florida Atlantic  
**Elishama Petion**, College of Science, Florida Atlantic University  
**Maayan Portal**, College of Science, Florida Atlantic University  
**Mariah Calubag**, Wilkes Honors College, Florida Atlantic University  
 2016-2017 **Jonathan Rivera**, College of Science, Florida Atlantic University  
**Elishama Petion**, College of Science, Florida Atlantic University  
**Danielle Riboul**, OUR1\* research grant recipient, College of Science, Florida Atlantic Univ.  
 2015-2016 **Jonathan Troiano**, College of Science, Florida Atlantic University  
**Oscar Rivera**, College of Science, Florida Atlantic University  
**Kristina Knapp**, College of Science, Florida Atlantic University  
**Ryan Hernandez**, College of Science, Florida Atlantic University

**SUPERVISION in the LABORATORY *continued***

2014-2015	<b>Kerriann Badal</b> , OURI* research grant recipient, College of Science, Florida Atlantic Univ. <b>Heather Wayman</b> , College of Science, Florida Atlantic University <b>Whitney Winslow</b> , College of Science, Florida Atlantic University
2013-2014	<b>Christina Silvestri</b> , College of Science, Florida Atlantic University <b>Rebecca Avila</b> , College of Science, Florida Atlantic University <b>Jeffrey Herr</b> , Wilkes Honors College, Florida Atlantic University <b>Amanda Nephew</b> , College of Science, Florida Atlantic University <b>Rachel Phillips</b> , College of Science, Florida Atlantic University
2012-2013	<b>Elisa Velez</b> , OURI* research grant recipient, College of Science, Florida Atlantic University <b>Rochelle Kinssies</b> , College of Science, Florida Atlantic University <b>Gary Bisgnano</b> , College of Science, Florida Atlantic University
2011-2012	<b>Judd Jackson</b> , College of Science, Florida Atlantic University <b>David Cherro</b> , College of Science, Florida Atlantic University
2010-2011	<b>Simon Valladares</b> , College of Science, Florida Atlantic University <b>Mercy Barrera-Lee</b> , College of Science, Florida Atlantic University <b>Herborg Nanna Ásgeirsdóttir</b> , College of Science, Florida Atlantic University <b>Stephanie Deltor</b> , Spelman College <b>Marisa Vinas</b> , University of Miami
2009-2010	<b>Jesse Skinner</b> , College of Science, Florida Atlantic University <b>Christina Christakis</b> , College of Science, Florida Atlantic University <b>Victoria Sterk</b> , College of Science, Florida Atlantic University
2008-2009	<b>Shiao-Ying (Nina) Chow</b> , College of Science, Florida Atlantic University <b>Rebecca Taskin</b> , College of Science, Florida Atlantic University <b>Alcira H. Munchow</b> , College of Science, Florida Atlantic University
2007-2008	<b>Diana Daniels</b> , College of Science, Florida Atlantic University <b>Chris Pierami</b> , College of Science, Florida Atlantic University
2006-2007	<b>Melissa Malka</b> , College of Science, Florida Atlantic University <b>Anthony Pappas</b> , College of Science, Florida Atlantic University <b>Kristine Smith</b> , College of Science, Florida Atlantic University <b>Robert Freund</b> , College of Science, Florida Atlantic University
2005-2006	<b>Melissa Malka</b> , College of Science, Florida Atlantic University <b>Michael Guidi</b> , College of Science, Florida Atlantic University
2004-2005	<b>Sophie Davis</b> , University of Oregon
2002-2003	<b>Alexandra Stavrakis</b> , University of Southern California
2001-2002	<b>Alexandra Stavrakis</b> , University of Southern California
2000-2001	<b>Nikole Ferree</b> , Reed College

***Undergraduate Honors Theses***

2019	<b>Jessica Baran</b>	Max Planck Honors Program thesis, Department of Psychology, FAU
2018	<b>Ronithe Senatus</b>	Honors thesis, Dept of Biological Sciences, Florida Atlantic University
2017	<b>Elishama Petion</b>	Honors thesis, Dept of Biological Sciences, Florida Atlantic University
2017	<b>Jonathon Rivera</b>	Honors thesis, Dept of Biological Sciences, Florida Atlantic University
2017	<b>Danielle Riboul</b>	Honors thesis, Dept of Biological Sciences, Florida Atlantic University
2016	<b>Rebecca Walsh</b>	Honors thesis, Wilkes Honors College, Florida Atlantic University
2015	<b>Cristina Rodriguez</b>	Honors thesis, Wilkes Honors College, Florida Atlantic University
2012	<b>Claire Rice-Kuchera</b>	Honors thesis, Department of Psychology, Florida Atlantic University
2011	<b>Akiva Rabinowitz</b>	Honors thesis, Wilkes Honors College, Florida Atlantic University
2011	<b>Joan C. Lora</b>	Honors thesis, NSF Undergraduate Research Mentoring program, Department of Biological Sciences, Florida Atlantic University
2007	<b>Michael Guidi</b>	Honors thesis, Department of Psychology, Florida Atlantic University

**SUPERVISION in the LABORATORY *continued*****Graduate Student Lab Rotation**

2019-2020	<b>Goksu Oz</b> , Graduate Neuroscience Training Program, Florida Atlantic University
2018-2019	<b>Gabriel Pena</b> , Integrative Biology, Florida Atlantic University; Fall semester, <i>left program</i>
2016-2017	<b>Ivylynn Pastor</b> , Experimental Psych. Ph.D. program, Florida Atlantic Univ., <i>left program</i>
2013-2014	<b>Abbi Rosen</b> , Biomedical Sciences M.S. program, Florida Atlantic University
2012-2013	<b>Robert Beck</b> , Psychology M.A. program, Florida Atlantic University, <i>left program</i>
2011-2012	<b>Christina Clements</b> , Experimental Psych. Ph.D. program, Florida Atl. Univ., <i>left program</i>
2010-2011	<b>Shweta Singh</b> , Integrative Biology, Florida Atlantic University
	<b>Jean-Sébastien Roy</b> , Experimental Psych. Ph.D. program, Florida Atl. Univ., <i>left program</i>
2007-2008	<b>Marlene Stemme</b> , Experimental Psych. Ph.D. program, Florida Atl. Univ., <i>left program</i>
2004-2005	<b>Naomi Yoneyama</b> , Behavioral Neuroscience Graduate Program, OHSU
	<b>Kristin McCarthy</b> , Behavioral Neuroscience Graduate Program, OHSU
	<b>Laura Villasana</b> , Behavioral Neuroscience Graduate Program, OHSU
2002-2003	<b>Joseph Bussiere</b> , Behavioral Neuroscience Graduate Program, OHSU
	<b>Keith Kohout</b> , Behavioral Neuroscience Graduate Program, OHSU
2003-2004	<b>Kelly Pollak</b> , MD/PhD Program, School of Medicine, OHSU
2001-2002	<b>Christa Helms</b> , Behavioral Neuroscience Graduate Program, OHSU
2000-2001	<b>Shane Durrant</b> , Neuroscience Graduate Program, Oregon Health & Science Univ. (OHSU)
	<b>Rebecca Hammond</b> , Behavioral Neuroscience Graduate Program, OHSU

**Masters Theses**

2008	<b>Eric Buerger</b> , M.A. in Psychology, Florida Atlantic University
2009	<b>Sidney Williams</b> , M.A. in Psychology, Florida Atlantic University
2009	<b>Kyle Vick IV</b> , M.A. in Psychology, Florida Atlantic University
2010	<b>Rebecca Lee</b> , M.S. in Biomedical Science, Florida Atlantic University
2011	<b>Lisa Rios</b> , M.A. in Psychology, Florida Atlantic University
2013	<b>H. Nanna Ásgeirsdóttir</b> , M.A. in Psychology, Florida Atlantic University
2015	<b>David Cinalli Jr.</b> , M.A. in Psychology, Florida Atlantic University
2015	<b>Claire Rice-Kuchera</b> , M.A. in Psychology, Florida Atlantic University
2015	<b>Shannon A. Sanguinetti</b> , M.S. in Biology, Florida Atlantic University
2019	<b>Brandon Hindman</b> , M.A. in Psychology, Florida Atlantic University
<i>In progress</i>	<b>Brittany Crafton</b> , M.A. in Psychology, Florida Atlantic University

**Doctor of Philosophy**

2005	<b>Rebecca S. Hammond</b> , Ph.D. in Behavioral Neuroscience, Oregon Health Science Univ. <u>Dissertation title</u> : “ <i>SK2 Channel Regulation of Hippocampal Function</i> ”. Current position: Director, <i>In vivo</i> Pharmacology, Sage Therapeutics, Cambridge, MA
2010	<b>Meltem Ballan</b> , Ph.D. in Complex Systems & Brain Sciences, Florida Atlantic Univ. <u>Dissertation title</u> : “ <i>Brain Dynamics and Behavioral Basis of a Higher-Level Cognitive Task: Number Comparison</i> ”. Current position: Data Scientist, Information Technology & Services, Dallas, TX
2016	<b>Sarah J. Cohen</b> , Ph.D. in Complex Systems & Brain Sciences, Florida Atlantic Univ. <u>Dissertation title</u> : “ <i>Of Mice, Men and Memories: The Role of the Rodent Hippocampus in Object Recognition</i> ”. Current position: Postdoctoral fellow, FAU, Jupiter, FL

**Doctor of Philosophy continued**

- 2017 **Joan C. Lora**, Ph.D. in Integrative Biology & Neuroscience, Florida Atlantic Univ.  
Dissertation title: “Which Way is It? Spatial Navigation and the Genetics of Head Direction Cells”.  
 Current position: Noldus Information Technologies, Leesburg, VA
- 2017 **H. Nanna Ásgeirsdóttir**, Ph.D. in Integrative Biology & Neuroscience, Florida Atlantic Univ.  
Dissertation title: “Behavioral and Electrophysiological Evidence for Hippocampal Involvement in Object Motion Processing in C57BL/6J Mice”.  
 Current position: Frontiers Media SA, Lausanne, Switzerland
- 2020 **David Cinalli Jr.**, Ph.D. in Experimental Psychology, Florida Atlantic Univ.  
Dissertation title: “Investigating the Neural Circuitry Supporting Object Recognition Memory in C57BL/6J Mice”.  
 Current position: Assistant Director, ASCEND Neuroscience Outreach
- 2020 **Claire A. Rice**, Ph.D. in Experimental Psychology, Florida Atlantic Univ.  
Dissertation title: “Selective Modulation of Small Conductance Calcium-Activated Potassium Channels Rescues Ketamine-induced Memory Impairments and Attention Deficits in a C57BL/6J Schizophrenic Mouse Model: A New Therapeutic Approach”.
- in progress* **Brandon Hindman**, Ph.D. in Experimental Psychology, Florida Atlantic Univ.

**Postdoctoral Fellows**

- 2004-2005 **Michael T. Lin** (Ph.D., 2004, Loma Linda Univ.), Co-mentor: John P. Adelman, OHSU.  
 Current position: Associate Professor, Department of Physiology & Cell Biology, College of Medicine, University of South Alabama
- 2010-12, 17-18 **Gongliang Zhang** (Ph.D., 2010, Florida Atlantic Univ.), Current position: Staff Scientist, Lieber Institute for Brain Development, Johns Hopkins University, Baltimore, MD.
- 2016-present **Sarah J. Cohen** (Ph.D., 2016, Florida Atlantic Univ.), Current position: Postdoctoral Fellow, Department of Biological Sciences, and Jupiter Life Science Initiative, Florida Atlantic University.

**THESIS and DISSERTATION SUPERVISORY COMMITTEES**

- 2001 **William Griesar**, Ph.D. in Behavioral Neuroscience, OHSU, Chair: Barry Oken
- 2003 **Joseph Bussiere**, M.S. in Behavioral Neuroscience, OHSU, Chair: Jeri Janowsky
- 2007 **Danielle Reis**, M.A. in Psychology, Florida Atlantic University, Chair: Betty Tuller
- 2008 **Swapna Krishnamoorthy**, M.S. in Integrative Biology, Florida Atlantic University, Chair: Rui Tao
- 2009 **Leslie Butler**, M.A. in Psychology, Florida Atlantic University, Chair: Alan Kersten
- 2010 **Gongliang Zhang**, Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Rui Tao
- 2010 **Simon Bulley**, Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Wen Shen
- 2010 **Kayla Causey**, Ph.D. in Experimental Psychology, Florida Atlantic U, Chair: David Bjorklund
- 2011 **Stephanie Linley**, Ph.D. in Experimental Psychology, Florida Atlantic Univ, Chair: Kathy Hughes
- 2011 **Maria Corbett**, M.A. in Psychology, Florida Atlantic University, Chair: Nancy Jones
- 2011 **Cigdem Aydin**, Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Ceylon Isgor
- 2012 **Joseph Guzzone**, M.S. in Biology, Florida Atlantic University, Chair: Wen Shen
- 2012 **Roger McIntosh**, Ph.D. in Experimental Psychology, Florida Atlantic Univ., Chair: M. Rosselli

**THESIS and DISSERTATION SUPERVISORY COMMITTEES *continued***

- 2012 **Laxmi Lalwani**, M.A. in Psychology, Florida Atlantic University, Chair: Monica Rosselli
- 2013 **Ozge Oztan**, Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Ceylon Isgor
- 2013 **Nick Minar**, M.A. in Psychology, Florida Atlantic University, Chair: David Lewkowicz
- 2013 **Nikola Lucas**, Ph.D. in Experimental Psychology, Florida Atlantic Univ., Chair: Nancy Jones
- 2014 **Tracy Romano**, Ph.D. in Complex Systems & Brain Sciences, FAU, Chair: Steve Bressler
- 2014 **Andres Paz**, M.A. in Psychology, Florida Atlantic University, Chair: Monica Rosselli
- 2014 **AmberRose Reale**, M.A. in Psychology, Florida Atlantic University, Chair: Monica Rosselli
- 2015 **Avisa Asemi**, Ph.D. in Complex Systems & Brain Sciences, FAU, Chair: Steve Bressler
- 2016 **Andres Paz**, Ph.D. in Experimental Psychology, Florida Atlantic Univ., Chair: M. Rosselli
- 2016 **Janet Menzie**, Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Jang Wu
- 2016 **Brandon Lloyd**, Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Rod Murphey
- 2017 **Shweta Singh**, Ph.D. in Integrative Biology, Florida Atlantic University, Chair: K. Dawson-Scully
- 2017 **Kyle Newton**, Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Steve Kajiura
- 2017 **Daniel Wilson**, Ph.D. in Integrative Biology & Neuroscience, FAU, Role: Committee Chair, Dissertation Advisor: D. Fitzpatrick
- 2018 **Keith Murphy**, Ph.D. in Integrative Biology and Neuroscience, FAU, Chair: K. Dawson-Scully
- 2018 **Britnee McDole**, Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Kate Guthrie
- 2018 **Tatiana Viena**, Ph.D. in Complex Systems & Brain Sciences, FAU, Chair: Robert Vertes
- 2019 **Kuo-Sheng Lee**, Ph.D. in Integrative Biology & Neuroscience, FAU, FAU, Role: Committee Chair, Dissertation Advisor: D. Fitzpatrick
- 2020 **Neymi Mignocchi**, Ph.D. in Integrative Biology & Neuroscience, FAU, Role: Committee Chair, Dissertation Advisor: H. Kwon
- 2020 **Ori Yarden**, M.A. in Psychology, FAU, Chair: C. Varela
- in progress* **Tim Holford**, Ph.D. in Integrative Biology & Neuroscience, FAU, Supervisor: M. Bolton
- in progress* **Ingo Gotthard**, Ph.D. in Integrative Biology & Neuroscience, FAU, Supervisor: M. Bolton
- in progress* **Clara Tepohl**, Ph.D. in Integrative Biology & Neuroscience, FAU, Supervisor: D. Fitzpatrick
- in progress* **Zidan Yang**, Ph.D. in Integrative Biology & Neuroscience, FAU, Supervisor: D. Fitzpatrick
- in progress* **Emily Stark**, Ph.D. in Experimental Psychology, Florida Atlantic Univ., Chair: E. Barenholtz
- in progress* **Kerriann Badal**, Ph.D. in Integrative Biology & Neuroscience, FAU, Role: Committee Chair, Dissertation Advisor: S. Puthanveetil
- in progress* **Goksu Oz**, Ph.D. in Integrative Biology & Neuroscience, FAU, Role: Committee Chair, Dissertation Advisor: R. Yasuda

**SERVICE****Department of Psychology, FAU**

- 2017-2018 Member, Undergraduate Committee
- 2017-2018 Chair, Behavioral Neuroscience Faculty Search Committee
- 2014 Member, Subcommittee on Departmental Policies
- 2010/11/13 Chair, Behavioral Neuroscience Faculty Search Committee
- 2008-2011 Member, Graduate Admissions Committee
- 2008-2010 Member, Undergraduate Committee

**Charles E. Schmidt College of Science, FAU**

- 2015 Department of Psychology representative, Search Committee Interim Dean of College of Science



**SERVICE *continued***

- 2013-2016 Associate Director of Neuroscience, Jupiter Life Science Initiative  
 2013-2015 Co-Chair, Neuroscience Faculty Search Committee, Jupiter Life Science Initiative  
 2011-2014 Department of Psychology representative, Master Researcher Committee  
 2011-2012 Member, Faculty Search Committee for Professor of Neuroscience (the Neuro-Star), Jupiter  
 2011-2019 Member, Admissions Committee, Integrative Biology and Neuroscience (IBNS) Ph.D. program  
 2010-2016 Member, Steering Committee, Integrative Biology and Neuroscience (IBNS) Ph.D. program  
 2007-2010 Member, FAU Interdisciplinary Neuroscience Steering Committee  
 2007-2010 Chair, Interdisciplinary Neuroscience Website Development Committee
- 2007-2009 Chair, Interdisciplinary Neuroscience Curriculum Subcommittee  
 2007-2008 Chair, FAU Neuroscience Seminar Subcommittee  
 2006-2011 Department of Psychology representative, Academic Freedom and Due Process Committee  
 2006-2007 Department of Psychology representative, FAU Neuroscience Seminar Subcommittee

**Florida Atlantic University**

- 2019-2019 Member, Institutional Animal Care and Use Committee, FAU Division of Research  
 2015-2019 Chair, Institutional Animal Care and Use Committee, FAU Division of Research  
 2018-2019 Member, Search Committee for Biomedical Research Institute (i-HEALTH) Director, FAU  
 2017-2018 Member, Steering Committee for Graduate Neuroscience Training Program (R. Blakely, Chair)  
 2015-2016 Member, Search Committee for Executive Director of Neuroscience, FAU Division of Research  
 2015 Member, Graduate Research and Inquiry Program (GRIP) Selection Committee, FAU  
 2014-2015 Vice-Chair, Institutional Animal Care and Use Committee, FAU Division of Research  
 2012-2016 College of Science representative, University Research Committee, FAU Division of Research  
 2012-2013 College of Science representative, University Research Counsel, FAU Division of Research  
 2010-2014 Member, Institutional Animal Care and Use Committee, FAU Division of Research

**External Service**

- 2020 External reviewer, Promotion to Professor application by Dr. Isabel Muzzio, Department of Biology, University of Texas – San Antonio
- 2019 Member, Max Planck Research Group Leader Search Committee, Max Planck Florida Institute
- 2018-pres Member, Selection Committee for the International Max Planck Research School for Brain & Behavior, Bonn Germany and Jupiter Florida
- 2014 External reviewer, Tenure and Promotion application by Dr. Ryan Yoder, Department of Psychology, Indiana University-Purdue University Fort Wayne
- 2014 Member, Organizing Committee for Tri-Institutional (FAU, MPFI and TSRI Florida) Neuroscience Seminar Series (TINSS)
- 2013-2015 Councilor, Palm Beach Chapter, Society for Neuroscience
- 2013-2015 Outside Scientist member, Max Planck Florida Inst. Institutional Animal Care & Use Committee
- 2009 External reviewer, Tenure and Promotion application by Dr. Derek Hamilton, Department of Psychology, University of New Mexico

**Scientific Outreach**

- 2018-pres **Middle School Science**, gave presentations designed to teach local Palm Beach County middle school students about brain science. Lake Park Baptist School (2018); Trinity Christian School (2019).
- 2007 **Science Project Advisor**, provided advice and guidance to Arlene Hoffman, a West Boca Raton High School student regarding the experimental design and analysis of data from a study she conducted of gender differences in memory among adolescents.
- 2002-2003 **Kids Judge Neuroscience**, Oregon Museum of Science & Industry, Portland, OR. Presented an interactive educational booth entitled, *Plasticity Makes Perfect*, designed to teach local 4<sup>th</sup> grade students about how brain plasticity enables motor skill learning.

**Grant Review**

- 2020 *Ad hoc* Scientific merit review, NSF, Assigned 1 proposal.
- 2019 *Ad hoc* Scientific merit review, NIH, Center for Scientific Review, Special Emphasis Panel ZRG1 MDCN-C (03) M, Mitochondrial Function and Neurodegeneration, Aug 1, 2019, Assigned 2 proposals.
- 2019 *Ad hoc* Scientific merit review, NSF, Assigned 1 proposal.
- 2019 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, Feb 6-7, 2019, Assigned 7 proposals.
- 2018 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, Sept 13-14, 2018, Reviewed 8 proposals.
- 2018 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, May 29-30, 2018, Reviewed 8 proposals.
- 2017 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, Sept 29-Sept 30, 2017, Reviewed 10 proposals.
- 2017 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, May 30-June 1, 2017, Reviewed 9 proposals.
- 2016 *Ad hoc* Scientific review for the Neurological Foundation of New Zealand, May 2016.
- 2016 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Fellowships: Learning, Memory, Language, Communication & Related Neurosciences (ZRG1 F01B-B) panel, Mar 3-4, 2016. Reviewed 10 proposals.
- 2015 *Ad hoc* Scientific review for the Marsden Fund, The Royal Society of New Zealand, July 2015.
- 2015 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Fellowships: Learning, Memory, Language, Communication & Related Neurosciences (ZRG1 F01B-B) panel, Mar 12, 2015. Reviewed 8 proposals.
- 2015 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, Feb 11-12, 2015, Reviewed 9 proposals.
- 2014 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, Oct 1-2, 2014, Reviewed 8 proposals.
- 2014 *Ad hoc* Scientific review member, NSF, Modulation II, Pre-proposal review panel, April 13-15, 2014. Reviewed 17 proposals.
- 2013 Scientific merit review for the Biotechnology & Biological Sciences Research Council, Swindon, Wiltshire, United Kingdom.
- 2011 *Ad hoc* Scientific merit review for the Scientific Committee of the France Parkinson Association.
- 2010 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Special Emphasis Panel ZRG1 IFCN-H 03 M, Integrative Neuroscience.
- 2009 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Special Emphasis Panel ZRG1 ETTN-A (58) R-RFA OD09-003 Challenge Grants # 12.
- 2008-2013 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Special Emphasis Panel ZRG1 F02A-J 20L, Fellowships: Behavioral Neuroscience.
- 2006-2011 Reviewer, Scientific Merit Review Panel for Behavioral Neuroscience, National Science Foundation.
- 2006 Reviewer, Scientific Review for the Medical Research Council of the United Kingdom.
- 2005 Reviewer, Scientific Review for the Pilot project program of the NIA funded Oregon Alzheimer's Disease Center, Portland, OR.

**Grant Review** *continued*

- 2004, 2009 Reviewer, Scientific Review for the Marsden Fund, The Royal Society of New Zealand.  
 2004 Reviewer, Scientific Review for the Health Research Council of New Zealand.  
 2003 Reviewer, Scientific Review for Yale University Pepper Research Center, New Haven, CT.  
 2003 Reviewer, Scientific Review for Health Research Board, Dublin, Ireland.  
 2002 Reviewer, Scientific Review for Grant Agency of the Czech Republic.  
 2001-pres Reviewer, Scientific Review Panel for National Alzheimer's Association, Chicago, IL.

**Manuscript Review**

- 2021-present **Editorial Board Member**, *Biology*, MDPI, Inc., Basel, Switzerland, Impact Factor: 3.796  
 2014-present **Review Board Member**, *Universal Journal of Psychology*, Horizon Research Publication, Inc.  
 2014-present **Review Editor**, *Frontiers in Neurology*, Frontiers Research Foundation, Lausanne, Switzerland, Impact Factor: 3.552  
 2010-present **Review Editor**, *Frontiers in Neuro-otology*, Frontiers Research Foundation, Lausanne, Switz., Impact Factor: 2.889

**Invited Peer Review (~2 manuscripts/month) for**

<i>Alcohol</i>	<i>Frontiers in Behav Neurosci</i>	<i>Nature Communications</i>
<i>Alcoholism: Clin. Exp. Res</i>	<i>Hippocampus</i>	<i>Neurobiology of Aging</i>
<i>Behavioral Neuroscience</i>	<i>Int. J. Neuropsychopharmacol</i>	<i>Neurobiol of Learning Memory</i>
<i>Behavioural Brain Research</i>	<i>J. Biomedical Sciences</i>	<i>Neuroscience</i>
<i>Biological Psychiatry</i>	<i>Journal of Cellular Physiology</i>	<i>Neurotoxicology</i>
<i>Brain</i>	<i>J. Comp. &amp; Altern. Medicine</i>	<i>Pharmacol, Biochem, Behav</i>
<i>Brain Research</i>	<i>Journal of Neurochemistry</i>	<i>Physiology &amp; Behavior</i>
<i>Brain Research Bulletin</i>	<i>Journal of Neurophysiology</i>	<i>PLoS One</i>
<i>Brain Structure &amp; Function</i>	<i>Journal of Neuroscience</i>	<i>PLoS Biology</i>
<i>Cell Biochem &amp; Biophysics</i>	<i>J. Neuroscience Methods</i>	<i>Psychoneuroendocrinology</i>
<i>Current Biology</i>	<i>J. Neuroscience Research</i>	<i>Psychopharmacology</i>
<i>Env. Science &amp; Pollution Res</i>	<i>Journal of Physiology</i>	<i>Prog. Neuro-Psychopharm.</i>
		<i>Biol. Psych.</i>
<i>Eur. Journal of Neuroscience</i>	<i>J. Undergrad Neurosci Edu</i>	<i>Quarterly Review of Biology</i>
<i>Experimental Brain Research</i>	<i>J. Visual Experimentation</i>	<i>Scientific Reports</i>
<i>Experimental Cell Physiology</i>	<i>Learning &amp; Memory</i>	<i>Synapse</i>
<i>Experimental Gerontology</i>	<i>Life Sciences</i>	<i>Universal Journal of</i>
		<i>Psychology</i>

**Book Review**

Oxford University Press

MacMillan Education Press

## PROFESSIONAL ADDRESS

Center for Complex Systems and Brain Sciences  
Florida Atlantic University  
777 Glades Road - Boca Raton, FL-33431, USA  
Phone: (int+1) 561-297-0110

Emmanuelle Tognoli, PhD

Email: [tognoli@ccs.fau.edu](mailto:tognoli@ccs.fau.edu)

<http://www.ccs.fau.edu/~tognoli>

<http://scholar.google.com/citations?user=1oQwbxQAAAAJ>

## EDUCATION

INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Lycee - Epinal - France	<i>Baccalaureate</i>	1992	Mathematics/Physics (C)
University Nancy 2 - France	Master/DEA ( <i>summa cum laude</i> )	1997/98	Psychology
University Nancy 2 - France	PhD ( <i>summa cum laude</i> )	2003	Psychology
Center for Complex Systems - FAU - USA	Postdoc	2003-2007	Electrophysiology

## POSITIONS AND HONORS

2020	Finalist, Art of Science @ FAU
2020	Affiliate Faculty, Peace, Justice, and Human Rights Initiative (PJHR)
2019	Member, National Academy of Inventors
2019	Research Professor, HBBL, Center for Complex Systems and Brain Sciences
2018-now	Secretary, FAU Chapter of the Association for Women in Science
2016	CESCoS Researcher of the Year, FAU - Boca Raton - Florida
2013-2019	Associate Research Professor, HBBL, Center for Complex Systems and Brain Sciences, FAU - Boca Raton - Florida
2008	Graduate Faculty, Charles E. Schmidt College of Sciences
2007-2013	Research Assistant Professor, HBBL, Center for Complex Systems and Brain Sciences, FAU - Boca Raton - Florida
2006	Recipient of the INNS-Sigcom award – World Conference for Computational Intelligence
2004-now	Supervisor of EEG facility: Center for Complex Systems and Brain Sciences
2003-2007	Postdoctoral Research Scholar, Center for Complex Systems and Brain Sciences - Boca Raton – Florida
2002-2003	Research Assistant, Functional Neuroscience and Pathologies Laboratory - CNRS - Lille - France
1999	Awardee by "fondation CETELEM"
1998-2003	PhD student and teaching assistant, Psychology Laboratory - Nancy - France

## CONTRACTS OR GRANTS RECEIVED

### **Ongoing**

2020-2022	The mathematics of relatedness. National Institute on Aging, \$657,900 total cost. PIs PIs E. Tognoli; C. Beetle; C. Williams
2020-2021	Alzheimer supplement. Virtual Neuroprosthetic Platform Extended to Investigate Alzheimer's Disease National Institute for Biomedical Imaging and Bioengineering, R01s2, \$349,939 total cost. PIs Engeberg, Du, Tognoli, Wei
2019-2021	Diversity supplement for Virtual Neuroprosthesis: Restoring Autonomy to People Suffering from Neurotrauma. National Institute for Biomedical Imaging and Bioengineering, R01s1, \$140,656 total cost. PIs Engeberg, Du, Tognoli, Wei
2017-2021	Virtual Neuroprosthesis: Restoring Autonomy to People Suffering from Neurotrauma. National Institute for Biomedical Imaging and Bioengineering, R01, \$1,297,577 total cost. PIs Engeberg, Du, Tognoli, Wei and Hutchinson [scored 1 <sup>st</sup> percentile]

## Completed

- 2014-2019 Neuromarkers of Social Coordination: a Dynamical Approach. National Institute for Mental Health, R01, \$1,966,784 total cost. PIs Kelso and Tognoli [scored 3<sup>rd</sup> percentile]
- 2018-2019 Electrophysiological neuromarkers as signals for neurobotic control. FAU's Brain Institute pilote grant, 10k\$, PIs E. Tognoli, E. Engeberg
- 2017 Robot Symbiosis with Neuronal Action Potential Sensing Electrodes (ROBO-SYNAPSE): Noninvasive Investigation of Neural Plasticity During Tactile Reinnervation FAU – I-sense Seed Grant, 20k\$, PIs Engeberg, Du, Wei and Tognoli
- 2008-2011 Brain dynamics of coordinated teams. Office of Naval Research, Code 30. 660,000\$ total cost. PIs Kelso and Tognoli
- 2009-2012 Social Coordination Dynamics: Intertwining self with others, NSF-08-508: "Human and Social Dynamics". 747.331\$ total cost. PI. de Guzman, Co-PIs Kelso and Tognoli
- 2008-2013 Neuromarkers of Social Coordination: a Dynamical Approach. National Institute for Mental Health: "Basic and Translational Research Opportunities in the Social Neuroscience of Mental Health". 1.635.000\$ total cost. Key personnel
- 2003-2004 Psychometric properties of BAaM attention-memory inventory for short-carrier pilots. INRS/French Institute of Safety, 80.000F total cost. Lead-investigator
- 2002-2003 Elaboration of an attention-memory inventory for short-carrier pilots. INRS/French Institute of Safety, 80.000F total cost. Lead-investigator

## Other and pending grant submission

- 2021 NSF Advance: ADAPTATION: Enabling Minorities' Prime Outcomes with Education & Research (EMPOWER) at Florida Atlantic University
- 2020 NSF Rapid: RAPID: 4D spatiotemporal visualization and modeling of COVID-19 epidemic (E. Tognoli, C. Beetle)
- 2019 NIH/NIA: Understanding Alzheimer's disease at the interface between neuronal activity and synaptopathy using a microfluidics-based neurochip (PIs. J. Wei, E. Tognoli, E. Du, E. Engeberg)
- 2019 NIH/NIMH: "Computational and experimental neuromodulation of metastable brain oscillations" (PI: E. Tognoli)
- 2019 NIH/NIBIB: Alzheimer supplement: "Virtual Neuroprosthesis platform extended to study Alzheimer's Disease" (PIs E. Engeberg, S Du, E Tognoli, J. Wei)
- 2018 NIH/NIA: "The mathematics of relatedness" (PIs E. Tognoli; C. Beetle)
- 2018 NIH/NIMH: "Experimental and computational neuromodulation of metastable brain oscillations" (PI: E. Tognoli)
- 2018 NSF/ERC: "Planning grant for Engineering Research Center for Connected Assured Autonomy (C2A2)." (PI: D. Pados, Co-PIs, E. Tognoli, R. Seker, S. Allen, S. Medeiros)
- 2016 NSF/NIH, SCH: "SCH: INT: Collaborative Research: Virtual Neuroprosthesis: Restoring Autonomy to People Suffering from Neurotrauma" (PI: E. Engeberg, coPIs: S. Du, E. Tognoli, J. Wei, D. Hutchinson)
- 2016 NIBIB, R15: "Noninvasive Neuroprosthetic Platform to Investigate Neural Plasticity" (PI: E. Engeberg, coPIs: S. Du, E. Tognoli, J. Wei)
- 2016 NIA, R24, "University Institute for Healthy Aging and Lifespan Studies (I-HeAL)" (PI: J. Galvin, role: steering committee).
- 2015 AFSOR, Cyber-Human Systems (CHS) program: "CHS: Small: Virtual Neuroprosthesis Via Microfluidic Chambers" (PI E. Engeberg, coPIs S. Du, E. Tognoli, J. Wei)
- 2015 NSF, IIS - Cyber-Human Systems (CHS): "CHS: Small: Virtual Neuroprosthesis Via Microfluidic Chambers" (PI E. Engeberg, coPIs S. Du, E. Tognoli, J. Wei)
- 2015 NSF, Integrative strategies for understanding neural and cognitive systems: "NCS-FO: Collaborative Proposal: Synergizing neural inputs and software systems in human-computer interactions" (PI E. Tognoli, co-PI S. Huang, FAU and D. Garlan, Carnegie Mellon University)
- 2014 Gordon and Betty Moore Foundation's Data-Driven Discovery program (PI E. Tognoli): Tackling complexity: 5D visualization of big spatiotemporal data
- 2014 FAU Seed Grant (PIs E. Tognoli, S. Huang): A brain computer interface to track covert attention: a pilot project in support of a collaborative NSF application
- 2013 Google Faculty Research Award (PIs E. Tognoli, S. Huang): bypassing the behavioral bottleneck of Human Computer Interfaces with brain inputs
- 2013 The James Mc Donnell Foundation (PI E. Tognoli): Visual tools for spatiotemporal complexity
- 2011 Human Frontiers Science Program (PIs E. Tognoli, K Kitajo): Toward a mesoscopic dynamic clamp: tickling

nonlinearities of the human brain

- 2010 NIH New Innovator Director's award (PI E. Tognoli): Tackling Complexity: brains, minds and beyond.
- 2009 FAU challenge (PI E. Tognoli): Complexity of Brains and Minds.
- 2008 Merck and Co, West-Point, PA: (PIs E. Tognoli and JAS Kelso): Probing brain areas and their communication: A methodological framework for spatio-temporal EEG recordings
- 2007 NIH Exceptional, Unconventional Research Enabling Knowledge Acceleration (Eureka) (PIs E. Tognoli and JAS Kelso): Sequencing Dynamic Patterns of the Brain

#### **PUBLICATIONS (numbers in bracket for chronological order)**

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- [1] Ibrahim A.K., Zhuang, H., Tognoli E., Erdol, N. Ali, A.M. (submitted). Epileptic Seizure Prediction Based on Multiresolution Convolutional Neural Networks. *Biomedical Signal Processing and Control*
- [2] Pavlov, Y.G., Adamian, N., Appelhoff, S., Arvaneh, M., Benwell, C., Beste, C., Bland, A., Bradford, D.E., Bublitzky, F., Busch, N. and Clayson, P.E., et al., (submitted). #eegmanylabs: Investigating the Replicability of Influential EEG Experiments. *Cercor*
- [3] Tognoli, E., Zhang, M., Fuchs, A., Beetle, C., & Kelso, J. A. S. (2020). Coordination Dynamics: A Foundation for Understanding Social Behavior. *Frontiers in Human Neuroscience*. 14:317.
- [4] Dodel, S. M., Tognoli, E., & Kelso, J. A. S. (2020). Degeneracy and complexity in neuro-behavioral correlates of team coordination. *Frontiers in Human Neuroscience*, 14, 328.
- [5] Tognoli, E., & Kelso, J. A. S. (2020). Spectral dissociation of lateralized brain rhythms. *Neuroscience research*, 156, 141-146.
- [6] Zhang, M., Kalies, W. D., Kelso, J. S., & Tognoli, E. (2020). Topological portraits of multiscale coordination dynamics. *Journal of Neuroscience Methods*, 108672.
- [7] Dumas, G., Moreau, Q., Tognoli, E., & Kelso, J. S. (2020). The Human Dynamic Clamp reveals the fronto-parietal network linking real-time social coordination and cognition. *Cerebral Cortex*, 30(5), 3271-3285.
- [8] Tognoli, E. (2019). More than Meets the Mind's Eye? Preliminary Observations Hint at Heterogeneous Alpha Neuromarkers for Visual Attention. *Brain sciences*, 9(11), 307.
- [9] Zhang, M., Beetle, C., Kelso, J. S., & Tognoli, E. (2019). Connecting empirical phenomena and theoretical models of biological coordination across scales. *Journal of the Royal Society Interface*, 16(157), 20190360.
- [10] Tognoli, E., Benites, D., Kelso, J.A.S. (submitted). A blueprint for the study of the brain's spatiotemporal patterns.
- [11] Tognoli, E., Huang, S. (submitted). Emotionally-Informed Decisions: Bringing Gut's Feelings into Self-adaptive and Co-adaptive Software Systems.
- [12] Andreou, A.G., Beaudoin, M., Dao, S.K., **Fiore, S.\***, Forsythe, C., Gratch, J., Hall, K.L., Hamilton, D.J., Heintz, I., Hylton, T., Kabbani, N., Khan, M.S., Kiourti, A., **Krichmar, J.\***, Kruse, A.A., Nguyen, B., **Olds, J.\***,<sup>†</sup>, Schroeder, N., Severa, W., Sukthankar, G., **Tognoli, E.\***, Wagner, C. (2018). The AI Acceleration: Implications for the US Air Force of 2030. Report to the Secretary of the USAF. (<sup>†</sup> Principal Investigator, \* **Corresponding Author**).
- [13] Benites, D., Tognoli, E., Kelso, J.A.S. (*in press*). Dinâmicas de Coordenação e Metaestabilidade. In V.G. Haase & G. Gauer (Eds.), *Elementos de Psicologia Cognitiva*. Porto Alegre: ARTMED.
- [14] Abd, M., Bornstein, M., Tognoli, E., Engeberg, E.D., (2018). Armband with Soft Robotic Actuators and Vibrotactile Stimulators for Bimodal Haptic Feedback from a Dexterous Artificial Hand. *IEEE/ASME International Conference on Advanced Intelligent Mechatronics*.
- [15] Tognoli, E., Zhang, M., Kelso, J.A.S. (2018). On the nature of Coordination in Nature. *Advances in Cognitive Neurodynamics (VI)*. Delgado-Garcia (Eds.). Springer.
- [16] Zhang, M., Kelso, J.A.S., Tognoli, E. (2018). Critical diversity: divided or united states of social coordination. *PLoS One*. doi: 10.1371/journal.pone.0193843

- [17] Nordham, C., Tognoli, E., Fuchs, A., Kelso, J.A.S. (2018). How Interpersonal Coordination Affects Individual Behavior (and Vice Versa). *Ecological Psychology*.
- [18] Dumas, G., Lefebvre, A., Zhang, M., Tognoli, E., & Kelso, J.A.S. (2018) The human dynamic clamp: a probe for social coordination dynamics. *Complexity and Synergetics*: 317-332.
- [19] Tognoli, E., Dumas, G., Kelso, J.A.S. (2018). A roadmap to Computational Social Neuroscience. *Cognitive Neurodynamics*. 12(1): 135-140.
- [20] Lloyd, E., Huang, S., Tognoli, E. (2017). Improving Human-in-the-Loop Adaptive Systems Using Brain-Computer Interaction. *Proceedings of the 12th International Symposium on Software Engineering for Adaptive and Self-Managing Systems* (pp. 163-174). IEEE Press.
- [21] Kelso, J. A. S., Tognoli, E. (2017). Toward a Complementary Neuroscience: metastable coordination Dynamics of the Brain. *Chaos and Complexity Letters*, 11(1), 141-162. [reprint]
- [22] Zhang M., Dumas, G., Kelso, J.A.S., Tognoli, E. (2016). Enhanced Emotional Responses during Social Coordination with a Virtual Partner. *International Journal of Psychophysiology*. 104, 33-43.
- [23] Tognoli, E., Kelso, J.A.S. (2015). The Coordination Dynamics of Social Neuromarkers. *Frontiers in Human Neurosciences*. 9:563. doi: 10.3389/fnhum.2015.00563
- [24] Kelso, J.A.S., Tognoli, E., Dumas, G. (2014). Coordination Dynamics: Bidirectional Coupling between humans, machines and brains. In *2014 IEEE International Conference on Systems, Man, and Cybernetics (SMC)* (pp. 2240-2243). IEEE.
- [25] Dumas G., de Guzman G.C., Tognoli, E., Kelso, J.A.S. (2014). The Human Dynamic Clamp as a Paradigm for Social Interaction. *Proceedings of the National Academy of Sciences*, 111(35), E3726-E3734. [High impact factor, Altmetric 98<sup>th</sup> percentile, index of public interest]
- [26] Tognoli, E., Kelso, J.A.S. (2014). Enlarging the scope: grasping brain complexity. *Frontiers in System Neuroscience*, 8:122. [Altmetric 97<sup>th</sup> percentile]
- [27] Huang, S., Tognoli, E. (2014). Brainware: synergizing software systems and neural inputs. *ICSE Companion, New Ideas and Emerging Results*, pp. 444-447.
- [28] Tognoli, E., Kelso, J.A.S. (2014). The metastable brain. *Neuron*, 81(1): 35-48. [Free feature article in January; altmetric 98<sup>th</sup> percentile, high impact, highly cited]
- [29] Dodel, S., Tognoli, E., Kelso, J.A.S. (2013). The Geometry of Behavioral and Brain Dynamics in Team Coordination. In *Foundations of Augmented Cognition*. Schmorow, D.D., Fidopiastis, C.M. (eds), *Lecture Notes in Computer Science Volume 8027*, pp.133-142.
- [30] Tognoli, E., Kelso, J.A.S. (2013). On the brain's dynamical complexity: coupling and causal influences across spatiotemporal scales. In *Advances in Cognitive Neurodynamics (III)*, ed. Y. Yamaguchi. Dordrecht: Springer Netherlands.
- [31] Kelso J.A.S., Dumas G., Tognoli E. (2012). Outline of a General Theory of Behavior and Brain Coordination. *Neural Networks*, 37: 120-131.
- [32] Banerjee, A., Tognoli, E., Kelso, J.A.S., Jirsa, V.K. (2012). Spatiotemporal (re)organization of sensorimotor networks underlying unimanual and bimanual coordination. *Neuroimage*, 62(3): 1582-1592.
- [33] Tognoli, E., Kovacs, A.J., Suutari, B., Afergan, D., Coyne, J., Gibson, G., Stripling, R., Kelso, J.A.S. (2011). Behavioral and brain dynamics of team coordination, Part I: task design. In Hutchison, D.; Kanade, T.; Kittler, J.; Kleinberg, J. M.; Mattern, F.; Mitchell, J. C.; Naor, M.; Nierstrasz, O.; Pandu Rangan, C.; Steffen, B.; Sudan, M.; Terzopoulos, D.; Tygar, D.; Vardi, M. Y.; Weikum, G.; Schmorow, D. D. & Fidopiastis, C. M. (Eds.). *Foundations of Augmented Cognition. Directing the Future of Adaptive Systems*, Springer Berlin Heidelberg, 6780: 257-264.
- [34] Tognoli, E., Kovacs, A.J., Suutari, B., Afergan, D., Coyne, J., Gibson, G., Stripling, R., Kelso, J.A.S. (2011). Behavioral and brain dynamics of team coordination, Part II: neurobehavioral performance. In Hutchison, D.; Kanade, T.; Kittler, J.; Kleinberg, J. M.; Mattern, F.; Mitchell, J. C.; Naor, M.; Nierstrasz, O.; Pandu Rangan, C.; Steffen, B.; Sudan, M.;



Terzopoulos, D.; Tygar, D.; Vardi, M. Y.; Weikum, G.; Schmorow, D. D. & Fidopiastis, C. M. (Eds.). Foundations of Augmented Cognition. Directing the Future of Adaptive Systems, Springer Berlin Heidelberg, 6780: 376-382.

- [35]Tognoli, E., de Guzman, G. C. & Kelso, J. A. S. (2011). Interacting humans and the dynamics of their social brains. In Wang, R., Gu, F. (eds.), *Advances in Cognitive Neurodynamics (II)*, pp. 139-143, Springer, Heidelberg.
- [36]Tognoli E., Kelso J.A.S. (2009). Brain Coordination Dynamics: True and False Faces of Phase Synchrony and Metastability. *Progress in Neurobiology*, 87(1): 31-40. **[Cover of the journal, high impact, highly cited]**
- [37]Kelso, J.A.S., de Guzman G.C., Reveley C., Tognoli, E. (2009). Virtual Partner Interaction (VPI): Exploring Novel Behaviors via Coordination Dynamics. *PLoS ONE* 4(6) e5749. **[Highly cited]**
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- [42]Bressler S.L., Tognoli, E. (2006). Operational principles in neurocognitive networks. *International Journal of Psychophysiology*, 60: 139-148. **[Highly cited]**
- [43]Kelso, J.A.S., Tognoli, E. (2006). Metastability in the brain. *Proceedings of the International Joint Conference on Neural Networks*, Vancouver, pp.755-760.
- [44]Tognoli E., Toniolo, A.M., (2003). L'attention chez l'enfant : mesures capacitaires ou mesures processuelles. *Psychologie et Psychométrie*, 24 : 1-17.
- [45]Tognoli, E., Toniolo, A.M., Boucart, M., (2002). Attention visuelle sélective et mémoire de travail. Signification stratégique des intrusions dans les séquences RSVP. Rennes, Presses Universitaires de Rennes.
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- [47]Tognoli, E., Toniolo, A.M., Boucart, M., (2000). Le stimulus, de sa perception a sa représentation : les influences de l'attention sélective. *Acte des Journées Internationales des Sciences Cognitives - Orsay*, 53-59.
- [48]Toniolo, A.M., Tognoli, E., (1998). Entre Biologie et Cognition : une pathologie dynamique : l'Epilepsie. In Alexandre, F., Kant, J.D., *Actes des 9emes Journées Neurosciences et Sciences pour l'Ingénieur*, 51-64.

## **PATENTS**

1. System and method for analysis of spatio-temporal data – Provisional Application filed on July 9, 2008 -Serial No. 61/134,349 | US utility patent filed on July 8, 2009 - 12/500,187 | PCT filed on July 9, 2009 PCT/US2009/50049 **[Patent awarded, Notice of Acceptance August 2013, 22 forward citations]**
2. [confidential, preliminary disclosure].

## **INVITED LECTURES**

TBD	An Essay on Extracellular Fields' Contributions to a Globally Conscious Brain – Monte Veritas, Switzerland (Keynote)
2021	Brain Metastability - Brain Space Initiative, online
2020	Computational Social Neuroscience - U Michigan
2019	Interdisciplinary studies of metastable brain oscillations – University of Alabama at Birmingham
2019	Selves, others, and the birth of coupling in neurocomputational models of social interactions – CSAN, Miami Beach
2019	Building neurotechnological complexity from the ground up – Osaka, Japan
2017	Sympathy of the Brains – Shanghai, China

- 2016 Spatiotemporal metastability – University of Miami, FL
- 2016 To mine or to mind: a primal view on spatiotemporal dynamics of neural oscillations – Arizona State University, AZ
- 2015 A roadmap for Computational Social Neuroscience. ICCN 2015 – Sanya, China (*delivered by G. Dumas*)
- 2015 4-5D visualization tools reveal different degrees of complexity in the spatiotemporal dynamics of natural systems. Nova Southeastern University, FL
- 2013 A Complexity viewpoint on the concept of sustainability. EURAGRI International Workshop- Sigtuna, Sweden
- 2013 Enduring questions about mu rhythm’s contribution to social behavior. ICCN 2013, Sigtuna, Sweden
- 2013 Spatiotemporal metastability: natural evidences and theoretical insights. Dynamic Brain Forum, Sigtuna, Sweden
- 2012 Neuromarkers of Social Coordination: a Dynamical Approach. New-Orleans.
- 2012 An essay on extracellular fields’ contribution to a global conscious brain. Carmona, Spain
- 2012 Metastable social coalitions: models, humans, fireflies. Sendai, Japan (\*postponed)
- 2012 System and method for analysis of spatiotemporal data. Florida International Univ. FL
- 2011 Xi rhythm: neuromarker of covert attention and interface between brains and machines. Boca Raton
- 2011 Spatiotemporal metastability & functional complexity. University of Memphis, TN
- 2011 A world of coordination: a journey across scales. Mini-symposium in honor of Michael Turvey. Boca Raton
- 2010 Of Neurons and Humans: Collective Behaviors. University of Cincinnati, OH
- 2010 Neural flows in space-time: traces of the self-organizing brain. Conference at Sea, Western Caribbean.
- 2009 Interacting Humans and the Dynamics of their Social Brains. International Conference on Cognitive Neurodynamics, Hangzhou, China.
- 2009 Neural Mechanisms of Social Coordination: a Continuous EEG Analysis using a Novel 4d Colorimetric Method. Joint Action Meeting, Amsterdam, The Netherlands.
- 2008 Neuromarkers of Social Behavior: Paving the Way to Electrophysiological Endophenotypes of Autism. Autism Society of America. Orlando, FL
- 2007 EEG Coordination Dynamics: Neuromarkers of Social Coordination. Conference in Honor of J. A. Scott Kelso’s 60<sup>th</sup> Birthday. Boca Raton, FL
- 2007 EEG Coordination Dynamics: Self-Organization in the Brain. Merck Laboratories, West Point, PA
- 2006 The phi complex: a dual-EEG study of effective social coordination. Gerontological Society of America, Dallas, TX
- 2006 Metastability in the Brain. IEEE World Conference on Computational Intelligence, Vancouver, Canada.

### **Sample public outreach, press coverage**

Scientific American Mind, August 2007. Social Rhythm: Unique patterns of neural activity mark personal interactions.

<http://www.scientificamerican.com/article.cfm?id=social-rhythm>

Director’s report to the National Advisory Mental Health Council, September 21, 2007 [http://www.nimh.nih.gov/about/advisory-](http://www.nimh.nih.gov/about/advisory-boards-and-groups/namhc/2007/september/directors-report-sept07.pdf)

[boards-and-groups/namhc/2007/september/directors-report-sept07.pdf](http://www.nimh.nih.gov/about/advisory-boards-and-groups/namhc/2007/september/directors-report-sept07.pdf)

ScienceDaily, May 15, 2007. New Brain Neuromarker May Shed Light On Autism And Schizophrenia.

<http://www.sciencedaily.com/releases/2007/05/070514150813.htm>

Plexus Institute, June 24th, 2009. Virtual Partner Interaction (VPI): A Mind-Machine Breakthrough.

<http://www.plexusinstitute.org/complexitymatters/?p=51>

Boca Raton News, July 6th, 2009. Boca Raton: FAU study offers unique look at human-machine [http://www.bocanews.com/local-](http://www.bocanews.com/local-news/boca-raton/4651-boca-raton-fau-study-offers-unique-look-at-human-machine.html)

[news/boca-raton/4651-boca-raton-fau-study-offers-unique-look-at-human-machine.html](http://www.bocanews.com/local-news/boca-raton/4651-boca-raton-fau-study-offers-unique-look-at-human-machine.html)

Physorg, June 16th, 2009: Scientists create hybrid system of human-machine interaction.

<http://www.physorg.com/news164363618.html>

Palm Beach Post, June 21th, 2009. FAU links man and machine, the research could have applications for therapy

[http://www.palmbeachpost.com/localnews/content/local\\_news/epaper/2009/06/20/a1b\\_faumachine\\_0621.html](http://www.palmbeachpost.com/localnews/content/local_news/epaper/2009/06/20/a1b_faumachine_0621.html)

Simons Foundation Autism Research Initiative, March 11th, 2009: New EEG analysis captures coordination among brain regions.

<http://sfari.org/news-and-opinion/news/2009/new-eeg-analysis-captures-coordination-among-brain-regions>

Plexus Institute, February 9th, 2009. Observing the Human Brain at Work. [http://www.plexusinstitute.org/news-](http://www.plexusinstitute.org/news-events/show_news.cfm?id=1654)

[events/show\\_news.cfm?id=1654](http://www.plexusinstitute.org/news-events/show_news.cfm?id=1654)

News Wise, January 19th, 2009. Groundbreaking Technique Reveals Modus Operandi of the Intact Living Brain.

<http://www.newswise.com/articles/view/548194/>

Science Daily, January 21st, 2009. Dynamical theory and novel 4-D colorimetric method reveal modus operandi of intact living brain.

<http://www.sciencedaily.com/releases/2009/01/090121122842.htm>

Simons Foundation Autism Research Initiative, March 14th, 2011: Machine-learning tool shows promise for autism diagnosis <https://sfari.org/news-and-opinion/news/2011/machine-learning-tool-shows-promise-for-autism-diagnosis>

Datanami Big Data, November 19, 2013: Neuroscientists Develop 5D Data Visualization Technique [http://www.datanami.com/datanami/2013-11-19/neuroscientists\\_develop\\_5d\\_data\\_visualization\\_technique.html](http://www.datanami.com/datanami/2013-11-19/neuroscientists_develop_5d_data_visualization_technique.html)

Sciencedaily, November 18, 2013: New 5-D method to understand big data <http://www.sciencedaily.com/releases/2013/11/131118132440.htm>

Newswise, November 18<sup>th</sup>, 2013: FAU Neuroscientists Receive Patent for New 5D Method to Understand Big Data <http://www.newswise.com/articles/fau-neuroscientists-receive-patent-for-new-5d-method-to-understand-big-data>

Inside NIMH, spring 2014: Notable NIMH Grants <https://www.nimh.nih.gov/researchpriorities/insidenimh/2014springinsidenimh.shtml>

Choratech, June 8th, 2014: The Metastable Brain <http://choratech.com/blog/?p=450>

Discover Magazine, top stories, July 14<sup>th</sup>, 2014: Can we grasp the brain's complexity? <http://blogs.discovermagazine.com/neuroskeptic/2014/07/14/can-grasp-brains-complexity/>

Physorg, August 12<sup>th</sup>, 2014: Researchers introduce 'Human Dynamic Clamp'—groundbreaking approach to understanding social interaction <http://phys.org/news/2014-08-human-dynamic-clampgroundbreaking-approach-social.html>

Improbable Research, Research that makes people LAUGH and then THINK, August 19<sup>th</sup>, 2014: The Human Dynamic Clamp <https://www.improbable.com/2014/08/19/the-human-dynamic-clamp/>

Analytics Magazine, January-February, 2015: The future of data visualization, by Will Towler <http://www.analytics-magazine.org/january-february-2015/1196-data-visualization-the-future-of-data-visualization>

SciFeeds, May 17<sup>th</sup>, 2016 Scientists create an 'emotional' Turing test to learn how it feels to interact with a machine. <https://scifeeds.com/news/scientists-create-an-emotional-turing-test-to-learn-how-it-feels-to-interact-with-a-machine/>

The Stack, May 20<sup>th</sup>, 2016, Virtual partner created for 'emotional' Turing test. <https://thestack.com/world/2016/05/20/virtual-partner-created-for-emotional-turing-test/>

EurekaAlert, 2016: FAU Scientists Develop 'Virtual Partner' That Can Elicit Emotional Responses from a Human Partner in Real-time. <https://www.eurekaalert.org/multimedia/pub/115616.php?from=327852>

Physorg, November 14<sup>th</sup>, 2017: Bioengineered robotic hand with its own nervous system will sense touch <https://phys.org/news/2017-11-bioengineered-robotic-nervous.html>

Azorobotics, November 15<sup>th</sup>, 2017: New Bioengineered Robotic Hand Regenerates the Sensation of Touch <https://www.azorobotics.com/News.aspx?newsID=9591>

Medical Device Daily, November 16<sup>th</sup>, 2017: FAU, Utah seek to restore touch with robotic hand [http://medicaldevicedaily.com/servlet/com.accumedia.web.Dispatcher?next=bioWorldHeadlines\\_article&forceid=96779](http://medicaldevicedaily.com/servlet/com.accumedia.web.Dispatcher?next=bioWorldHeadlines_article&forceid=96779)

Newswise, December 1<sup>st</sup>, 2020: FAU Receives NIH Grant to Enhance Social Engagement in Older Adults <https://www.newsbreak.com/news/2116118567506/fau-receives-nih-grant-to-enhance-social-engagement-in-older-adults>

## **PROFESSIONAL SERVICE**

- Judge for MIT Technology Review, Innovators Under 35, edition Europe (2015; 2017; 2018; 2019)
- Professorial Promotion and award, University of Toronto and Sick Kids (Prof. J. L. Perez Velazquez), Worcester Polytechnic Institute (Asst. Prof. T. Padir), Florida Atlantic University (Assoc. Prof. S. Huang), Fundación Premios Rey Jaime I (Prof. J.M. Delgado-Garcia), Indian Institute of Science Education and Research (Assist. Prof. Suhita Nadkarni)
- Survey Editor and Associate Editor (2017-2019): Cognitive Systems Research
- Grant reviewer for NASA (NASA HERO19 Team Dynamics); National Science Foundation (NSF), Cognitive Neuroscience Program; Perception Action Cognition program; Developmental and Learning Sciences Program.
- Peer Reviewer for journal articles: E-Neuro, Journal of Cognitive Neuroscience, Cerebral Cortex, PLoS Computational Biology, PLoS One, Scientific Reports, Neuroinformatics, Neurocomputing, Journal of Biological Physics, Chaos, Entropy, Solitons & Fractals, Physica A, Neuroscience of Consciousness; Psychopharmacology, Brain Research, Neurolmage, European Journal of Neuroscience, Neurosurgery, Human Brain Mapping, Experimental Brain Research, Schizophrenia Bulletin, Journal of Integrative Biological Science, SCAN, The International Journal of Neuropsychopharmacology, Journal of Neuroscience Methods, Cognitive Neurodynamics, Intellectica, Computational Intelligence and Neuroscience, IEEE Transactions on Neural Systems & Rehabilitation Engineering, Human Movement Science, Journal of Motor Behavior

- Peer reviewer for book proposals: World Scientific Publishing/Imperial University Press, Oxford University Press.
- Secretary, FAU's chapter of the Association for Women in Science, grow online and local membership, collaboratively execute mentorship, networking and leadership opportunities.

## Conferences and scientific events

- 2023 PreProposal Organization of Human Brain Mapping – OHBM, Miami (Uddin, Heller, Laird, Dick, Dykstra, Tognoli, Riera, Denkova, Jha, Nomi, Britton, Losin, McIntosh, Sutherland, Mattfeld, McMakin)
- 2019 Co-organizer, Social and Affective Neuroscience Satellite, Computational Social Neuroscience, Miami, May 2nd
- 2018 Proposal Co-organizer, SfN minisymposium, Bridging the gap from neurons to complex social networks
- 2013 Chair: ICCN2013, special session, social neurodynamics
- 2011 Co-organizer: A Mini Symposium to celebrate the 25/26th anniversary of the Center for Complex Systems and Brain Sciences, December 8<sup>th</sup>, 2011
- 2011 Co-organizer: Minisymposium in honor of Michael Turvey. Boca Raton, FL, May 5th.
- 2010 Co-organizer, The History of Science Lecture, by James McGuire, professor Emeritus, to Celebrate the 25/26th anniversary of the Center for Complex Systems and Brain Sciences, October 29<sup>th</sup>, 2010.
- 2010 Co-organizer and program director: Brain Coordination Dynamics, An International Conference at Sea. <http://www.ccs.fau.edu/bcd2010>, May 1<sup>st</sup>-5<sup>th</sup>, 2010
- 2008 Co-organizer, Comealyle for Centerites and Center Alumni, 2008, a Society for Neuroscience Social

## Host to visitors at FAU:

Danielle Bassett, U. Penn [youngest individual to be awarded a MacArthur fellowship]

Flavio Frohlich, UNC, [NIMH's flagship "Biobehavioral Research Awards for Innovative New Scientists" (BRAIN)]

Robert Levy, Marcus Neuroscience Institute

Read Montague, UCI, Virginia Tech, [Kavli fellow]

William Bialek, Princeton, Pending commitment

Alik Widge, Univ. Minnesota, December 2019

## Teaching and Mentoring

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### Classes taught

#### At FAU:

Invited lectures (2010, 2011), Electrical Engineering and Bioengineering

Proseminar at Center for Complex Systems and Brain Sciences (2010-now)

Invited EEG demonstration, Psychology, Physics and CCSBS (2005-now): EEG demonstration, Profs. Tuller (Psychology) and Fuchs (Medical Physics, CCSBS)

Internal training in the Center for Complex System and Brain Sciences, FAU (2004-now): Introduction to EEG data acquisition: theory & instrumentation (3 half-day theoretical and hands-on training)

#### In French, University of Nancy (now University of Lorraine):

Maîtrise, Cognitive Sciences, Nancy 2 University (2000-2002): visual perception, visual selective attention (class development and teaching)

Licence, Cognitive Sciences, Nancy 2 University (1999-2002): introduction to Psychophysics, attentional processes (class development and teaching)

Licence, Psychology, Nancy 2 University (1999-2001): introduction to SPSS (TA)

Licence, Psychology, Nancy 2 University (1999-2000): Psychological assessment of intellectual development, WISC III (TA)

DEUG, Psychology, Nancy 2 University (1998-1999): Methodology in Psychology (TA)

### Dissertations

2020-NOW	Tuan Vo, PhD Computer & Electrical Engineering	Dissertation Committee
2020	Melanie Jouaiti, PhD Computer Science, LORIA, France	Dissertation Committee
2018-NOW	Genevieve Liddle, PhD Integrative Biology	Dissertation Committee
2018-2019	Mohammed Alharbi, Master Computer Science	Dissertation Committee
2017-2018	Joe Ignicco, Master Mechanical Engineering	Dissertation Committee
2016-2018	Thomas Colestock, PhD Mechanical Engineering	Dissertation Committee
2016-2020	Aritra Ghosh, PhD Computer Science	Dissertation Committee
2015-2016	Eric Lloyd, Master Computer Science	Dissertation Committee
2015-2019	Ali Ibrahim, Electrical Engineering	Dissertation Committee
2014	Friederike Hohlefeld, Charite, Univ. Medicine, Berlin	Visiting PhD student

2014-NOW	Pedro Miranda, Master Computer Science	Dissertation Committee
2013-2018	Mengsen Zhang, PhD Center for Complex Systems and Brain Sciences	Advisor
2012	Solveig Vieluf, Jacobs Univ. Bremen, Germany	Visiting PhD student
2011-2016	Craig Nordham, PhD Center for Complex Systems and Brain Sciences	Advisor
2011	Yu Chun Chung, National Yang-Ming University, Taiwan	Visiting PhD student
2010-2011	Jack Petersen, Master Computer Sciences	Dissertation Committee
2008-2009	Rodrigo Calderon, Master Computer Sciences	Dissertation Committee
2007-2008	Daniela Benites, Porto Allegre, Brazil	Visiting PhD student

### Other research Mentoring, graduate

Basak Kocaoglu, (2018-2019, Master in Philosophy, enrolled In GNTP)  
 Joshua Childs (2018, FAU, Political Sciences)  
 Tarah Raldiris (2014, Penn State University, alumni and non-degree seeking student at FAU)  
 Camille Lewis-Henry (2012, FAU College of Education, volunteer)  
 Seth Weisberg (2009-2010, Neuroscience Certificate at FAU)  
 Allison de la Rosiere (2007, Master student, Physics Dept. at FAU)

### Research Mentoring, volunteers, undergraduate, high school

Gianna Cannestro (2019-now, Biology)  
 Hayden Siesel, (2020, Rise scholarship, U Penn)  
 David Maya (2019, Mechanical Engineering)  
 Sabrina Forgnone (2018, Psychology)  
 Nadine Akin (2017-2019, Post Bacc, FAU)  
 Ananda Chowdhury (2016, Computer Sciences, FAU)  
 Michael Femenia (2015, Volunteer)  
 Ricardo Martinez (2014, Electrical Engineering)  
 Chelsey Hoff (2014, Electrical Engineering, Mathematics)  
 Randy Ellis (2012, undergraduate FAU Psychobiology), now PhD student Icahn School of Medicine at Mount Sinai and NIDA  
 Leonardo Rhodes (2012, UF, summer undergraduate volunteer)  
 Anamaria Alexandrescu (2010, undergraduate Biological Sciences at FAU), PhD, NYU and now instructor at Columbia University  
 Benjamin Suutari (2009-2011, undergraduate Physics Dept. at FAU), PhD NYU, now with Elucid  
 Brittany Zelch (2009-2011, high school volunteer assistant, Pine Crest High School), undergraduate NorthWestern and graduate Univ. Chicago  
 Jennifer Moore (2009, undergraduate Human Factors - George Mason University)  
 Sara Anastas (2008, Undergraduate Psychology, University of Florida Gainesville), undergrad Massachusetts Eye and Ear Infirmary, Med School at FAU, intern, Univ. New Mexico, currently resident at New York Medical College

### Mentoring at post-doctoral level

Maohua Lin (2021, postdoctoral scholar).  
 Yuhao Qiang (2020, postdoctoral scholar). Now postdoctoral scholar at MIT  
 Jinzi Deng (2019, postdoctoral scholar). Now Clinical Assistant Professor at Yeshiva University  
 Kunal Mondal (2018-2019, postdoctoral associate). Staff Scientist at Idaho National Laboratory & Affiliate and Allied Graduate Faculty at Idaho State  
 Roxana Stefanescu (2015-2018, Senior Research Specialist). Now Bioinformatics Fellow at Palantir Technologies.  
 Anand Ramamoorthy (2014, Postdoctoral Fellow)  
 Guillaume Dumas (2012-2014, Postdoctoral Fellow). Now IVADO Assistant Professor of Computational Psychiatry, Univ. Montreal.  
 Row Hashemiyoan (2011, Research Associate). Chief neurophysiologist at the University Hospital of Cologne  
 Slava Murzin (2010-2013, Postdoctoral Fellow). Owner, Synerlogics.  
 Attila Kovacs (2010-2012, Postdoctoral Fellow). Now Assistant Professor University of Wisconsin.  
 Kaushik Majumdar (2008, Postdoctoral Fellow). Now Full Professor, Indian Statistical Institute.

### Data Sharing

Dr. Marco Congedo, Gipsa Lab, Grenoble, France  
 Dr. Naem Mohammed, Univ. Ulster

### Advising for establishment of dual-EEG laboratories:

Drs. William Kalkhoff (Kent State Univ.), Ed Lawler (Cornell University) and Shane Thye (University of South Carolina)  
 Dr Kozma, Univ. Memphis, TN  
 Dr Luca Onnis, Univ. Hawaii, HI  
 Dr Frezza-Buet, Supélec-Metz, France

### **Student recommendation to training programs:**

Ms Gianna Cannestro for PhD application in Neuroscience at FAU  
Ms Akin for multiple applications to medical schools  
Mr Eric Lloyd for a PhD application in Computer Science at FAU  
Mr Benjamin Suutari, PhD programs, accepted at Univ. Texas at Austin and at New York Univ.  
Mr Seth Weisberg, graduate certificate in Medical Science at FAU; PhD programs, accepted at Univ. Texas at Austin  
Ms Sara Anastas, for a Position of Research assistant at the Massachusetts Eye and Ear Infirmary, Harvard Medical School; for a position of Research Assistant at Tufts University School of Medicine; for applications to Medical Schools  
Ms Anamaria Alexandrescu for Summer Research Programs, accepted at University of Pennsylvania's Summer Undergraduate Research Program  
Ms Brittany Zelch, for a position of Research Assistant, Developmental Cognitive Neuroscience Lab, Northwestern Univ.

### **Student recommendation, jobs, travel grants and awards:**

2020 Dr Zhang for TT Position at NIH, U-Michigan,  
2019 Dr Zhang for a travel award from SIAM  
2019 Dr Kunal Mondal for Faculty positions at U. Minnesota,  
2018 Dr Zhang for a position at Stanford University  
2017 Ms Zhang for a position In the Santa Fe Complexity Institute  
2016 Ms Zhang for fellowships by McDonnell Foundation, Omidyar foundation  
2014 Mr Leonardo Rhodes for an internship in Metz, France  
2011 Ms Brittany Zelch for talent search award at Siemens Foundation  
2012 Dr Daniela Benites, postdoctoral fellow at Univ. Texas at Austin  
2011 Ms Daniela Benites for a travel award by the Society for Psychophysiological Research  
2010 Ms Daniela Benites for a travel award by IBRO  
2008 Ms Reyna Gordon for an award from FAU Graduate Fellowship for Academic Excellence

### **Recommendations for award professional development of colleagues:**

2018 Professor Jose-Maria Delgado-Garcia, for the Royal recognition from Fundación Premios Rey Jaime I in Spain  
2016 Dr G. Estrada, for a conversion from Physics to Optical NeuroImaging at Boston University  
2015 Associate Professor S. Huang for promotion to Full Professor at FAU's CEECS  
2014 Dr Gahangir Hossain, for his transition from the Fedex Institute of Technology to tenure-track at Texas A&M  
2014 Dr G. Dumas, recommendation to permanent researcher positions at CNRS and Pasteur Institute,  
2013 Professor Perez Velazquez for promotion to the rank of Full Professor, Univ. Toronto  
2011 Dr Collins Assisi for faculty position at the Indian Institute of Science Education and Research  
2010 Dr Collins Assisi for a staff position at University of California, Riverside

### **Extramural support for grantmanship**

Dr Friederike Hohlefeld, Charite Berlin, DFG Grant from the German Research Foundation and  
Dr Ana Teixeira de Melo, European Union's ERC program and Templeton Foundation

### **Outreach efforts solicited by funding agencies:**

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Illustrative material for NIMH booth at Society for Neuroscience  
Layperson abstract material for justification of NSF research to congress  
Graphical and text material for illustration of research on NSF's website front page  
Communicated findings through ONR's NRE navigator

### **And to finish**

Citation in Annals of Improbable Research ("Research that makes people laugh and then think"):  
<https://www.improbable.com/2014/08/19/the-human-dynamic-clamp/>

Official blogger "Neuroskeptic" from Discover Magazine covering a publication at the core of brain complexity that generated a storm of media attention (<http://blogs.discovermagazine.com/neuroskeptic/2014/07/14/can-grasp-brains-complexity/>).  
Excerpt: "An entertaining paper [...] remarkable not just for its content but also for its style. [...] I love it [...] great question, and Tognoli and Kelso frame it very well."

**Carmen Varela, Ph.D.**  
 carmenv.work@gmail.com  
[www.varelalab.org](http://www.varelalab.org)

Psychology Department  
 Florida Atlantic University  
 MC19, Jupiter, Florida

**Research mission:** My laboratory aims to discover the mechanisms by which thalamic neurons contribute to cognitive and sleep-regulated functions, such as memory consolidation and cognitive flexibility. Learning and memory require the coordination of brain regions that have the thalamus as a common link and potential pivot target for therapeutic interventions. I believe that clinical and technological innovations that capitalize on understanding the brain network mechanisms underlying cognition have the potential to utterly transform the way we learn, educate others, and treat neurological and psychiatric disorders.

## ACADEMIC APPOINTMENTS

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<b>Psychology Department, Florida Atlantic University</b> Assistant Professor	<b>2019-current</b>
<b>MIT, Cambridge, MA.</b> Research Scientist, NARSAD young investigator	<b>2012-2018</b>

## EDUCATION

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<b>MIT, Cambridge, MA.</b> Post-Doctoral Associate. Advisor: Matthew A. Wilson	<b>2010-2012</b>
Post-Doctoral Fellow. Advisor: Matthew A. Wilson	<b>2008-2010</b>
<b>The University of Chicago, IL.</b> Ph.D. Computational Neuroscience. Advisor: S. Murray Sherman	<b>2002-2008</b>
<b>University Pablo de Olavide, Seville, Spain.</b> M.S. Neuroscience. Advisor: Javier Cudeiro	<b>1999-2001</b>
<b>University of A Coruña, Spain.</b> B.S. Biology. Highest GPA across regional schools.	<b>1995-1999</b>
<b>University of A Coruña, Spain.</b> B. in Physical Therapy.	<b>1992-1995</b>

## RESEARCH CONTRIBUTIONS AND EXPERTISE

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### POST-DOCTORAL & RESEARCH SCIENTIST

- *Topic:* **Thalamo-Neocortico-Hippocampal Interactions (network level)**
- I validated a preparation to record, for the first time, single cells and local field potentials simultaneously from three functionally related areas that are key for cognitive function (midline thalamus, prefrontal cortex and CA1) in behaving rats. Demonstrated functional and anatomical contributions of cells in the midline thalamus to the coordination between hippocampus and neocortex thought to underlie sleep-dependent memory consolidation.
- *Methods:* behaving rodent electrophysiology, quantitative methods, behavioral testing, optogenetics, pharmacogenetics, anatomical tracing.
- Partly funded through a NARSAD Young Investigator Award and a Caja Madrid Foundation fellowship. Results from this project were also the basis for NIH and additional private funding.

**PH.D. THESIS**

- **Title: 'Functional Differences between First and Higher Order Thalamic Nuclei: Effects of Modulatory Systems and Response Properties'.**
- Demonstrated that cells in primary sensory and associative nuclei of the thalamus are differentially affected by sleep-related neuromodulators (acetylcholine, serotonin), suggesting heterogeneous state-dependent functional channels in thalamocortical associative networks.
- **Methods:** in vitro (slice) electrophysiology and pharmacology.
- Partly funded through a fellowship from the Pedro Barrié de la Maza Foundation.
- **Outcomes:** 5 publications (1 review, 1 book chapter).

**PRE-DOCTORAL**

New York University, NY. Advisor: Bernardo Rudy.

Visiting student, **Sep 2001-Dec 2001**

- **Topic: Function of potassium channels in thalamic relay cells.** *Techniques:* in vitro (slice) electrophysiology.

University of A Coruña, Spain. Advisor: Javier Cudeiro.

Master's student, **Sep 1999-Sep 2001**

- **Topic: The role of corticothalamic feedback in dLGN visual responses.** *Techniques:* in vivo electrophysiology, anesthetized cat.

University of Quilmes, Argentina. Advisor: Diego Golombek.

Visiting student, **Jul 1999-Sep 1999**

- **Topic: Circadian enzymatic activity in the suprachiasmatic nucleus.** *Techniques:* biochemical assays. University of A Coruña, Spain.

Undergraduate research assistant

- *Techniques:* in vivo electrophysiology, anesthetized cat. **Sep 1998-Jun 1999**
- *Techniques:* Histological methods (sectioning, staining, immunohistochemistry). **Sep 1997-Jun 1998**

**PUBLICATIONS AND MANUSCRIPTS IN PREPARATION**

- **Varela C**, Ahmad S. A dendritic mechanism for dynamic routing and control in the thalamus (in preparation).
- **Becker LA, Penagos H, Flores FF, Manoach DS, Wilson MA, Varela C.** Pharmacological control of hippocampal ripple density with eszopiclone and zolpidem (**under review**).
- **Desai NV, Varela C.** Distinct burst properties contribute to the functional diversity of thalamic nuclei. **Under review, Journal of Comparative Neurology.**
- **Varela C**, Wilson MA. mPFC spindle cycles organize sparse thalamic activation and recently active CA1 cells during non-REM sleep. *eLife* 9, e48881 (2020).
- **Varela C**, Wilson MA 2019. Simultaneous extracellular recordings from midline thalamic nuclei, medial prefrontal cortex and CA1 from rats cycling through bouts of sleep and wakefulness. 2019 CRCNS.org. <https://doi.org/10.6080/K0K35RVG>
- Penagos H, **Varela C**, Wilson MA. **Oscillations, neural computations and learning during wake and sleep.** *Current Opinion in Neurobiology* 2017 (May 29; 44:193-201).
- **Varela C**, Weiss S, Meyer RM, Biedenkapp JC, Halassa MM, Goosens KA, Wilson MA, Bendor D. **Tracking the time-dependent role of the hippocampus in memory recall using DREADDs.** *PLoS One.* 2016 May 4;11(5):e0154374).
- Wilson MA, **Varela C\***, Remondes M.\* **Phase organization of network computations.** *Curr Opin Neurobiol.* 2015 Apr; 31:250-3. \*Equal contribution



- Duan A, **Varela C**, Zhang Y, Shen Y, Xiong L, Wilson MA, Lisman J. **The causal role of abnormal delta oscillations in producing working memory deficits; relevance to schizophrenia**. *Biol Psychiatry*. 2015 Jun 15; 77(12):1098-1107.
- **Varela C**. **Thalamic neuromodulation and its implications for executive networks**. *Front. Neural Circuits*. 2014 Jun 24. 8:69.
- **Varela C**, Kumar S, Yang JY, Wilson MA. **Anatomical substrates for direct interactions between hippocampus, medial prefrontal cortex and the thalamic nucleus reuniens**. *Brain Structure & Function* 2014 May; 219, no. 3: 911–29.
- **Varela C**. **The gating of neocortical information by modulators**. *J Neurophysiol*. 2013 Mar; 109(5):1229-32.
- **Varela C**, Llano DA, Theyel BB. **An introduction to in vitro slice approaches for the study of neuronal circuitry**. Chapter 6, in “Neuronal Network Analysis”, “Neuromethods Series”, Springer, 2012.
- **Varela C**, Sherman SM. **Differences in response to serotonergic activation between first and higher order thalamic nuclei**. *Cereb Cortex*. 2009 Aug; 19(8):1776-86.
- **Varela C**, Sherman SM. **Differences in response to muscarinic activation between first and higher order thalamic relays**. *J Neurophysiol*. 2007 Dec; 98(6):3538-47.
- Lam YW, Cox CL, **Varela C**, Sherman SM. **Morphological correlates of triadic circuitry in the lateral geniculate nucleus of cats and rats**. *J Neurophysiol*. 2005 Feb; 93(2):748-57.
- Rivadulla C, Martínez LM, **Varela C**, Cudeiro J. **Completing the corticofugal loop: a visual role for the corticogeniculate type I metabotropic glutamate receptor**. *J Neurosci*. 2002 Apr 1; 22(7):2956-62.

## FUNDED GRANTS, FELLOWSHIPS AND AWARDS

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- **NIMH**. “Optimizing sleep spindle measurements as translational assays of memory consolidation”. Direct Costs: \$1.7M. PIs: Manoach, Varela; Dates: 2021-2024.
- **NSF-Advance, FAU Division of Research**: Research Mentoring Fellowship. Summer Stipend: \$2,000. Dates: June-July 2020
- **Whitehall Foundation Research Grant**. “Thalamocortical dynamics underlying flexible memory consolidation”. Direct Costs: \$225k **PI: Varela**. Dates: 2020-2023
- **WNPRC Pilot Project Grant**. “A novel freely moving macaque preparation for studying the neural basis of navigation”. Direct Costs: \$50k. **PIs: Kim, Varela, Rosenberg**. Dates: 2020-2022
- Member of the 2020 Mentoring Institute for Neuroscience Diversity Scholars (MINDS).
- **Seed grant from the Center for Brains, Minds and Machines (MIT)**. “Sleep Network Dynamics Underlying Flexible Memory Consolidation and Learning”. Total Direct Costs: \$40k **PI: Varela C**. Dates: 2019-2020
- **NIMH**. “Sleep-dependent memory processing in schizophrenia”. **R01, >\$1.7M direct costs**. PIs: Dara S. Manoach and Matthew A. Wilson. **Role**: Co-author. I provided preliminary results and wrote one of the aims with Drs. Manoach and Wilson. Dates: 2017-2022
- **MGH-MIT Grand Challenge on Neurosciences Grant**. “Characterization and manipulation of the coordination of sleep oscillations to improve memory processing during sleep in schizophrenia”. Direct costs: **\$600k**. PIs: Dara S. Manoach and Matthew A. Wilson. The preparation I validated to record simultaneously from the thalamus, neocortex and hippocampus in freely behaving rats served as the

basis for this proposal. **Role:** Co-author. I provided preliminary results and wrote the grant with Drs. Manoach and Wilson. Dates: 2015-2017

- I have contributed preliminary results to an NIH TRO1 (PIs: Emery N. Brown, Edward Boyden and Matthew A. Wilson) and have helped with results, writing and editing in additional grants (PI: Matthew A. Wilson), funded through the Picower Institute for Learning & Memory and through the Simons Foundation.
- NARSAD Young Investigator Award, Brain & Behavior Research Foundation. **\$75k direct costs**  
**Role: PI** **2015-2018**
- Post-doctoral Fellowship Award, Fundación Caja Madrid. **2008-2010**
- Pre-doctoral Fellowship Award, Fundación Pedro Barrié de la Maza. **2002-2004**
- Fellowship Award, Spanish Ministry of Education and Science, visiting student, Department of Physiology and Neuroscience, New York University. **2001**
- Pre-doctoral Fellowship Award, Spanish Ministry of Education and Science. **1999-2001**
- Fellowship Award, Spanish Ministry of Foreign Affairs, to visit the Department of Science and Technology at the University of Quilmes, Buenos Aires, Argentina. **1999**
- BS extraordinary award, highest GPA, class of 1999, University of A Coruña. **1999**
- BS extraordinary award, highest GPA, class of 1999, regional level (Galicia). **1999**

## INVITED TALKS

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- Florida State University, Tallahassee, FL.** **September 2019**
- “Fine Timescale Coordination of Thalamic Activity with mPFC and CA1 non-REM Oscillations”
- Neuroscience Graduate Student Organization Retreat, Florida Atlantic University.** **June 2019**
- “Thalamo-Cortical Interactions across Systems and Brain States”
- The Institute for Learning in Retirement, Boca Raton, FL.** **March 2019**
- “The Brain Learning Machine”
- University of Coimbra, Portugal.** **February 2019**
- “Fine Timescale Coordination of Thalamic Activity with mPFC and CA1 non-REM Oscillations”
- Gladstone Institutes, UCSF. San Francisco, CA.** **April 2018**
- “Thalamic Contribution to Neocortico-Hippocampal Interactions during Sleep”
- Florida Atlantic University. Boca Raton, FL.** **March 2018**
- “Contribution of the Midline Thalamus to Neocortico-Hippocampal Interactions during Sleep”
- University of Wisconsin. Madison, WI.** **July 2017**
- “Contribution of the Midline Thalamus to Neocortico-Hippocampal Interactions during Sleep”
- Annual Biomedical Research Conference for Minority Students (ABRCMS)** **November 2016**
- “Multidisciplinarity in Systems Neuroscience”
- University of Barcelona, Spain** **July 2016**
- “Thalamic Contribution to Sleep Neocortico-Hippocampal Interactions”
- Brown University. Providence, RI.** **May 2016**
- “Thalamic Contribution to Sleep Neocortico-Hippocampal Interactions”
- University of Illinois at Urbana-Champaign, IL.** **October 2015**

- “Sleep Thalamo-Neocortico-Hippocampal Interactions”  
**University of Connecticut. Storrs, CT.** **December 2014**
- “Thalamo-Cortico-Hippocampal Interactions and Memory Consolidation”  
**University of Coimbra, Portugal.** **March 2014**
- “Disruption of Hippocampal Function Using Pharmacogenetics”

## CONFERENCE PRESENTATIONS

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### ORAL

- Florida Consortium on the Neurobiology of Cognition. Remote Conference.** **August, 2020**
  - “Fine Timescale Coordination of Thalamic Activity with mPFC and CA1 non-REM Oscillations”
- Winter Conference on Brain Research. Big Sky, Montana.** **January, 2020**
  - “Fine Timescale Coordination of Thalamic Activity with mPFC and CA1 non-REM Oscillations”
- Hippocampus Spring Conference. Taormina, Italy.** **June, 2017**
  - “Thalamic Contribution to Neocortico-Hippocampal Interactions during Sleep”
- Brains on Brains. Fundraising symposium, MIT.** **May, 2017**
  - “Science of Education”
- COSYNE. ~5% abstracts selected for oral presentation** **February, 2017**
  - “Thalamic Contribution to Neocortico-Hippocampal Interactions during Sleep”
- Janelia Research Campus. Ashburn, VA.** **April 2015**
  - “Sleep thalamo-neocortico-hippocampal Interactions”

### POSTERS

- **Becker LA, Penagos H, Manoach DS, Wilson MA, Varela C.** Disruption of CA1 Sharp-Wave Ripples by the nonbenzodiazepine hypnotic eszopiclone. Society for Neuroscience, Chicago, 2019.
- **Varela C, Ahmad S.** A dendritic mechanism for dynamic routing and control in the thalamus. COSYNE; Lisbon, Portugal, 2019.
- **Varela C, Wilson MA.** Thalamic contribution to CA1-mPFC interactions during sleep. Society for Neuroscience Meeting, Washington DC, 2017.
- **Varela C, Wilson MA.** Sleep thalamo-cortico-hippocampal interactions. Thalamus and corticothalamic interactions conference. Janelia. April 26-29, 2015.
- **Varela C, Weiss S, Meyer R, Halassa M, Biedenkapp J, Goosens K-A, Wilson MA, Bendor DA.** Pharmacogenetic disruption of hippocampal function. Society for Neuroscience Meeting, San Diego, 2013.
- **Varela C\***, Bendor D\*, Halassa MM, Biedenkapp JC, Meyer RM, Kuo E, Goosens KA, Wilson MA. Reversible pharmacogenetic inactivation of the hippocampus using DREADDs. Poster presentation at the FENS Forum of neuroscience, Barcelona, 2012. \* Equal contribution
- Bendor D\*, **Varela C\***, Weiss S, Halassa MM, Biedenkapp JC, Meyer RM, Goosens KA, Wilson MA. Tracking the hippocampus-dependence of a contextual fear memory using pharmacogenetics. Poster presentation at the Society for Neuroscience Meeting, and talk at the 7th Brain Research Conference on Optogenetics and Pharmacogenetics in Neuronal Function and Dysfunction, New Orleans, 2012. \* Equal contribution
- **Varela C, Yang JY, Kumar S, Wilson MA.** Interactions between the midline thalamus, medial prefrontal cortex and dorsal CA1 in the rat. Society for Neuroscience Meeting, Washington DC, 2011.
- **Varela C, Sherman SM.** Spike-frequency adaptation in higher order thalamic relays: modulation by muscarinic receptors. Society for Neuroscience, Washington DC, 2005.
- **Varela C, Sherman SM.** A further difference between first and higher order thalamic relay: response to cholinergic input. Society for Neuroscience, San Diego, 2004.

- **Varela C**, Sherman SM. A further difference between first and higher order thalamic relay: response to cholinergic input. Symposium 'Cortical Function: A view from the thalamus'. Madison, Wisconsin; September 12th-14th 2004.
- Lam Y-W, **Varela C**, Sherman SM. Morphological and physiological correlates of cells of rat dLGN". Society for Neuroscience, New Orleans, 2003.
- **Varela C**, Rivadulla C, Martínez LM, Cudeiro J. Stimulus dependent modulation of LGN activity by cortically activated metabotropic glutamate receptors. Society for Neuroscience, San Diego, 2001.
- Rivadulla C, Martínez LM, **Varela C**, Cudeiro J. Efecto del bloqueo de las aferencias corticales en la respuesta de las células del núcleo geniculado lateral: estímulos estáticos. IX Spanish Society for Neuroscience, 2001.
- Martínez LM, Rivadulla C, **Varela C**, Cudeiro J. Efecto del bloqueo de las aferencias corticales en la respuesta de las células del núcleo geniculado lateral: estímulos dinámicos. IX Spanish Society for Neuroscience, 2001.
- Ferreyra G, Murad A, **Varela C**, Golombek D. Cyclic nucleotides, kinases and phosphorylation: some intimacy in the hamster suprachiasmatic nucleus. V Latin American Symposium of Chronobiology. Buenos Aires, 1999.

## TEACHING

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### FAU

- The Neurobiology of Learning & Memory. Undergraduate Level. Organizer **Fall**
- Neuroscience-2. Systems Neuroscience. Graduate Level. Organizer **Spring**

### MIT

- "Memory Wars: Contrasting Views of Memory from Systems Neuroscience Research" **January 2018**
- "The Neuroscience Business". Reading-discussion group. Organizer. **January 2016**
- CBMM Annual Quantitative Methods Workshop. Lecture: "Intro to Systems Neuroscience". **January 2016, 2017**
- Systems Neuroscience (graduate level). Lecture: "Organization and Function of Thalamic Networks". **October 2015**
- CBMM Summer Workshop for High School Science Teachers. Guest lecture: "Network Mechanisms of Behavior. The View from Electrophysiology". **July 2015**
- "So You Wanna be a Scientist". Organizer. **January 2015**
- "Building Your Own Neuroscience Lab". Co-organizer. **January 2012**

### Boston University

- Course faculty, BE-710 Neuroplasticity and Perceptual Learning. Lectures on: "A Systems Neuroscience Perspective to Hippocampal Neuroplasticity". **2015, 2017**

### University of Coimbra, Portugal

- MIT-Portugal PhD Program in Bioengineering. Two lectures, "Introduction to Electrophysiology in Behaving Animals". **March 2014**

### The University of Chicago

- "Introduction to Neuroscience" (undergraduate level). Teaching assistant. **Spring 2007**
- "Computational Neuroscience I" (graduate level). Teaching assistant. **Fall 2006**

## **LEADERSHIP AND MANAGEMENT**

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- Coursework at Harvard Extension School (HES) and MIT's Sloan School of Business:
  - “Innovation, Entrepreneurship and Business Transformation” (HES) **Fall 2014**
  - “Essentials of Executive Speaking” (HES) **Spring 2014**
  - “Creating and Leading Team Dynamics” (HES) **Fall 2013**
  - “Negotiation for Executives” (MIT-Sloan) **October 2015**
- Mentorship: Supervised over 10 undergraduate and graduate students at MIT, including underrepresented minorities (URMs) from various international and socioeconomic backgrounds.

## **SERVICE & AFFILIATIONS**

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- Graduate recruitment committee. Center for Complex Systems, FAU **2020**
- Advisory Committee, Neuroscience and Behavioral B.S. Program, FAU **2020**
- Selection committee, IMPRS Graduate program. Max Planck-FAU **2020-2021**
- Affiliate Faculty, Center for Complex Systems and Brain Sciences, FAU **2020-present**
- Affiliate Faculty, Max Planck IMPRS Brain & Behavior Graduate Program **2020-present**
- Instructor Search Committee. FAU **2019**
- Graduate Recruitment Committee. FAU **2019**
- Affiliate Brain Institute, FAU **2019-present**
- Research Affiliate. Center for Brains, Minds and Machines, MIT **2019-present**
- Board member, University of Chicago Alumni Club-Boston chapter **2016**
- Selection committee, MIT Excellence Awards + Collier Medal **2015-2017**
- Selection committee, Postdoctoral “Mentor of the Year Award”  
Brain & Cognitive Sciences Department **2014**
- Organizing committee, MIT-Harvard “2012 European Career Fair” **Sep 2011-Feb 2012**
- Volunteer mentor for URMs with the MAP undergraduate mentoring program,  
Office of Minority Education, MIT **2011-2013**
- Memberships: Society for Neuroscience
- Reviewer for Rubriq, Neuroscience & Biobehavioral Reviews, Hippocampus, Nature Communications

## CURRICULUM VITAE

**Name:** Robert Paul Vertes

### **Education:**

1969            B.A., University of Dayton, Dayton, Ohio (Psychobiology)

1975            Ph.D., New School University, New York, NY

                  Doctoral research and dissertation done under the direction of Dr. Neal E. Miller at The Rockefeller University, New York, NY (Neurophysiology)

### **Post-doctoral Training:**

1975-1977      NIH (NINCDS) post-doctoral fellowship in the laboratory of Dr. Kenneth L. Casey, Department of Physiology, University of Michigan, Ann Arbor, MI.

### **Professional Employment:**

1993-present   Professor, Center for Complex Systems and Brain Sciences, Florida Atlantic University, Boca Raton, FL

1989-1993      Associate Professor, Center for Complex Systems and Brain Sciences, Florida Atlantic University, Boca Raton, FL

1986-1989      Associate Professor, Division of Basic Medical Sciences, Mercer University School of Medicine, Macon, GA

1984-1986      Assistant Professor, Division of Basic Medical Sciences, Mercer University School of Medicine, Macon, GA

1982-1984      Assistant Professor, Department of Physiology, Wayne State University, Detroit, MI.

1978-1981      Assistant Research Scientist, Department of Physiology, University of Michigan, Ann Arbor, Michigan.

### **Teaching Experience:**

*Florida Atlantic University*

Graduate Courses:

    Neuroscience Core I and II

    Neuroscience Core III

Neural Control of Sleep/Wakefulness  
Brainstem Mechanisms of Behavior  
Functional Neuroanatomy  
Structure, Function and Disorders of the CNS  
Neuroscience of Sleep

Undergraduate Courses:

Biological Bases of Behavior  
Sleep and Dreams  
Neuroscience of Sleep

**Grants and Awards:**

- 2018-2023 Agency, NIH (NIMH), Project title: The role of the nucleus reuniens in the temporal organization of memory and behavior. Role: Co-PI; Total Award: \$1,825,848.
- 2018-2021 Agency, NIH (NINDS), Project Title: Nucleus reuniens: critical role in working memory and executive functions. Role: PI; Total Award: 423, 839.
- 2013-2017 Agency, NIMH, Project Title: Role of the midline thalamus in arousal, attention and cognition. Role: PI; Total award: \$423,421.
- 2008-2013 Agency: NSF; Project Title: Role of Subcortical Systems in Hippocampal Memory Processing; Role: PI; Total Award: \$449,135.
- 2008-2009 Agency: Johnnie B. Byrd Alzheimer's Foundation; Project Title: Examination of Serotonin Systems in AD using a Transgenic Mouse Model; Role: PI; Total Award: \$31,387.
- 2003-2008 Agency: NIMH; Project Title: Brainstem-Diencephalic Modulation of the Hippocampus; Role: PI; Total Award: \$1,414,546.
- 1998-2003 Agency: NIMH; Project Title: Circuitry Controlling the Hippocampal Theta Rhythm; Type of Award: K02; Role: PI; Total award: \$525,151.
- 1996-2001 Agency: NIH (NINDS); Project Title: Brainstem-Diencephalic Modulation of the Hippocampus; Role: PI; Total Award: \$869,445.
- 1995-1997 Agency: Health Foundation of South Florida; Project Title: Experimental Studies on Physiological Mechanisms of SIDS; Role: PI; Total Award: \$40,000.
- 1990-1995 Agency: NIMH; Project Title: Brainstem Modulation of the Hippocampus; Role: PI; Total Award: \$641,740.
- 1993-1995 Agency: Sudden Infant Death Syndrome Alliance; Project Title: Sleep and Respiratory Variables in a Kitten Model of SIDS; Role: PI; Total Award:

\$104,000.

1985-1988 Agency: NSF; Project Title: Brainstem Modulation of the Hippocampus; Role: PI; Total Award: \$197,000.

1978-1982 Agency: NSF; Project Title: Brainstem Neurons: Response during Behavior and Sleep; Role: PI; Total Award: \$118,000.

### **Professional Activities:**

*Director of Doctoral and Masters Students*

at Florida Atlantic University: doctoral students: Gene Kinney, James T. McKenna, Zimbul Albo, Walter Hoover, Tatiana Viena; Masters students: William Fortin, Jeffrey S. Thinschmidt, Michelle Owens, Argira Glama

### **Society Memberships:**

American Association for the Advancement of Science  
Sleep Research Society  
Society for Neuroscience

### **BIBLIOGRAPHY**

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Vertes, R.P. Selective firing of rat pontine gigantocellular neurons during movement and REM sleep. *Brain Res.* 128:146-152, 1977.

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Vertes, R.P. Brainstem control of the events of REM sleep. *Prog. Neurobiol.* 22:241-288, 1984.

Martin, G.F., Vertes, R.P. and Waltzer, R. Spinal projections of the gigantocellular reticular formation in the rat. Evidence for projections from different areas to laminae I and II and lamina IX. *Exp. Brain Res.* 58:154-162, 1985.

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Vertes, R.P. A life-sustaining function for REM sleep: A theory. *Neurosci. Biobehav. Rev.* 10: 371-376, 1986.

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Hoover, W.B. and Vertes, R.P. Anatomical analysis of afferent projections to the medial prefrontal cortex in the rat, *Brain Struct. Funct.* 212:149-179, 2007.

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Morales, G.J., Ramcharan, E.J., Sundararaman, N., Morgera, S.D. and Vertes, R.P. Analysis of the actions of nucleus reuniens and the entorhinal cortex on EEG and evoked population behavior of the hippocampus. *Proc. IEEE Eng. Med. Biol. Soc.* 1:2480-2484, 2007.

Vertes, R.P. and Hoover, W.B. Projections of the paraventricular and paratenial nuclei of the dorsal midline thalamus in the rat. *J. Comp. Neurol.* 508:212-237, 2008.

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Hoover, W.B. and Vertes, R.P. Projections of the medial orbital and ventral orbital cortex in the rat. *J. Comp. Neurol.* 519:3766-3801, 2011.

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Cassel, J.C., Pereira de Vasconcelos, A., Loureiro, M., Cholvin, T., Dalrymple-Alford, J. and Vertes, R.P. The reuniens and rhomboid nuclei: neuroanatomy, electrophysiological characteristics

and behavioral implications. *Prog. Neurobiol.* 111: 34-52, 2013.

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Linley, S.B. and Vertes, R.P. Serotonergic systems in sleep and waking. In: *Handbook of Sleep Research*, Vol. 30, Dringenberg, H.C. (Ed.), Elsevier, New York, 2019, pp. 101-124.

Jayachandran M, Linley, S.B., Schlecht, M., Mahler, S.V., Vertes, R.P, and Allen. T.A. Prefrontal pathways provide top-down control of memory for sequences of events. *Cell Reports* 28:640-654, 2019.

Dolleman-van der Weel, M.J., Griffin, A.L., Ito, H.T., Shapiro, M.L., Witter, M.P., Vertes, R.P. and Allen, T.A. The nucleus reuniens of the thalamus sits at the nexus of a hippocampus and medial prefrontal cortex circuit enabling memory and behavior. *Learn Memory* 26:191-205, 2019.

Vertes, R.P. and Linley, S.B. Serotonergic regulation of hippocampal rhythmical activity. In: *Handbook of the Behavioral Neurobiology of Serotonin*, 2nd ed, Vol. 31, Muller C.P. and Cunningham, K.A. (Eds), Academic Press, London, p. 337-360, 2020.

Vertes, R.P. and Linley S.B. No cognitive processing in the unconscious, anesthetic-like, state of sleep. *J. Comp. Neurol.* 529:524-538, 2021.

Vertes, R.P. and Linley. S.B. Structural and functional organization of the midline and intralaminar nuclei of the thalamus. In: *The Thalamus*, Halassa, M. (Ed), Cambridge University Press, New York, in press.

Linley, S.B., Athanason, A.C., Rojas, A.K.P. and Vertes, R.P. Role of the reuniens and rhomboid thalamic nuclei in anxiety-like avoidance behaviors in the rat. *Hippocampus*, in press.

Vertes, R.P., Linley, S.B. and Viena, T.D. Nucleus reuniens: circuitry, function and dysfunction. In: In: Electrophysiological Recording Techniques, 2nd ed, Vertes R.P. and Allen T.A. (Eds.), Humana Press, New York, in press.

Viena, T.D., Vertes, R.P. and Linley, S.B. Discharge characteristics of neurons of nucleus reuniens across sleep-wake states in the behaving rat. *Behav. Brain Res.*, in press.



## Current curriculum vitae

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## EDUCATION

INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY
University of Science and Technology of China, Hefei, Anhui, P. R. China	B.S.	07/99	Organic Chemistry
University of Kansas, Lawrence, KS	Ph.D.	07/03	Biochemistry/Neuroscience

## ACADEMIC POSITIONS

Aug 1999-July 2003	<b>Graduate Assistant</b> , Department of Molecular Biosciences, University of Kansas, Lawrence, KS.
Aug 2003-Dec 2005	<b>Postdoctoral Fellow</b> , Department of Biomedical Science, Charles E. Schmidt College of Science, Florida Atlantic University, Boca Raton, FL.
Jan 2006-July 2006	<b>Research Assistant Professor</b> , Department of Biomedical Science, Charles E. Schmidt College of Science, Boca Raton, FL.
Aug 2006-July 2013	<b>Assistant Professor</b> , Department of Biomedical Science, Charles E. Schmidt College of Medicine, Boca Raton, FL.
Aug 2013-present	<b>Associate Professor with Tenure</b> , Department of Biomedical Science, Charles E. Schmidt College of Medicine, Boca Raton, FL.
Sep 2008- Aug 2010	<b>Affiliated Assistant Professor</b> of Biochemistry and Molecular Biology, University of Miami Miller School of Medicine.

## MAJOR RESEARCH INTEREST

Neuroregeneration and degeneration, Protein misfolding, Neuronal apoptosis/Autophagy, Neuronal protein trafficking, Cellular stresses.

## CONTRACTS OR GRANTS RECEIVED

### ACTIVE

1. **1R01EB025819-01 (NIH/NIBIB, 9/15/2017-6/30/2021)** Title: SCH: INT: Virtual Neuroprosthesis: Restoring Autonomy to People Suffering From Neurotrauma. **Role: multi-PI** (Other PIs: Drs. Erik Engeberg (contact PI), Sarah Du, Emmanulle Tognoli, Douglas Hutchinson). Total amount: \$1,297,577.

2. **9AZ06 (Department of Health, Florida, 03/01/2019-2/28/2021)** Title: Effect of neuronal activity on synaptopathy in Alzheimer's disease using a novel multi-electrode microfluidic platform. **Role: PI.** Total amount: \$95,000 (Direct: \$82,609).
3. **1R21NS111202-01 (NIH/NINDS, 4/1/2019-3/31/2021)** Title: Dynamic network analysis of huntingtin interactome in response to cellular stresses. **Role: PI.** Total amount: \$342,081 (Direct: \$275,000).

### **COMPLETED**

- 1) **Brain Institute Pilot Grant/FAU 03/10/2017-09/09/2018, PI, \$20,000**  
Title: Lysosomal Positioning in the Pathogenesis of Huntington's Disease.
- 2) **i-SENSE-FAU 01/09/2017-01/08/2018, co-PI, \$20,000**  
Title: Robotic Symbiosis with Neuronal Action Potential Sensing Electrodes (ROBO-SYNAPSE): Network Connection To Link Living Systems with Robotic Devices
- 3) **R15NS066339-02 (NIH/NINDS) 07/01/2012-06/30/2015, PI, \$428,694**  
Title: Regulation of BimEL phosphorylation in the pathogenesis of Huntington's disease.
- 4) **R15DA029863 (NIH/NIDA) 07/01/2010-06/30/2013, Co-I, \$287,775**  
Title: Mechanisms of sudden onset of malignant MDMA toxicity.
- 5) **R15DC012425-01A1 (NIH/NIDCD), 9/13/2012-9/12/2015, Co-I, \$430,000**  
Title: BDNF over-expression and olfactory neurogenesis
- 6) **FAU Seed grant 1/1/2012-12/31/2013, PI, \$20,000**  
Title: Regulation of BimEL phosphorylation in the pathogenesis of Huntington's disease.
- 8) **R15NS066339-01 (NIH/NINDS) 07/01/2009-06/30/2012, PI, \$211,200**  
Title: Regulation of BimEL phosphorylation in the pathogenesis of Huntington's disease.
- 9) **07KB-08 Bridge Grant (State of Florida) 07/01/2007-6/30/2008, Co-I, \$173,223**  
Title: Regulation of GABA Biosynthesis in the Brain.
- 10) **New Project Development Award (FAU) 06/01/2007-05/31/2008, PI, \$10,000**  
Title: Neuron Protective Effect of Granulocyte-Colony Stimulating Factor in a Model of Huntington's Disease.

### **PEER-REVIEWED PUBLICATIONS (Last ten years)**

Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/jianning.wei.1/bibliograpahy/49450739/public/?sort=date&direction=ascending>

1. Leon, R., Bhagavatula, N., Ulukpo, O., McCollum, M., Wei, J. (2010) BimEL as a possible molecular link between proteasome dysfunction and cell death induced by mutant huntingtin. *Eur J Neurosci.* 31, 1915-1925. PMID: PMC2931320.
2. McCollum, M., Ma, Z., Cohen, E., Leon, R., Tao, R., Wu, J-Y., Maharaj, D., Wei, J. (2010) Post-MPTP treatment with granulocyte colony-stimulating factor improves nigrostriatal function in the mouse model of Parkinson's disease. *Mol Neurobiol.* 41(2-3), 410-9.
3. Krishnamoorthy, S., Ma, Z., Zhang, G., Wei, J., Auerbach, SB., Tao, R. (2010) Involvement of 5-HT(2A) Receptors in the Serotonin (5-HT) Syndrome caused by Excessive 5-HT Efflux in Rat Brain. *Basic Clin Pharmacol Toxicol.* 107 (4), 830-41.
4. Rush, D., Leon, R., McCollum, M., Treu, R., Wei, J. (2012) Palmitoylation and trafficking of GAD65 is impaired in a cellular model of Huntington disease. *Biochem J.* 442(1) 39-48. PMID: PMC4646170.
5. McGreal, R.S., Kantorow, W.L., Chauss, D.C., Wei, J., Brennan, L.A., Kantorow, M. (2012)

- $\alpha$ B-crystallin/sHSP protects cytochrome c and mitochondrial function against oxidative stress in lens and retinal cells. *Biochim Biophys Acta*. 820(7), 921-30.
6. Brennan, L.A., Kantorow, W.L., Chauss, D., McGreal, R., He, S., Mattucci, L., Wei, J., Riazuddin, S.A., Cvekl, A., Hejtmancik, J.F., Kantorow, M. (2012) Spatial expression patterns of autophagy genes in the eye lens and induction of autophagy in lens cells. *Mol. Vis.* 18, 1773-86.
  7. McGreal, R.S., Brennan, L.A., Kantorow, W.L., Wilcox, J.D., Wei, J., Chauss, D., Kantorow, M. (2013) Chaperone-independent mitochondrial translocation and protection by  $\alpha$ B-crystallin in RPE cells. *Exp Eye Res.* 110, 10-7.
  8. McCollum, M., Leon, R., Rush, D., Guthrie, K., Wei, J. (2013) Striatal oligodendroglioneurogenesis and neuroblast recruitment is increased in the R6/2 mouse model of Huntington's disease. *Brain Res.* 1518, 91-103. PMID: PMC3684253.
  9. Liu X, Busby J, John C, Wei J, Yuan X, Lu ML. (2013) Direct Interaction between AR and PAK6 in Androgen-Stimulated PAK6 Activation. *PLoS One.* 8(10):e77367.
  10. Erie C, Sacino M, Houle L, Lu M, Wei J. (2015) Altered lysosomal positioning affects lysosomal functions in a cellular model of Huntington's disease. *Eur J Neurosci.* 42(3): 1941-51. PMID: PMC4523460.
  11. Chou CC, Modi JP, Wang CY, Hsu PC, Lee YH, Huang KF, Wang AH, Nan C, Huang X, Prentice H, Wei J, Wu JY. (2017) Activation of Brain L-glutamate Decarboxylase 65 Isoform (GAD65) by Phosphorylation at Threonine 95 (T95). *Mol Neurobiol.* 54(2):866-873
  12. Huang, N., Erie, C., Lu, M., Wei, J (2017) Aberrant subcellular localization of SQSTM1/p62 contributes to increased vulnerability to proteotoxic stress recovery in Huntington's disease. *Mol. Cell. Neurosci.* 88: 43-52. PMID: PMC5893379.
  13. Davis S, Cirone AM, Menzie J, Russell F, Dorey CK, Shibata Y, Wei J, Nan C. Phagocytosis-mediated M1 activation by chitin but not by chitosan. *Am J Physiol Cell Physiol.* (2018) 315 (1): C62-C72.
  14. Louis P, Mercer B, Cirone AM, Johnston C, Lee ZJ, Esiobu N, Li Z, Wei J, Dorey CK, Shibata Y, Nan C. Dietary Chitin Particles Called Mimetic Fungi Ameliorate Colitis in Toll-Like Receptor 2/CD14- and Sex-Dependent Manners. *Infect Immun.* 2019 Apr 23;87(5).
  15. Galpayage Dona, K., Du, E., Wei, J. An impedimetric assay for the identification of abnormal mitochondrial dynamics in living cells. *Electrophoresis* (2020). 10.1002/elps.202000125.
  16. Bensalel, J., Xu, H., Lu, M., Capobianco, E., Wei, J. (2020) RNA-seq analysis reveals significant transcriptome changes in huntingtin-null human neuroblastoma cells. Submitted to *BMC Medical Genomics* (submitted after minor revision).

#### REVIEWS AND BOOK CHAPTERS:

1. Sha, D., Wei, J., Jin, H., Wu, H., Osterhaus, G.L. and Wu, J.-Y. (2003) Effect of taurine on regulation of GABA and acetylcholine biosynthesis. In: *Taurine 5* (Lombardini, J.B. and Schaffer, S.W., eds) Kluwer Academic/Plenum Publisher, New York. Pp. 499-505.
2. Wu, J-Y., Wu, H., Jin, Y., Wei, J., Sha, D., Prentice, H., Lee, H-H., Lin, C-H., Lee, Y-H., Yang, L-L. (2008) Mechanism of neuroprotective function of Taurine. In: *Taurine 7* (Lombardini, J.B. and Schaffer, S.W., eds) Kluwer Academic/Plenum Publisher, New York. Pp. 169-179.
3. Wei, J and Wu, J-Y. (2008) Post-translational regulation of L-glutamic acid decarboxylase in the brain. *Neurochemical Res* 33, 1459-65.

#### ABSTRACT:

- A1. Zhu, M.Z., Wei, J., Wu, Q.H., Zheng, X.Q., and Guo, Q.X. Synthesis and characterization of cationic lipids bearing cholesteryl groups for gene delivery *in vitro*. *the 6th International Symposium for Chinese Organic Chemists ISCOG-2000, Shanghai.*

- A2. Wei, J., Wang, J.H. (2000) The polymerization of postsynaptic tubulin and actin involved in Ca<sup>2+</sup>/CaM-induced potentiation of glutamatergic synapses on CA1 interneurons. *Soc. Neurosci. Abstr.* Program No. 335.4.
- A3. Wei, J., Kelly, P., Floor, E., Wang, J.H. (2000) Ca<sup>2+</sup>/CaM signal pathways enhance the function of GABAergic synapses through cytoskeleton-mediated mechanisms. *Soc. Neurosci. Abstr.* Program No. 522.3.
- A4. Wang, J.H., Wei, J. (2001) The regulation of unitary synaptic responses to multipulse inputs. *Soc. Neurosci. Abstr.* Program No. 501.1.
- A5. Wei, J., Osterhaus, G., Wu, H., Davis, K.M., Jin, H., Sha, D., Wu, J-Y., Floor, E. (2002) Role of truncated human glutamate decarboxylase 65 (hGAD65) in GABA biosynthesis. *Soc. Neurosci. Abstr.* Program No. 837.18.
- A6. Chen, R., Wei, J., Fowler, S.C., Wu, J-Y. (2002) Cocaine-induced behavioral sensitization and functional changes in plasmalemmal and vesicular dopamine transporter. *Soc. Neurosci. Abstr.* Program No. 898.12.
- A7. Wu, J-Y., Wei, J., Jin, H., Wu, H., Sha, D., Jin, Y. (2003) Characterization of full length and truncated L-glutamate decarboxylase. BP08-04. *Amer. Soc. Neurochem.* Annual meeting. May 4-8.
- A8. Wu, J-Y., Wei, J. (2004) Cysteine 446 is crucial for human glutamate decarboxylase (GAD), GAD65, activity. CP4-02, *Amer. Soc. Neurochem.* Annual meeting. Aug 14-18.
- A9. Leon, R., Buddhala, C., Bhagathula, N., Wu, J-Y., Wei, J. (2007) Neuron protective effect of taurine against glutamate-induced excitotoxicity. *FAU Research Fair.*
- A10. Bhagathula, N., Ulukpo, O., Wei, J. (2008) Polyglutamine aggregates stimulate ER stress and triggers apoptosis by activating BH3-only protein Bim. *FAU Research Fair.*
- A11. Leon R., McCollum M., Rush, D., Wei, J. (2010) BimEL as a key molecule in regulating mHtt-induced cell death. *Soc. Neurosci. Abstr.* Program No.860.3.
- A12. McCollum, M., Rush, D., Leon, R., Wei, J., (2010) Dopaminergic modulation of adult neurogenesis in the striatum using transgenic mouse model of Huntington disease. *Soc. Neurosci. Abstr.* Program No. 235.13.
- A13. Rush, D., Leon, R., McCollum, M., Treu, R., Wei, J. (2011) Palmitoylation and trafficking of GAD65 is impaired in a cellular model of Huntington disease. *Soc. Neurosci. Abstr.* Program No.148.06.
- A14. McCollum, M., Rush, D., Leon, R., Wei, J. (2011) Adult striatal neurogenesis is altered in the R6/2 transgenic mouse model of Huntington's disease. *Soc. Neurosci. Abstr.* Program No. 557.02.
- A15. Tao, R., Ma, Z., Adams, H., O'Malley, B.D., Tran, P., Wei, J. (2011) Effect of MDMA on integrity of serotonergic projections from dorsal raphe nucleus to prefrontal cortex. *Soc. Neurosci. Abstr.* Program No. 690.14.
- A16. McCollum, M., Rush, D., Leon R., Guthrie, K., Wei, J. (2012) Striatal oligodendroglioneurogenesis and neuroblast recruitment is increased by BDNF overexpression in the R6/2 transgenic mouse model of Huntington's disease. *Soc. Neurosci. Abstr.* (2012-S-18145-SfN).
- A17. Sacino, M., Lambrino, N., Erie, C., Lu, M., Wei, J. (2013) Impairment of Parkin-mediated mitophagy in Huntington's disease. *Soc. Neurosci. Abstr.* (2013-S-13500-SfN).

- A18. A Noninvasive Microfluidic Platform: Understanding How Hand Actions and Nerve Regeneration Play Hand-to-hand". Genevieve Liddle, Moad Abd, Erik Engeberg, Sarah Du, Emmanuelle Tognoli, Jianning Wei, Third Annual Neural Engineering Symposium in Miami 4/4/2019
- A19. Microglial dynamics in Huntington's disease: Physical interactions between microglia and synaptic nerve terminals. Johanna Bensalel, Nicole Rosa, Jianning Wei. FAU undergraduate research symposium, 4/8/2019.
- A20. Liddle, G., Abd., M., Engeberg, E., Tognoli, E., Du, E., Wei, J. A Study of Activity-Dependent Synaptic Plasticity in Primary Alzheimer's Neurons by Means of Microfluidic Electrical Stimulation. FAU Graduate Study Research Day. April. 10<sup>th</sup>, 2020. (poster abstract submitted on 3/18/2020, virtual presentation cancelled due to the COVID-19 outbreak)
- A21. Johnson, K., Wei, J. The Integrated Stress Response is Differentially Regulated in Huntington's Disease. FAU Medical Research Day. 2/28/20.
- A22. Liddle, G., Abd., M., Engeberg, E., Tognoli, E., Du, E., Wei, J. A Study of Activity-Dependent Synaptic Plasticity in Primary Huntington's Disease Neurons by Means of Microfluidic Electrical Stimulation. FAU Research day showcase. 9/26/2019
- A23. Wei, J., Xu, H., Capobianco, E., Lu, M. Dynamic analysis of huntingtin interactomes, normal and diseased, in response to proteotoxic stress. SFN Global Connectome (Jan 11-13, 2021). 2021-S-1300-SfN.

#### **TEACHING EXPERIENCE**

1. Adult Neurogenesis, PCB6848 (2009-present, course developer and instructor)
2. Biomedical Concepts and Translational Applications (2018-present, co-course director)
3. Fundamental Topics in Human Health (2017, co-course director)
4. Graduate seminar, PCB6934 (2007-2008, instructor)
5. Topics in Biomedical Sciences I, PCB6933 (2008, instructor)
6. Integrative Biology I, BSC 6390 (2009, invited speaker)
7. Introduction to honors I, BSC 4905 (2012, invited speaker)
8. Problem-Based learning in Medical Teaching (2008-present, core facilitator)

#### **INVITED GRANT REVIEW BOARDS**

1. NIH S10 Flow Cytometry review panel, CB-J (30) Study section, July, 8-9, 2009.
2. *Ad Hoc* reviewer for NIH Challenge Grant Initiatives (NIH, RFA-OD-09-003), 2009.

## CURRICULUM VITA

Teresa G. Wilcox

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### Education

1988-1993    Psychology, Ph.D.  
                  University of Arizona  
1985-1988    Child Development, M.S.  
                  University of California, Davis  
1979-1983    Psychology and Education, B.A.  
                  Bethel University, St. Paul, MN

### Professional Experience

2020-current    Interim Dean  
                  College of Science  
                  Florida Atlantic University  
2018-2020    Professor and Chair  
                  Department of Psychology  
                  Florida Atlantic University  
2015-2017    Research Fellow, Office of the Vice President for Research, Division of Research  
                  Graduate Student Ombuds Officer  
                  Texas A&M University  
2014-2015    ADVANCE Administrative Fellow  
                  Assistant Provost for Graduate and Professional Studies  
                  Graduate Student Ombuds Officer  
                  Texas A&M University  
2011-2017    Professor  
                  Department of Psychology  
                  Texas A&M University  
2009-2018    Faculty, Texas A&M Institute for Neuroscience  
                  Texas A&M University  
2004-2011    Associate Professor  
                  Department of Psychology  
                  Texas A&M University  
2000 - 2004    Assistant Professor  
                  Department of Psychology  
                  Texas A&M University  
1995 - 2000    Assistant Professor  
                  Department of Psychology  
                  University of Texas, Arlington  
1993 - 1995    Postdoctoral Fellow  
                  Collaborated with Renée Baillargeon  
                  Department of Psychology, University of Illinois, Urbana-Champaign

## Federal Grant Support

NIH UG3 OD023244	Preconception Stress Exposure: Impact on Pregnancy and Offspring Neurodevelopment, Consultant (PI, Alison Hipwell, University of Pittsburgh Medical Center), 2016-2022
NIH R15 G0-47553	Obesity, Stress, and Neuromuscular Function in the Elderly Co-I (PI, Ranjana Mehta, School of Rural Public Health, TAMU) 2015-2018
NIH R01 HD-057999	Optical imaging in infants, PI 2009-2016
NSF BCS-0642996	Neuroimaging of infants' processing of spatiotemporal information, PI 2007-2011
NIH R21 HD-48943	The neural basis of object processing, PI 2005-2007
NSF BCS-0518986	Neuroimaging of object processing in human infants, PI 2005-2006
NIH R03 HD-46532	Auditory information and object individuation in infancy, PI 2004-2006
NIH R03 HD-36741	Object individuation and event representation in infancy, PI 1998-2001
NSF Doctoral Dissertation	The development of object recognition memory, memory for the location of objects, and inhibitory control of behavior in preterm and full-term infants, PI, 1992-1993

## Other Grant Support

College of Engineering-ISENSE, Seed Grant Program, FAU (Co-I Behnaz Ghoraani), 2020  
FAU-Ariel University, Joint Research Program (Co-I Hila Gvirtz), 2019  
College of Science, Seed Grant Program, FAU (Co-I Erik Engeberg), 2018  
APA Undergraduate Summer Scholars Program, (Co-I, PI, Sheerece Fields), 2016  
Seed Grant (PI), College of Liberal Arts, Texas A&M University, 2015  
Proposal Planning Grant (PI), Texas A&M University, 2004  
Children, Youth, and Families Seed Grant (PI), Texas A&M University, 2003  
Research Enhancement Program, Texas A&M University (PI), 2003  
Program for Enhancement of Scholarly & Creative Activities (PI), Texas A&M University, 2001  
Advanced Research Program (PI), Texas Higher Educ. Coordinating Board, 1998-2000  
Research Enhancement Program, University of Texas, Arlington, 1996

## Academic Honors and Awards

2009	APS Fellow
1993-1995	Postdoctoral Fellowship, NICHD Training Grant University of Illinois, Urbana-Champaign
1993	Predocctoral Fellowship, University of Arizona
1992	Predocctoral Fellowship, University of Arizona
1983	Graduated cum laude

## Publications (students in **bold**)

Wilcox, T., & Kraft, R. (1989). Lateral differences in schematic face encoding during dual-task performance with increasing levels of difficulty. *Perceptual and Motor Skills*, 68, 767-778.

Wilcox, T., Rosser, R., & Nadel, L. (1994). Representation of object location in 6.5-month-old infants. *Cognitive Development*, 9, 193-209.

Sell, E., Figueredo, A. J., & Wilcox, T. (1995). Assessment of Preterm Infants' Behavior (APIB): Confirmatory factor analysis of behavioral constructs. *Infant Behavior and Development*, 18, 447 - 457.

Wilcox, T., Nadel, L., & Rosser, R. (1996). Location memory in healthy preterm and full-term

infants. *Infant Behavior and Development*, 19, 309-323.

Wilcox, T., & Baillargeon, R. (1998a). Object individuation in infancy: The use of featural information in reasoning about occlusion events. *Cognitive Psychology*, 37, 97-155.

Wilcox, T., & Baillargeon, R. (1998b). Object Individuation in young infants: Further evidence with an event monitoring task. *Developmental Science*, 1, 127-142.

Wilcox, T. (1999). Object Individuation: Infants' use of shape, size, pattern, and color. *Cognition*, 72, 125-166.

Wilcox, T. (2001). Object identity: A developmental perspective. *Cahiers de Psychologie Cognitive (Current Psychology of Cognition)*, 20, 269-276.

Wilcox, T., & **Chapa, C.** (2002). Infants' reasoning about opaque and transparent occluders in an individuation task. *Cognition*, 85, B1-B10.

Wilcox, T., & **Schweinle, A.** (2002). Object individuation and event mapping: Developmental changes in infants' use of featural information. *Developmental Science*, 5, 87-105.

Wilcox, T., **Schweinle, A., & Chapa, C.** (2003). Object individuation in infancy. In F. Fagan & H. Hayne (Eds.). *Progress in Infancy Research* (Vol 3, pp. 193-243). Mahwah, NJ: Lawrence Erlbaum Associates.

Wilcox, T., & **Schweinle, A.** (2003). Infants' use of speed information to individuate objects in occlusion events. *Infant Behavior and Development*, 26, 253-282.

Wilcox, T. (2003). Event-mapping tasks: Investigating the effects of prior information and event complexity on performance. *Infant Behavior and Development*, 26, 568-587.

**Schweinle, A., & Wilcox, T.** (2004). Sex differences in infants' ability to represent complex event sequences. *Infancy*, 6, 333-359.

Wilcox, T., & **Chapa, C.** (2004). Priming infants to use color and pattern information in an individuation task. *Cognition*, 90, 265-302.

**Schweinle, A., & Wilcox, T.** (2004). Intermodal perception and physical reasoning in young infants. *Infant Behavior and Development*, 27, 246-265.

Wilcox, T., Bortfeld, H., **Woods, R., Wruck, E., & Boas, D. A.** (2005). Using near-infrared spectroscopy to assess neural activation during object processing in infants. *Journal of Biomedical Optic*, 10, 011010-1 – 011010-9.

Wilcox, T., **Woods, R., Tuggy, L., & Napoli, R.** (2006). Shake, rattle, and.... one or two objects? Infants' use of sound information to individuate objects. *Infancy*, 9, 97-123.

**Woods, R., & Wilcox, T.** (2006). Infants' ability to use luminance information to individuate objects. *Cognition*, 99, B43-B52.

Wilcox, T., & **Woods, R., Chapa, C., & McCurry, S.** (2007). Multisensory exploration and object individuation in infants. *Developmental Psychology*, 43, 479-495.

Wilcox, T. (2007). Sex differences in infants' mapping of complex occlusion sequences: Further evidence. *Infancy*, 12, 1-25.

Wilcox, T., Bortfeld, H., **Woods, R., Wruck, E., & Boas, D.** (2008). Hemodynamic response to featural changes in the occipital and inferior temporal cortex in infants: A preliminary methodological exploration. *Developmental Science*, 11, 361-370.

Wilcox, T., **Woods, R., & Chapa, C.** (2008). Color-function categories that prime infants to use color information in an object individuation task. *Cognitive Psychology*, 57, 220-261.

Alexander, G. M., Wilcox, T., & **Farmer, M-B.** (2009). Hormone-behavior associations in early infancy. *Hormones and Behavior*, 56, 498-502.

Alexander, G. M., Wilcox, T., & **Woods, R.** (2009). Sex differences in infants' visual interest in toys. *Archives of Sexual Behavior*, 38, 427-433.

**McCurry, S., Wilcox, T., & Woods, R.** (2009). Beyond the search barrier: New evidence for object individuation in young infants. *Infant Behavior and Development*, 32, 429-436.

Wilcox, T. (2009). Perceptual Development: Visual Object Permanence and Identity. In B. Goldstein (Ed.), *Encyclopedia of Perception*. Sage Publishers.

Wilcox, T., Bortfeld, H., **Armstrong, J., Woods, R., & Boas, D.** (2009). Hemodynamic changes in the infant cortex during the processing of featural and spatiotemporal information. *Neuropsychologia*, 47, 657-662.

Wilcox, T., & **Woods, R.** (2009). Experience primes infants to individuate objects: Illuminating learning mechanisms. In A. Needham & A. Woodward (Eds.), *Learning and the Infant Mind* (pp. 117-143). NY: Oxford University Press.

**Woods, R., & Wilcox, T.** (2010). Co-variation of color and luminance facilitate object individuation in infancy. *Developmental Psychology*, 46, 681-690.



- Wilcox, T., **Haslup, J.**, & Boas, D.A. (2010). Dissociation of processing of featural and spatiotemporal information in the infant cortex. *NeuroImage*, *53*, 1256-1263.
- Wilcox, T., & **Smith, T.R.** (2010). The Development of infants' use of property-poor sounds to Individuate Objects. *Infant Behavior and Development*, *33*, 365-700.
- Woods, R.**, & Wilcox, T., **Armstrong, J.**, & Alexander, G. (2010). Infants' tracking of 3-dimensional objects through occlusion. *Infant Behavior and Development*, *33*, 663-671.
- Wilcox, T., **Smith, T.R.**, **Woods, R.** (2011). Priming infants to use pattern information in an object individuation task: The role of comparison. *Developmental Psychology*, *47*, 886-897.
- Brower, T.R.**, & Wilcox, T. (2012). Shaking things up: Young infants' use of sound information for object individuation. *Infant Behavior and Development*, *35*, 323-327.
- Wilcox., T., **Stubbs, J.**, **Hirshkowitz, A.**, & Boas, D.A. (2012). Functional activation of the infant cortex during object processing. *NeuroImage*, *62*, 1833-1840.
- Alexander, G.A., & Wilcox, T. (2012). Sex differences in early infancy. *Child Development Perspectives*, *6*, 400-406.
- Wilcox, T., Alexander, G.A., **Wheeler, L.**, & **Norvell, J.** (2012). Sex differences during visual scanning of occlusion events in infants. *Developmental Psychology*, *48*, 1091-1105.
- Brower, T.**, & Wilcox, T. (2013). Priming infants to use color in an individuation task: Does social context matter? *Infant Behavior and Development*, *35*, 323-327.
- Hirshkowitz, A.**, & Wilcox, T. (2013). Infants' ability to extract three-dimensional shape from coherent motion. *Infant Behavior and Development*, *36*, 863-872.
- Wilcox, T., **Stubbs, J.A.**, **Wheeler, L.**, & Alexander, G.M. (2013). Infants' scanning of dynamic faces during the first year. *Infant Behavior and Development*, *36*, 513-517.
- Woods, R.J.**, & Wilcox, T. (2013). Posture support improves object individuation in infants. *Developmental Psychology*, *49*, 1413-1424. DOI: 10.1037/a0030344
- Wilcox, T., **Hirshkowitz, A.**, **Hawkins, L.**, & Boas, D.A. (2014). The effect of color priming on infant brain and behavior. *NeuroImage*, *85*, 302-313.
- Wilcox, T., **Hawkins, L.**, **Hirshkowitz, A.**, & Boas, D.A. (2014). Cortical activation to object shape and speed of motion during the first year. *NeuroImage*, *99*, 129-141. DOI: 10.1016/j.neuroimage.2014.04.082
- Wilcox, T., & **Biondi, M.** (2015). fNIRS in the developmental sciences. Wiley Interdisciplinary Reviews: Cognitive Science.
- Wilcox, T. & **Biondi, M.** (2015). Object processing in the infants: Lessons from Neuroscience. *Trends in Cognitive Sciences*, *19*, 406-413.
- Wilcox, T. & **Biondi, M.** (2016). Functional activation in the ventral object processing pathway during the first year. *Frontiers in Systems Neuroscience*, *9*:180. doi: 10.3389/fnsys.2015.00180
- Biondi, M.**, Boas, D.A., & Wilcox, T. (2016). On the other hand: Increased cortical activation to human versus mechanical hands in infants. *NeuroImage*, *141*, 143-153.
- Alexander, G.M., Wilcox, T., **Hawkins, L.**, & **Hirshkowitz, A.** (2016). Infant Preferences for Sexually Dimorphic Body Traits: Implications for Female-typical Toy Preferences. *Frontiers in Psychology*, *7*:804. doi: 10.3389/fpsyg.2016.00804
- Hirshkowitz, A.**, **Biondi, M.**, & Wilcox, T. (2018; epub 2017). Cortical responses to shape-from-motion stimuli in the infant. *Neurophotonics*, *1*, 011014. doi: 10.1117/1.
- Hssayeni, M.D.**, Wilcox, T., Ghoraani, B. (2020). Tensor decomposition of function near-infrared spectroscopy (fNIRS) signals for pattern discovery of cognitive response in infants. IEEE EMBC.

### Manuscripts under Review

- Hughes, L.**, **Nyman, T.**, & Wilcox, T (under review). Spatial transformation of mirror image and structural distinct objects in older infants.
- Biondi, M.**, **Stotler, J.**, & Wilcox, T (under review). Infant cortical responses to mechanical and social entities.

### Recent Invited Presentations

- Wilcox, T. (February, 2009). Knowledge acquisition in infancy: Cognitive mechanisms and neural foundations. Department of Psychology, Ohio State University.
- Wilcox, T. (September, 2009). Babies, brain and behavior. Brain, Cognitive Sciences and

Education: Interdisciplinary Seminar Series, Texas A&M University.

Wilcox, T. (January, 2010). Object processing in infants: brain and behavior. Biomechanical Core Facility, University of Nebraska, Omaha.

Wilcox, T., Alexander, G.A., **Haslup, J.A.**, & **Norvell, J.A.** (April, 2010). Sex differences in visual scanning duration occlusion. Gender Development Research Conference, San Francisco, CA.

Wilcox, T. (July, 2010). Invited presentation at the *Multi-modal Neuroimaging Training Program Symposium: Visual Processing*. Carnegie Mellon University and University of Pittsburgh.

Wilcox, T. (October, 2010). Invited presentation at the conference on *Functional Near Infrared Spectroscopy of the Brain*. Harvard University.

Wilcox, T. (March, 2011). Invited presentation at the 19<sup>th</sup> meeting of the Centre de recherche en neuropsychologie et cognition, Montreal, Canada.

Wilcox, T. (November, 2011). Object individuation in infancy: Brain and behavior. Department of Psychology, Texas Christian University, Fort Worth, TX.

Wilcox, T. (May 2013). fNIRS as a tool for studying infant cognition. Invited presentation at Approaches to Answering Questions about Cognitive Development with Neuroscience. Harrington Faculty Fellows Program (David Lui, organizer), University of Texas, Austin.

Wilcox, T. (February 2014). Development of Object Individuation: Cortical Networks and Behavior. Brain and Behavioral Sciences, University of Texas, Dallas.

Wilcox, T. (October, 2015). fNIRS in the developmental sciences. NIRS-DOT Visiting Fellowship Course, Athinoula A. Martinos Center for Biomedical Imaging, MGH, Harvard Medical School, Charlestown, MA.

Wilcox, T. (March, 2016). Object Representation in the Infant Brain. Department of Psychology and Department of Communication Sciences and Disorders. University of Texas, Austin.

Wilcox, T. (October, 2016). Cortical Basis of Object Processing in the Infant. Department of Psychology, Florida Atlantic University.

Wilcox, T. (January, 2019). Object processing in the infant: What we have learned from color priming. Budapest CEU Conference on Cognitive Development. Central European University, Budapest, Hungary.

## Recent Conference Presentations

**Armstrong, J.**, Wilcox, T., Alexander, G., & **Woods, R.** (March, 2008). Infants Tracking of Objects through Occlusion in 2-D Animated Displays. Presented at the International Conference on Infant Studies, Vancouver, Canada.

**Smith, T.**, & Wilcox, T. (March, 2008). Baby see, baby do: Parents and infants playing with sound. Presented at the International Conference on Infant Studies, Vancouver, Canada.

**Smith, T.**, & Wilcox, T. (March, 2008). Shaking Things Up: Young Infants' Use of Sound Information for Object Individuation. Presented at the International Conference on Infant Studies, Vancouver, Canada.

Wilcox, T., & **Woods, R.** (March, 2008). Infants' use of Color in Object Processing. Presented at the International Conference on Infant Studies, Vancouver, Canada.

Wang, S.H., & Wilcox, T. (April, 2009). Selective Use of Information in Infancy: The Roles of Categorization and Action. Symposium organized for the biennial meeting of the Society for Research in Child Development, Denver, CO.

Wilcox, T. (April, 2009). Infants' category of occlusion: Blocked access or out of view? Presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.

**Armstrong, J.**, & Wilcox, T. (April, 2009). Cortical Activation During Spatiotemporal Processing in the Infant Brain. Presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.

**Stubbs, J.A.**, **Smith, T.R.**, & Wilcox, T. (April, 2009). The Effect of Emotional Communication on Infant Behavior. Presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.

**Smith, T.R., & Wilcox, T.** (April, 2009). A Social Act: Priming Infants to use Color in and Individuation Task. Presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.

Wilcox, T., Alexander, G.M., **Haslup, J.A., & Norvell, J.M.** (March, 2010). Sex Differences in Visual Scanning Duration an Object Individuation Task. Presented at the International Conference on Infant Studies, Baltimore, MD.

**Smith, T.R., & Wilcox, T.** (March, 2010). The Exploratory Dyad that Plays Together Stays Together: Playing with Non-Obvious Object Properties. Presented at the International Conference on Infant Studies, Baltimore, MD.

**Smith, T.R., Liew, J., & Wilcox, T.** (March, 2010). Predicting Preschool Adaptability and Task Engagement from Infant Processing Speed. Presented at the International Conference on Infant Studies, Baltimore, MD.

**Stubbs, J.A., Smith, T.R., & Wilcox, T.** (March, 2010). The Effect of Emotional Communication on Infant Behavior. Presented at the International Conference on Infant Studies, Baltimore, MD.

**Hirshkowitz, A., & Wilcox, T.** (March, 2011). Infant Shape Perception in Structure-From-Motion Random-Dot Stimuli. Presented at the biennial meeting of the Society for Research in Child Development, Montreal, Canada.

**Stubbs, J., & Wilcox, T.** (March, 2011). The Influence of Parent's Emotional Expression on Infants' Preference Attention: An eye-tracking Study. Presented at the biennial meeting of the Society for Research in Child Development, Montreal, Canada.

Wilcox, T. (March, 2011). The Development of Visual Object Processing: Brain and Behavior. Presented at the biennial meeting of the Society for Research in Child Development, Montreal, Canada.

**Hirshkowitz, A., & Wilcox, T.** (June, 2012). Object Perception in Infancy: A NIRS Study. Presented at the biennial meeting of the International Conference on Infant Studies, Minneapolis, MN.

**Stubbs, J.A., Wheeler, L., Wilcox, T., & Alexander, G.M.** (June, 2012). Infants' Scanning of Dynamic and Static Faces. Presented at the biennial meeting of the International Conference on Infant Studies, Minneapolis, MN.

**Stubbs, J.A., Goodman, L., & Wilcox, T.** (June, 2012). Approach and Avoidance Motivation in Social-Referencing Contexts. Presented at the biennial meeting of the International Conference on Infant Studies, Minneapolis, MN.

Wilcox, T. (October, 2012). Experience-Dependent Changes in Infant Brain and Behavior: The Case of Color Priming. Presented at the biennial fNIRS Conference, UCL, London.

Wilcox, T., **Hirshkowitz, A., Hawkins, L.** (October, 2012). Age-related Changes in the Functional Organization of Object Processing Pathways. Presented at the biennial fNIRS Conference, UCL, London.

Wilcox, T., **Hirshkowitz, A., Hawkins, L.** (October, 2012). Different Patterns of Activation in Temporal Cortex Function vs. Motion Events. Presented at the biennial fNIRS Conference, UCL, London.

**Biondi, M., Wilcox, T., & Stubbs, J.** (March, 2013). Infants' Scanning of Positive, Fearful, and Neutral Faces. Presented at the biennial meeting of the Society for Research in Child Development, Seattle, Washington.

**Hirshkowitz, A., & Wilcox, T.** (March, 2013). Infant Shape Perception in Apparent Motion. Presented at the biennial meeting of the Society for Research in Child Development, Seattle, Washington.

Wilcox, T. (March, 2013). Color priming: Experience-Dependent Changes in Infant Brain and Behavior: Presented at the biennial meeting of the Society for Research in Child Development, Seattle, Washington.

Wilcox, T., **Hirshkowitz, A., Hawkins, L.** (March, 2013). Different Patterns of Activation in Temporal Cortex Function vs. Motion Events. Presented at the biennial meeting of the Society for Research in Child Development, Seattle, Washington.

**Biondi, M., & Wilcox, T.** (July, 2014). Developmental Changes in Scanning Patterns of Emotional Expressions. Presented at the biennial meeting of the International Conference on Infant Studies, Berlin, Germany.

**Biondi, M., & Wilcox, T.** (July, 2014). Processing of Biological and Mechanical Motion in the Infant Brain. Presented at the biennial meeting of the International Conference on Infant Studies, Berlin, Germany.

**Hirshkowitz, A., & Wilcox, T.** (July, 2014). Do Social Events Prime Individuation-by-Color in Physical Events? Presented at the biennial meeting of the International Conference on Infant Studies, Berlin, Germany.

**Hirshkowitz, A., & Wilcox, T.** (July, 2014). The Roles of Color and Luminance in Apparent Motion Shape Perception. Presented at the biennial meeting of the International Conference on Infant Studies, Berlin, Germany.

**Biondi, M. & Wilcox, T.** (October, 2014). Differences in Activation to Biological and Mechanical Motion in the Infant Temporal Cortex. Presented at the biennial meeting of the Society for Functional Near-infrared Spectroscopy, Montreal, Canada.

Wilcox, T., **Hawkins, L., & Hirshkowitz, A.** (October, 2014). Functional Organization of Object Processing Areas in the Infant Brain. Presented at the biennial meeting of the Society for Functional Near-infrared Spectroscopy, Montreal, Canada.

Wilcox, T. (March, 2015). Functional (Re)organization of the Ventral Stream during the First Year. Presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.

**Biondi, M. & Wilcox, T.** (March, 2015). Not all "Negative" Emotions are Treated Equally: Using Eye Tracking to Determine Infant Preferences. Presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.

**Biondi, M., & Wilcox, T.** (March, 2015). Using fNIRS to Investigate Processing of Social and Mechanical Events in the Infant Brain. Presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.

**Herrera, L., Holmes, S., & Wilcox, T.** (June, 2016). Effects of Categorization on Object Individuation in Infants: An Eye-tracking Study. The Society for Philosophy and Psychology, Austin Texas.

**Biondi, M. & Wilcox, T.** (October, 2016). Increased Cortical Activation to Human Versus Mechanical Hands in Infants. Presented at the biennial meeting of the Society for Functional Near-infrared Spectroscopy, Paris, France.

**Biondi, M. & Wilcox, T.** (October, 2016). Cortical Basis of Social and Mechanical Object Processing in Infancy. Presented at the biennial meeting of the Society for Functional Near-infrared Spectroscopy, Paris, France.

**Biondi, M. & Wilcox, T.** (April, 2017). Increased Cortical Activation to Human Versus Mechanical Hands in Infants. Presented at the biennial meeting of the Society for Research in Child Development, Austin, TX.

**Biondi, M. & Wilcox, T.** (April, 2017). Priming and Object Individuation: The Importance of Human Agents. Presented at the biennial meeting of the Society for Research in Child Development, Austin, TX.

**Biondi, M. & Wilcox, T.** (October, 2018). Development of Infants' Processing of Social and Mechanical Entities: Patterns of Cortical Activation during the First Year. Presented at the biennial meeting of the Society for Functional Near-infrared Spectroscopy, Tokyo, Japan.

## **Specialized Training**

Institute for Academic Leadership (June and October, 2019).

Foundations of Organizational Ombudsman Practice (October, 2014)

International Ombudsman Association

Mediation Training and Certification (April, 2015)

Center for Change and Conflict Resolution through Office of Diversity, Texas A&M University

## **Workshops Organized**

May 2009, fNIRS Workshop, Texas A&M University

August 2013, fNIRS Workshop, Texas A&M University

## **Courses Taught**

### Undergraduate courses:

- Developmental Psychology (Life-span and Infancy, Childhood, & Adolescence)
- Developmental Psychobiology (co-taught)
- Cognitive Development
- Infancy and Early Childhood
- Infant Cognition
- Freshman Critical Thinking Seminar: Origins of Knowledge

### Graduate courses:

- Cognitive Development
- Developmental Psychobiology (co-taught)
- Principles of Human Development
- Visual Cognition in Infancy
- Infant Cognition

## **Postdoctoral Trainees**

Rebecca Woods (2006 – 2007)

## **Ph.D. Committees**

Amy Schweinle (Psychology, UT Arlington, Wilcox Chair, 1998-2000)  
Luis Paulo Rodrigues (Health & Kinesiology, TAMU, Gabbard Chair, 2002-2004)  
Eric Wruck (Psychology, TAMU, Bortfeld Chair, 2003-2005)  
Diala Ammar (Health & Kinesiology, TAMU, Gabbard Chair, 2003-2005)  
Rebecca Woods (Psychology, TAMU, Wilcox Chair, 2004-2006)  
Jin Park (Architecture, TAMU, Shepley Chair, 2005-2008)  
Alberto Cordova (Health & Kinesiology, TAMU, Gabbard Chair, 2005-2008)  
Tracy Smith (Psychology, Wilcox Chair, 2007-2010)  
Wondae Kim (Health & Kinesiology, TAMU, Gabbard Chair, 2005-2013)  
Priscila Caçola (Health & Kinesiology, TAMU, Gabbard Chair, 2007-2013)  
Andrea Wahlberg (Education & Human Development, TAMU, Riccio Chair, 2011-2014)  
Amy Hirshkowitz (Psychology, TAMU, Wilcox Chair, 2012-2014)  
Janet Saenz (Psychology, TAMU, Alexander Chair, 2010-2014)  
Marisa Biondi (Psychology, TAMU, Wilcox Chair, 2010-2018)  
Tristin Nyman (Psychology, TAMU, Wilcox Chair, 2016-2018)

## **Oral and/or Written Exam Committees**

Luis Paulo Rodrigues (Health & Kinesiology, TAMU, Gabbard Chair, 2003)  
Eric Wruck (Psychology, TAMU, Bortfeld Chair, 2004)  
Rebecca Woods (Psychology, TAMU, Wilcox Chair, 2005)  
Diala Ammar (Health & Kinesiology, TAMU, Gabbard Chair, 2004)  
Jin Park (Architecture, TAMU, Shepley Chair, 2006)  
Alberto Cordova (Health & Kinesiology, TAMU, Gabbard Chair, 2007-2008)  
Wondae Kim (Health & Kinesiology, TAMU, Gabbard Chair, 2007-2013)  
Tracy Smith (Psychology, TAMU, Wilcox Chair, 2007-2008)  
Priscila Caçola (Health & Kinesiology, TAMU, Gabbard Chair, 2007-2013)  
Andrea Wahlberg (Education & Human Development, TAMU, Riccio Chair, 2011-2014)  
Amy Hirshkowitz (Psychology, TAMU, Wilcox Chair, 2012-2014)  
Janet Saenz (Psychology, TAMU, Alexander Chair, 2010-2014)  
Marisa Biondi (Psychology, TAMU, Wilcox Chair, 2010-2018)  
Jacqueline Stotler (Psychology, FAU, Wilcox Chair, 2018-present)  
Jasmine Chan (Psychology, FAU, Wilcox Chair, 2018-present)

## **Master's Committees**

Amy Schweinle (Psychology, UT Arlington, Wilcox Chair, 1996-1998)  
Sami Rae Grimes (Philosophy, TAMU, 2000-2002)  
Rebecca Woods (Psychology, TAMU, Wilcox Chair, 2002-2004)  
Sara Pearce (Bush School, TAMU, 2003-2005)  
Tracy Smith (Psychology, TAMU, Wilcox Chair, 2006-2007)  
Eswen Fava (Psychology, TAMU, Bortfeld Chair, 2007-2008)  
Jennifer Armstrong (Psychology, TAMU, Wilcox Chair, 2007-2008)  
Melissa Harris (Education, TAMU, 2009-2011)  
Amy Hirshkowitz (Psychology, TAMU, Wilcox Chair, 2009-2011)  
Tyler Kasper-Bauer (Psychology, TAMU, Wilcox Chair 2009-2011)  
Laura Hawkins (Psychology, TAMU, Wilcox Chair 2011-2014)  
Priya Patel (Health & Kinesiology, TAMU, Gabbard Chair, 2014-2017)  
Tristin Nyman (Psychology, TAMU, Wilcox Chair, 2016-2018)  
Jacqueline Stotler (Psychology, FAU, Wilcox Chair, 2018-present)  
Jasmine Chan (Psychology, FAU, Wilcox Chair, 2018-present)

## **Undergraduate Honors Thesis**

Sarah McCurry, Psychology, TAMU, 2003-2004

## **Undergraduate Research Scholars (TAMU)**

Lynnel Goodman, Psychology, TAMU, 2011-2012  
Lynee Herrera, Psychology, TAMU, 2015-2016  
Sydney Holmes, Psychology, TAMU, 2015-2016

## **OURI Grant Recipients (FAU)**

Daniella Hernandez, Grant Recipient, Office of Undergraduate Research & Inquiry, FAU, 2019  
Chloe Joseph, Grant Recipient, Office of Undergraduate Research & Inquiry, FAU, 2019

## **Student Awards**

Rebecca Woods, Student Research Week, 2005, TAMU, 1<sup>st</sup> place poster presentation (graduate)  
Tracy Smith, Student Research Week, 2009, TAMU, 1<sup>st</sup> place poster (graduate)  
Jessica Stubbs, Student Research Week, 2009, TAMU, 1<sup>st</sup> place poster (undergraduate)  
Lynnel Goodman, Student Research Week 2012, TAMU, 1<sup>st</sup> place oral presentation (undergraduate)  
Amy Hirshkowitz, Student Research Week 2012, TAMU, 1<sup>st</sup> place poster presentation (graduate)  
Amy Hirshkowitz, Graduate Student Travel Award, Graduate Student Council, TAMU, 2014  
Amy Hirshkowitz, Graduate Student Travel Award, International Society for Infant Studies, 2014  
Marisa Biondi, Professional Development Award, College of Liberal Arts, TAMU, 2015  
Marisa Biondi, Student Research Week 2015, TAMU, 1<sup>st</sup> place oral presentation (graduate)  
Marisa Biondi, Travel Honorarium, Office of Graduate and Professional Studies, TAMU, 2015  
Marisa Biondi, STAR Fellowship, College of Liberal Arts, TAMU, 2015  
Marisa Biondi, Aggies Commit Fellowship, Graduate and Professional Student Council, TAMU, 2015  
Marisa Biondi, Accountability, Climate & Equity Diversity Service Award, TAMU, 2016  
Marisa Biondi, Buck Weirus Spirit Award, TAMU, 2016  
Jacqueline Stotler, Science Graduate Research Support Scholarship, FAU, 2020  
Jasmine Chan, Graduate Fellowship for Academic Excellence, FAU, 2020

## **Professional Organizations (member)**

American Psychological Association  
American Psychological Association - Division 7  
American Psychological Society  
Cognitive Development Society  
International Society for Infant Studies  
Society for Neuroscience  
Society for Research in Child Development  
Society for Functional Near-Infrared Spectroscopy  
Council of Graduate Departments of Psychology  
International Ombudsman Association

## **Reviewing Activities**

Associate Editor:

*Infant and Child Development* (2015-current)

Editorial Board:

*Infancy* (2005-2013) and *Frontiers in Developmental Psychology* (Review Editor)

Grant Review Panel:

National Science Foundation 2008-2012

National Science Foundation, College of Reviewers, 2016-current

Guest reviewer for funding agencies:

Canadian Research Chairs Program, National Science Foundation, National Institutes of Health

Guest reviewer for journals:

*Child Development, Cognition, Cognitive Development, Cognitive Psychology, Cahiers de Psychologie Cognitive (Current Psychology of Cognition), Developmental Psychology, Developmental Science, Infancy, Infant Behavior and Development, Journal of Experimental Child Psychology, NeuroImage, Neurophotronics, Neuroscience, Journal of Experimental Psychology: General, Journal of Biomedical Optics, Journal of Experimental Child Psychology; Psychological Science, Scandinavian Journal of Psychology, Trends in Cognitive Sciences, WIRES Cognitive Science*

Conference review panels:

Biennial International Conference on Infant Studies (1998, 2008, 2010, 2012, 2014, 2016)

Biennial Meeting of the Society for Research in Child Development (1999, 2001, 2005, 2007, 2009, 2011, 2013)

fNIRS Society (2016)

## **Departmental Service at Texas A&M University (2000-2017)**

Departmental Operations Committee (2000-2005)

Clinical Faculty Search Committee (2000-2001)

Promotion and Tenure Committee (2004 – present)

Departmental Head Search Committee (2001-2001; 2005-2006; 2009-2010)

Faculty Evaluation Committee (2005-2007)

Parliamentarian, Psychology Department (2005-2006)

Diversity Committee (2005-2009)

Advisory Committee (2005-2014)

Advisory Committee, Chair (2010-2011, 2013-2014)

Neuroscience Faculty Search Committee (2007-2009)

Cognitive Faculty Search Committee (2009-2010)

Social Faculty Search Committee (2009-2010)

Graduate Studies Committee (2011-2014)

Chair, Senior Search Committee in fMRI (2013-2014)

## **University Service at Texas A&M University (since 2000-2017)**

Children, Youth, and Families (CYF) Initiative, Task Force Member (2001-2003)  
Task force members appointed by former Provost Ronald Douglas  
Children, Youth, and Families Interdisciplinary Executive Committee (2003-2008)  
Children, Youth, and Families Interdisciplinary Research Program (2003-2008)  
Search Committee, faculty position in Developmental Psychology, Department of Educational Psychology, College of Education and Human Development (2003-2004 and 2004-2005)  
Officer, Faculty Senate (2004-2005).  
Funding Mechanisms Committee, Chair, CYF Interdisciplinary Research Program (2004 – 2006)  
Communications Committee, College of Liberal Arts (2004 – 2005)  
Committee members appointed by Dean Charles Johnson, CLA  
Selection Committee, Advanced Research Program, Consortium Proposals, Texas Higher Education Coordinating Board (2005)  
Faculty Panel on NIH Funding, Office of Proposal Development, VPR Office, (Spring, 2009)  
Optical Imaging Mini-Workshop (October, 2009 and August, 2014). Provided as a service to an interdisciplinary group of faculty, students, and researchers at TAMU.  
Texas A&M University Institute for Neuroscience, Graduate Curriculum Committee (2011-2012)  
Human Subjects Protection Program, Practice & Procedures Subgroup (2011-2012)  
Program for the Enhancement of Scholarly Activities (PESCA), Review Board (2011, 2012)  
Council of Principle Investigators, CLA representative (2012-present)  
Council of Principle Investigators, Member of Executive Committee (2014-2016)  
Search Committee, Faculty Ombuds position, Dean of Faculties, Texas A&M University (2013)  
Search Committee, faculty position in Educational Neuroscience, Department of Educational Psychology, College of Education and Human Development (2014)  
Faculty Reviewer: Diversity Fellowships and Phil Gramm Awards, OGAPS, Texas A&M (2015 - 2017)

## **National Service (since 2000)**

Member of the Sigma Xi Admittance Committee, TAMU Chapter (2000-2004)  
Editorial Board: *Infancy*, *Infant and Child Development*, and *Frontiers in Developmental Psychology*  
National Science Foundation Grant review panel (2008-2012)  
National Science Foundation, College of Reviewers, DLS (2016-current)  
Conference Review Panels for ICIS and SRCD (1998-2014)  
Ad hoc reviewer, National Institute for Child Health and Human Development and NSF

## **Collaborators (past or present student in *italics*):**

Gerianne Alexander, Texas A&M University  
*Jennifer Armstrong Haslup, Texas A&M University*  
Renée Baillargeon, University of Illinois  
*Marisa Biondi, Texas A&M University*  
*Jasmine Chan, Florida Atlantic University*  
David Boas, Athinoula A. Martinos Center for Biomedical Imaging, MGH, Harvard Medical School  
Heather Bortfeld, University of California, Merced  
*Catherine Chapa, Palo Alto College*  
Erik Engeberg, Florida Atlantic University  
Behnaz Ghoraani, Florida Atlantic University  
Hila Gvirts, Ariel University



Heather Howard, Florida Atlantic University  
*Laura Hawkins, Texas A&M University Amy*  
*Hirshkowitz, Texas A&M University Ted*  
Huppert, University of Pittsburg  
*Tyler Kasper-Bauer, Texas A&M University*  
Jeffrey Liew, Texas A&M University  
*Murtadha Hssayeni, Florida Atlantic University*  
*Amy Schweinle, University of South Dakota*  
*Tracy Smith, Texas A&M University Jacqueline*  
*Stotler, Florida Atlantic University Jessica*  
*Stubbs, Texas A&M University*  
*Lesley Wheeler, Texas A&M University*  
*Rebecca Woods, North Dakota State University*

**CURRICULUM VITAE**  
**Zhongwei Li, Ph.D.**

**INSTITUTIONAL ADDRESS:**

Department of Biomedical Science  
Charles E. Schmidt College of Medicine  
Florida Atlantic University  
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Phone: (561)297-3178, Fax: (561)297-0819, Email: zli@health.fau.edu

**EDUCATION:**

**1982 B.S. Microbiology.**

Liaoning University, Shenyang, China.  
Concentrations: Biology, Chemistry, Microbiology.

**1984 M.S. Microbiology.**

Chinese Academy of Sciences (CAS), Shenyang, China.  
Thesis: “Symbiotic nitrogen fixation by *Frankia* and woody host plants *Casuriana* and *Alnus* species.”

Advisor: Dr. Jian Ding

Concentrations: Microbiology, Plant Physiology.

**1989 Ph.D. Microbiology.**

Chinese Academy of Sciences (CAS), Shenyang, China.  
Dissertation: “Interaction of *Bradyrhizobium japonicum* with soybean host: Identification of genes of *B. japonicum* responsible for the synthesis of surface lipopolysaccharides that affect infectivity.”

Advisor: Dr. Xianwu Zhang

Concentrations: Molecular genetics of microbe-plant interactions.

**2001 M.S. Computer Sciences.**

University of Miami, Miami, Florida.  
Advisor: Dr. Victor Milenkovic  
Concentrations: Computational Biology.

**PROFESSIONAL EXPERIENCES:**

2013-present **Professor (tenured).** Department of Biomedical Science, Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL.

Sept. 2017-present **Faculty Ombudsman of College of Medicine, Director of Faculty Development for the Department of Biomedical Science.** Florida Atlantic University, Boca Raton, FL.

Mar. 2016-Sept. 2017 **Interim Associate Dean for Faculty Affairs and Faculty Ombudsman.** Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL.

Sept. 2015-Mar. 2016 **Interim Assistant Dean for Faculty Affairs and Faculty Ombudsman.** Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL.

2016-2019 **Member** of i-HeAL Program at Healthy Aging Pillar.

- 2019-present **Member** of FAU Institute for Human Health and Disease Intervention (I-HEALTH).
- 2007-2013 **Associate Professor (tenured)**. Department of Biomedical Science, Charles E. Schmidt College of Medicine (formally C.E.S. College of Biomedical Science), Florida Atlantic University, Boca Raton, FL.
- 2010-2013 **Director** of Year 1 Medical Course “Fundamentals of Basic Science”.
- 2002-2007 **Assistant Professor**. Department of Biomedical Science, Charles E. College of Biomedical Science (Prior to 2006: C.E.S. College of Science), Florida Atlantic University, Boca Raton, FL.
- 2002-present **Member**. Center for Molecular Biology and Biotechnology, Florida Atlantic University, Boca Raton, FL.
- 2003-2010 **Assistant (2003-2007) and Associate Professor (2007-2010), (secondary)**. Department of Biological Sciences, Florida Atlantic University, Boca Raton, FL.
- 2003-2010 **Assistant (2003-2007) and Associate Professor (2007-2010), (secondary)**. Department of Chemistry and Biochemistry, Florida Atlantic University, Boca Raton, FL.
- 2007-2010 **Associate Professor (adjunct)**. Department of Biochemistry and Molecular Biology, University of Miami Miller School of Medicine, Miami, FL.
- 2001-2002 **Instructor (adjunct)**. Mos Institute of Technology, Philadelphia, PA.
- 2000-2002 **Staff Scientist**. DuPont Central Research and Development. Wilmington, DE.
- 1996-2000 **Research Assistant Professor**. Department of Biochemistry and Molecular Biology, University of Miami School of Medicine, Miami, FL.
- 1995-1996 **Postdoctoral Associate**. Division of Molecular Psychiatry, Yale University School of Medicine. (Advisor: Dr. Ronald S. Duman).
- 1991-1995 **Postdoctoral Fellow**. Department of Biochemistry, University of Connecticut Health Center. (Advisor: Dr. Murray P. Deutscher).
- 1989-1991 **Assistant Researcher**. Department of Microbiology, Institute of Applied Ecology, Chinese Academy of Sciences (CAS).
- 1985 **Research Associate**. Department of Microbiology, Institute of Forestry and Soil Sciences, Chinese Academy of Sciences (CAS).

### **AWARDS AND HONORS:**

- 2008 Nominee for Researcher of the Year Award, Florida Atlantic University
- 2001 Way-To-Go Award, DuPont Central Research and Development.
- 1990 Research Excellence Award, Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang, China.
- 1989 Presidential Distinguished Dissertation Award, Chinese Academy of Sciences.
- 1988 Outstanding Young Investigator Award, Joint Symposium of the 4<sup>th</sup> International Union of Biochemistry and Molecular Biology (IUBMB) and the 6<sup>th</sup> Chinese Biochemistry Conference, Nov. 6-11, 1988, Nanjing, China.
- 1986-1989 Research Assistantship, Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang, China.

- 1982-1984 Research Assistantship, Institute of Forestry and Soil Sciences, Chinese Academy of Science.
- 1982 Award for Outstanding Undergraduate Research, Liaoning University, China.
- 1978-1982 Undergraduate Scholarship, Liaoning University, Shenyang, China.

## **RESEARCH:**

### **GRANTS AND CONTRACTS:**

- 1990-1992 **Principal Investigator**, New Investigator Award, National Scientific Foundation, China: "Structure of *Rhizobium fredii* surface polysaccharides and their roles in infection of soybean." RMB 35,000.
- 1992-1995 **Key Personnel**, NIH 7R01GM016317-28: "Enzymology and control of amino acid activation", PI: Dr. Murray P. Deutscher.
- 1996-2000 **Key Personnel**, NIH 5R01GM016317-32: "Enzymology and control of amino acid activation", PI: Dr. Murray P. Deutscher.
- 2003-2005 **Principal Investigator**, Contract DAAD13-02-C-0080 Subtask 15, funded by US Army Research, Development & Engineering Command (RDECOM) through University of South Florida Center for Biological Defense: "Genomics study of enterobacterial BT agents: identification of genes and sequence tags as targets for novel diagnosis and therapy." \$124,527.00 (Direct: \$90,090.00 including subcontract of \$24,999 to Dr. L. Liao; Indirect: \$34,437.00).
- 2004 **Principal Investigator**, New Project Development Award, Florida Atlantic University: "RNA metabolism in *Mycoplasma*." \$15,000.00 (Direct \$15,000.00).
- 2006-2008 **Principal Investigator**, Contract W911SR-06-C-0023 Principal Task Area 3, funded by US Army Research, Development & Engineering Command (RDECOM) through University of South Florida Center for Biological Defense: "Identification of genes essential for growth and prediction of antimicrobial targets in *Yersinia pestis*." \$226,483 (Direct: \$164,945; Indirect: \$61,538). No-cost extension to Aug. 2008.
- Jun. 8, 2005-May 31, 2009 **Principal Investigator**, Research Project in NIH SCORE Program S06GM073621 (Program Director: Dr. Gregg Fields): "RNA damage and quality control under oxidative stress." \$827,610.00 (Direct: \$600,000.00; Indirect: \$227,610.00). No-cost extension to May 2010.
- Sept. 26, 2007-Sept. 25, 2009 **Principal Investigator**, Contract W911SR-07-C-0084 Subagreement #6415-1012-61-A, funded by US Army Research, Development & Engineering Command (RDECOM) through University of South Florida Center for Biological Defense: "Identification of genes essential for growth and prediction of antimicrobial targets in *Yersinia pestis*." \$168,126 (Direct: \$120,071; Indirect: \$48,055). Awarded, pending for laboratory inspection. No-cost extension to Sept. 2010.
- Sept. 1, 2011-Aug. 31, 2012, **Principal Investigator**, Florida Dept. of Health and the James & Ether King Biomedical Research Program Bridge Fund grant: "RNA quality control against oxidative damage". \$103,500 (Direct: \$90,000; Indirect: \$13,500).
- Sept. 1, 2011-Aug. 31, 2014, NCE Aug. 31, 2015. **Principal Investigator**, NIH/NIGMS R15 grant: "RNA quality control against oxidative damage". \$317,900 (Direct: \$220,000; Indirect: \$97,900).

May 16, 2013-May 15, 2014, **Principal Investigator** (Co-PI: Diane Baronas-Lowell, Herbert Weissbach), FAU HARI SG, \$20,000.

Apr. 9, 2014-Apr. 8, 2015, **PI Sponsor** for FAU Undergraduate Research Grant, \$920.

May 1, 2014-Apr. 31, 2016, **Co-Investigator** (PI: Y. Shibata), FAU Research Seed Grant, \$25,000.

Jun. 1, 2014-May 31, 2017 **Co- Investigator** (PI: Y. Shibata), NIH/NIAID R15 grant, \$380,552.

May 1, 2015-Oct. 31, 2018 **Principal Investigator**, Contract #AGR-15-47, TA Diagnostics, LLC. “Tests for feasibility of bacterial identification using a proprietary medical device”. \$149,831.

Jan. 15, 2016-Dec. 31, 2019 **Principal Investigator**, Subcontract to Florida Atlantic University, NIH R01 (PI: Dr. Jean Schaffer, Washington University St Louis) “Tissue Responses to Metabolic Stress”. Subcontract fund is \$80,752.

Feb. 17, 2016-Jun. 30, 2016, **PI Sponsor** for FAU Undergraduate Research Grant, \$1,000.

Sept. 1, 2017-Aug. 31, 2018, **Principal Investigator**, FAU Institute for Healthy Aging and Lifespan Studies (I-HeAL) Pilot Award, “RNA oxidation as a potential cause and new biomarker for age-related neurodegeneration”. \$30,000.

Jan. 2018-Dec. 2018, **PI Sponsor** for FAU College of Medicine Graduate Research Grant, \$5,000.

Aug. 1, 2018-Sept. 2, 2019, **Principal Investigator**, TA Diagnostics, LLC Contract # SP18-495 Li (PI) (terminated 12/31/2018) “Tests for feasibility of bacteria identification using a proprietary medical device”. \$89,388.

Oct. 1, 2018 – Sept. 30, 2021, **Co-Investigator** (PI: Xingquan Zhu, FAU College of Engineering) NSF MRI Award #1828181: “Acquisition of Artificial Intelligence & Deep Learning (AIDL) Training and Research Laboratory”. \$652,850.

Apr. 1, 2019 – June 30, 2021, **Co-Investigator** (PI: Nancy Jones, FAU College of Science) FAU Seed Grant for Initiative to Stimulate Extramural Research. \$ 23,400.

Apr. 2, 2019-April 1, 2020, **Principal Investigator**, NIH Alzheimer Disease Sequence Project (ADSP) data use agreement. \$0 (for data usage only).

Sept. 28, 2020-Sept. 27, 2021, **Principal Investigator**, “Biorepository: Study for Brain Health and Neurodegeneration”, converted to maintain biorepository samples without additional funding from FAU I-HeAL Pilot Award (ZL as PI), “RNA oxidation as a potential cause and new biomarker for age-related neurodegeneration”.

#### **PENDING GRANTS AND CONTRACTS:**

**Principal Investigator**, NIH R21, “Pathological mutations of human PNPase”. Date of Submission: June 16, 2020.

**Co-Investigator** (PI: Dr. Nancy Jones, FAU College of Science), NIH R15, “Developing Social Attachment and Social Threat Systems Across the first two years”. Date of Submission: June 25, 2020.

#### **RESEARCH INFRASTRUCTURE AND RESOURCES:**

2008, as Chair of Research Committee, College of Biomedical Science, led the application of equipment fund and was awarded \$500,000 by Florida Department of Health for purchasing the FACSARIA cell sorting system in the College.

#### **INVENTIONS:**

1. **Li, Z.** (Inventor) "Use of unique sequence tags in the detection of bacteria". Disclosure accepted by FAU Office of Technology Transfer on June 17, 2005.

### **INVITED PRESENTATIONS:**

1. Joint Symposium of the 6<sup>th</sup> Chinese Biochemical Conference and the 4<sup>th</sup> Meeting of International Union of Biochemistry and Molecular Biology (IUBMB), Nov. 11-14, 1988, Nanjing, China. "Tn5 mutagenesis of *Rhizobium fredii* SC2 and characterization of exopolysaccharide-deficient mutants for nodulation of soybean".
2. Los Alamos National Laboratory, Oct. 20, 1999. Los Alamos, NM. "Genomics studies of RNA processing in bacteria".
3. Mississippi State University, March 5, 2000. Starville, MS. "Bacterial RNA metabolism".
4. ISIS Pharmaceuticals, July 11, 2000. Carlsbad, CA. "RNA Processing in *E. coli*".
5. Pioneer Hi-Bred International, Inc, June 3, 2001, Johnston, IA. "Genomic data analysis and management".
6. DuPont Toxicology Division, May 9, 2002, Newark, DE. "Leveraging Bioinformatics Support to Biotechnology Research and Development".
7. Department of Biomedical Science Brown Bag Meeting, Florida Atlantic University, Nov. 15, 2002. "Non-coding RNAs".
8. Center for Molecular Biology and Biotechnology, Florida Atlantic University, Jan. 22, 2003. "Non-coding RNA Metabolism".
9. Department of Chemistry and Biochemistry, Florida Atlantic University, Sept. 12, 2003. "RNA metabolism and Quality Control under Oxidative Stress".
10. Department of Biomedical Science Brown Bag Meeting, Florida Atlantic University, Sept. 17, 2003. "RNA Degradation under Oxidative Stress".
11. Biodefense Roundtable, Dec. 10, 2003. Boca Raton, FL. "Control of Bacterial Bioterrorism Agents".
12. University of Delaware, Delaware Biotechnology Institute, July 6, 2004. Newark, DE. "RNA Metabolism and Quality Control".
13. The Fourth Annual Emerging Information Technology Conference (EITC04). Oct. 28, 2004, Princeton, NJ. "Genomic analysis of RNA processing".
14. Medical College of Georgia, Feb. 11, 2005. Augusta, GA. "RNA processing and damage-induced degradation in *E. coli*".
15. Sixth Annual Meeting of the Consortium of Biodefense Researchers. May 31-June 3, 2005, Clearwater, Florida. "Identification of essential genes of *Yersinia pestis* as possible drug target by genomic analysis".
16. Florida International University, November 8, 2005. Miami, FL. "RNA metabolism in *Escherichia coli*".
17. Seventh Annual Meeting of the Consortium of Biodefense Researchers. June 1, 2006, Clearwater, Florida. "Identification of essential genes in bacterial bioterrorism agents and prediction of antimicrobial targets".
18. Florida Atlantic University Biomedical Science Research Day, July 31, 2006. Boca Raton, Florida. "RNA damage and surveillance under oxidative stress".

19. University of Miami School of Medicine, April 20, 2007, Miami, Florida. “RNA damage and surveillance under oxidative stress”.
20. Invited speaker in Enzyme Engineering Conference, July 25, 2007, Dalian, China. “Ribonucleases (RNases): Roles in RNA Metabolism and Application in Biotechnology”.
21. Invited speaker in PepCon-2008, April 22, 2008 Shenzhen, China, Session 19, “Bioinformatics and Structural Proteomics”, Forfeited.
22. Shantou University, April 26, 2008, Shantou, China. Forfeited.
23. Applied Life Sciences, Niigata University of Pharmacy and Applied Life Sciences, April 19, 2008, Niitsu, Niigata, Japan. Forfeited.
24. University of Miami Miller School of Medicine, April 16, 2010, Miami, Florida. “RNA quality control in *E. coli* under oxidative stress”.
25. University of Miami Miller School of Medicine, July 8, 2010, Miami, Florida. “Identification of *Yersinia pestis* genes essential for surviving mammalian macrophage like cells by a genomic approach”.
26. University of Colorado Denver, Department of Chemistry, February 26, 2021, Denver, Colorado (tentatively setup as virtual visit). “RNA damage and human diseases”.

## **INSTRUCTION:**

### **COURSES DEVELOPED / TAUGHT:**

#### **Medical Courses**

1. **(University of Miami School of Medicine)** Instructor for Medical Biochemistry and Molecular Biology Group Discussions (1st year medical students). 1997-1999, 2 hours each year.
2. **(Florida Atlantic University)** Course Director of Fundamental Biomedical Science 1 (2010-2013).
3. **(Florida Atlantic University)** Lecturer for Molecular Genetics Section of “Molecular Basis of Life” and Microbiology Section of “Host Defense and Pathogens” (2004-2009 at Regional Campus of UMMSM), and Fundamental Biomedical Science (2010-present at FAU College of Medicine).
4. **(Florida Atlantic University)** Co-author of 4 Problem Based Learning cases. Facilitator of PBL Block 1 in the course Fundamental Biomedical Science (2005-present).
5. **(Florida Atlantic University)** Facilitator of IQ in the course Pathology and Therapeutics I (2013-2014). Facilitator of SLIQ in the course Pathology and Therapeutics III (2019-present), and Facilitator of SLIQ in the course Pathology and Therapeutics IV (2017-present).

#### **Graduate Courses (Florida Atlantic University)**

6. Course solely developed and taught: Biomedical Data and Informatics. BSC6459, 3 credits. (2015-present, was a required course for Biomedical Science MS Program during 2015-2019).
7. Course solely developed and taught: RNA Biology and Diseases. 3 credits, 45 lecture hours, 2005, 2007. PCB6525: graduate students; PCB4521: senior undergraduate students. This course was offered every other year during 2002-2010.

8. Course Director (2010-2011) and Instructor (2007-2016): Core Graduate Course: "Macromolecules and Human Diseases". 3 credits.
9. Lectures in the course Fundamental Topics in Human Health (FTHH, later changed to BCTA, 2017-present): 3 lectures (1.5 hr each) in molecular basis of life and bioinformatics.
10. Lecture in the course Integrative Biology I (2012-2019): 1.5 hour lecture each year.
11. Lecture in the course PCB 6933 Topics in Biomedical Sciences I, 2004-2008. Gave 3 lecture hours each year.
12. Coordinator of Journal Club: Center for Molecular Biology and Biotechnology/Biomedical Science, Coordinator: 2003-2004. Joint Coordinator in 2005-2007.
13. Coordinator of Seminar: jointly sponsored by Biomedical Science and Center for Molecular Biology and Biotechnology, 2007-2008.
14. Instructor for comprehensive exam for M.S. students: provided exam topics and evaluations for Mary Espinosa, Samantha Matthews, Ron Fague, Odette Gordon, Brian Suarez, Alina Driver, Jasmine Prchal, Morolake Amole.

#### **Undergraduate Courses (Florida Atlantic University)**

15. Instructor of PCB 4930 Medical Scholar Program (7 students) for the Biochemistry and Molecular Genetics sections of Molecular Basis of Life. The students received 31 lectures from Miami. Fall 2003.

#### **Professional Training Courses (Mos Institute of Technology, Philadelphia, PA)**

16. Instructor of Bioinformatics Training Courses. 2001-2002, 2 sessions, gave 54 lecture hours in each session. Most of the 47 students became Certified Bioinformatics Specialist (CBS) and Certified Bioinformatics Master (CBM) from National Bioinformatics Institute.

#### **RESEARCH TRAINING (Florida Atlantic University):**

##### **Graduated Thesis/ Dissertation Students**

1. Maureen S. Lalonde: M.S. in Biomedical Sciences, FAU. Graduated in May 2006.
2. Gayatri Kollipara: M.S. Student in Biomedical Sciences, FAU. Graduated in Dec. 2007.
3. Jianan Zhang: M.S. Student in Biomedical Science, FAU. Graduated in Dec. 2007.
4. Jinhua Wu: Ph.D. Student in Integrative Biology, FAU. Aug. 2003-2008.
5. Min Liu: Ph.D. Student in Integrative Biology, FAU. Aug. 2005-2012.
6. Ravi Kumar Alluri: Ph.D. Student in Integrative Biology, FAU. Aug. 2007-2012.
7. Delaram Pourkalbassi Esfahani, MS Student in Biomedical Science, Spring 2014 - Summer 2016.
8. Sulochan Malla: Ph.D. Student in Integrative Biology, FAU. Aug. 2012-Dec. 2019.
9. Alexander Kwakye: M.S. Student in Biomedical Science, FAU, Aug. 2018-Aug. 2020.

##### **Post-Docs (Florida Atlantic University)**

10. Shaohui Wu: Ph.D.: Post-Doctoral Associate. 2003 – 2004.
11. Zhe Jiang, Ph.D.: Post-Doctoral Associate. Dec. 2005 – July 2006.
12. Yang Jiang, Ph.D.: Post-Doctoral Associate. Apr. 2007-Oct. 2007.
13. Sandhya Darsi, Ph.D.: Postdoctoral Associate. Aug. 2011-2012.



**Laboratory Members and Trainees (Florida Atlantic University)**

14. Xin Gong: Research Associate and Lab Manager. 2002-2010.
15. Edna Gamliel: Research Associate. Aug.-Dec., 2007.
16. Gayatri Kollipara: Research Associate. 2008-2010.
17. Haiyun Fu: Research Associate. 2013-2019.

**Thesis/Dissertation Committee (Florida Atlantic University, University of Miami)**

Served the committees of 20 Ph.D. and 2 M.Sc. students.

**Research Students (Florida Atlantic University)**

Instructed directed independent study or research rotation of 25 undergraduate students, 7 high school students, 3 Master of Science students, 4 Ph.D. Students, 5 MD students.

**SERVICE:****GRANT / MANUSCRIPTS:**

- 1989-present *Ad hoc* reviewer for *Journal of Microbiology*, *The FASEB Journal*, *European Journal of Biochemistry*, *Journal of Biological Chemistry*, *Journal of Molecular Biology*, *Microbiology*, *Molecular Microbiology*, *Nucleic Acid Research*, *RNA*, *PNAS*, *Oligonucleotides*, *Protein and Peptide Letters*, *Journal of Neurochemical Research*, *Free Radical Biology & Medicine*, *Current Cellular Biochemistry*, *BioTechniques*.
- 2004-present Grant review panel for *Alzheimer's Association*.
- 2012-present Grant Reviewer, *National Science Foundation of China*, microbiology and biochemistry sections.

**EDITORIAL SERVICES:**

- 1990-1992 Associate Editor, *Journal of Microbiology*.
- 1992 Associate Editor, *Biotechnology Development Policies in Liaoning Province*, China, Liaoning People's Press.
- 1993 Editorial Board, *Studies on Soil Microorganisms*, Shenyang Academic Press, ISBN 7-80556-725-5/S.7, Shenyang, China.
- 2004 Editorial Board, *Studies on Terrestrial & Marine Microorganisms*, ISBN 7-5381-4123-5. Liaoning Science and Technology Press, Shenyang, China.
- 2011-2016 Editorial Board, *Current Cellular Biochemistry*.
- 2013-2014 Editorial Board, *Frontiers in Genomic Physiology*
- 2016-present Editorial Board, *BAOJ Microbiology*
- 2016-present Editorial Board, *The Scientific Pages of Biomedical Research*

**MEMBERSHIPS / SOCIETY SERVICES:**

- 1985-1987 Founder & Chairman, Youth Scientific Association of the Institute of Forestry and Soil Science, Chinese Academia of Sciences, Shenyang, China.
- 1990-1992 Board of Directors, Liaoning Microbiology Society, China.
- 2001 Invited Member of Science and Technology Delegation, organized by Liaoning Province and Chinese Ministry of Science and Technology, July 2001.

- 2001-2014 Board Member, Vice President and Financial Officer of the Association of Chinese Bioinformaticians, USA.
- 2002 Coordinator of Sponsorship for the Second Chinese Conference on Bioinformatics, July 2002, Beijing, China.
- 2004 Chair of Bioinformatics Session and Member of Program Committee, Enhanced Information Technology Conference 04, Princeton, NJ, Oct. 2004.
- 2004-present Member, The RNA Society.
- 2005-present Member, American Society for Biochemistry and Molecular Biology (ASBMB).
- 2010-present Life-Time Member, Overseas Chinese Society for Microbiology (Sino-Micro).
- 2012 Session Chair, 3<sup>rd</sup> World DNA and Genome Day. Xi'an, China, Apr. 25-28, 2012.
- 2017 Organizing Committee Member, Co-Chair of Day 1 Session, and Workshop Conductor, Molecular Biology 2017, Philadelphia, USA, August 31-September 01, 2017.
- 2018 Representative of Co-Host Organization, BIT's 11<sup>th</sup> Annual World Protein & Peptide Conference (PepCon-2018 <http://www.bitcongress.com/pepcon2018/>) and BIT's 6th Annual Conference of AnalytiX-2018 (AnalytiX-2018 <http://www.bitcongress.com/analytix2018/>), Miami, FL, March 26-28, 2018.

**COMMITTEES:**

**DuPont Toxicology:** Member of Scientist Search Committee, 2001-2002.

**Florida Atlantic University: 2002-present**

**Department of Biomedical Science:** (1) Member (2003-2005) and Chair (2005-2006), Research Committee; (2) Member, Faculty Search Committee (2003-2004, 2008, 2010); (3) Member, Promotion and Tenure Committee (2006-2008).

**Charles E. Schmidt College of Medicine (prior to 2010: CES College of Biomedical Science):** (1) Chair, Promotion and Tenure Committee (2007-2009; 2013-2016); (2) Chair (2006-2007) and Member (2007-), Research Committee; (3) Member, Planning Committee for developing the new College of Biomedical Sciences, and Co-Chair, Development Subcommittee of the Planning Committee (2005-2006); (4) Member, Committee for Medical Curriculum (2006-2007, 2010); (5) Member, Research Day Committee (2009 for student poster evaluation and award, 2010 for planning); (6) Member, Faculty Assembly Bylaws Revision Committee (2009-2010); (7) Member, Committee for Medical Students (2010); (8) Bridge Fund Committee (2010); (9) Secretary, Faculty Assembly (2012-2014). (10) Vice Chair, Faculty Assembly (2014-2016). (11) Search Committee for Chair of Biomedical Science Department (2014-2015); (12) Faculty Satisfaction Taskforce (2014-2015); (13) Graduate Studies Taskforce (2014-present); (14) College Marshal of FAU Commencement Program (2003-present).

**Charles E. Schmidt College of Science:** Member, Faculty Computing Committee, Charles E. Schmidt College of Science (2004-2007). Member, Executive Committee for Center of Molecular Biology and Biotechnology (2008-present).

**University:** (1) Member, University Promotion and Tenure Committee (2007-2009, 2013-2015); (2) Member, University Research Committee (2006-2007); (3) Member, Institutional Biosafety Committee (2004-2007); (4) Member, Presidential University Diversity Committee (2008-2010); (5) Member of HARI Executive Committee

(Healthy Aging Research Initiative, 2010-2014); (6) Member, University Sustained Performance Evaluation Policy Committee (2014-2016). (7) Member, Radiation Safety Committee (2015-present). (8) Search Committee for Dean of College of Medicine (2016); (9) Member of FAU i-HeAL Executive Committee (2016-2018).

## **PUBLICATIONS:**

### **Articles:**

1. Wu Y, Wang S, Tang G, Xue D, Li H, Xia H and Li Z. (1981). Nitrogen-fixation by root nodules of soybean under various gaseous conditions. *J. Microbiol. (Chaoyang, China)* 1(3):25-29.
2. Li Z, Huang Y and Ding J. (1984) Isolation and infectivity of *Frankia sp.* At4 from root nodules of *Alnus tinctoria*. *J. Microbiol. (Chaoyang, China)* 4(2):29.
3. Li Z. and Ding J. (1985) Isolation and characterization of *Frankia sp.* from root nodules of *Alnus tinctoria* and studies of infectivity. *J. Microbiol. (Chaoyang, China)* 5(3):17-20.
4. Ding J, Shu F, Sun H, Huang Y, Xu Q, Li Z and Li W. (1985) Analysis of cellular chemical compositions of cultured *Frankia* strains. *J. Microbiol. (Chaoyang, China)* 5(4):17-19.
5. Ding J, Zhang Z, Li Z, Shu F, Sun H, Huang Y, Wu Y, Cui Y, Xu Q and Li W. (1986) Studies of *in vitro* nitrogen fixation activity of *Frankia* strains by gas chromatography. *J. Microbiol. (Chaoyang, China)* 6(2):33-34.
6. Ding J, Shu F, Sun H, Huang Y, Xu Q, Li Z, Wu Y, Zhang L, Zhu Y and Li W. (1986) Characterization of infrared absorption spectra of *Frankia*. *Acta Microbiologica Sinica* 26(4):285-289.
7. Li Z and Ding J. (1986) Isolation of *Frankia sp. FSCc01* and nodulation on *Casuarina cunninghamiana*. *Acta Microbiologica Sinica*, 26:295-301.
8. Ding J, Shu F, Sun H, Huang Y, Xu Q, Li Z, Wu Y, Zhang L, Zhu Y and Li W. (1987) Infrared absorption spectra of whole cells of *Frankia*. *J. Microbiol. (Chaoyang, China)* 7(2):6-10.
9. Qi B, Li Z, Wang S and Zhang X. (1987) Study on genetic characteristics of fast-growing *Rhizobium japonicum* from various soil types in Northeastern China. *J. Microbiol. (Chaoyang, China)* 7(Suppl.):27-31.
10. Wang S, Fu P, Lin J, Xue D, Qi B, Li Z, Xu G and Zhang X. (1989) Ecological distribution and characteristics of *Clycine soja* plants and their microsymbiont, *Sinorhizobium fredii* in Northeast China area. *J. Microbiol. (Chaoyang, China)* 9(3):35-40.
11. Zhang L, Li Z and Zhang Q. (1991) Cloning and expression of penicillin G acylase gene in *Bacillus megaterium*. *Chin. J. Biotechnol.* 7:63-72.
12. Kelly KO, Reuven NB, Li Z and Deutscher MP. (1992) RNase PH is essential for tRNA processing and viability in RNase-deficient *Escherichia coli* cells. *J. Biol. Chem.* 267: 16015-16018.
13. Tuohy TMF, Li Z (joint first author), Atkins JF and Deutscher MP. (1994) A functional mutant of tRNA<sup>Arg2</sup> with 10 extra nucleotides in its TFC arm. *J. Mol. Biol.* 235:1369-1376.
14. Li Z. and Deutscher MP. (1994) The role of individual exoribonucleases in processing at the 3' end of *Escherichia coli* tRNA precursors. *J. Biol. Chem.* 269:6064-6071.

15. Li Z and Deutscher MP. (1995) The tRNA processing enzyme RNase T is essential for maturation of 5S RNA. *Proc. Natl. Acad. Sci. U.S.A.* 92:6883-6886.
16. Li Z, Zhan L and Deutscher MP. (1996) The role of individual cysteine residues in the activity of *Escherichia coli* RNase T. *J. Biol. Chem.* 271:1127-1132.
17. Li Z, Zhan L and Deutscher MP. (1996) *Escherichia coli* RNase T functions *in vivo* as a dimer dependent on Cysteine 168. *J. Biol. Chem.* 271: 1133-1137.
18. Li Z and Deutscher MP. (1996) Maturation pathways for *E. coli* tRNA precursors: a random multienzyme process *in vivo*. *Cell* 86:503-512.
19. Fitzgerald LR, Li Z, Machida CA, Fishman PH and Duman RS. (1996) Adrenergic regulation of ICER (inducible cyclic AMP early repressor) and  $\beta$ 1-adrenergic receptor gene expression in C6 glioma cells. *J. Neurochem.* 67:490-497.
20. Li Z, Vaidya VA, Alvaro JD., Iredale PA, Hsu R, Hoffman G, Fitzgerald L, Curran PK., Machida CA., Fishman PH., Duman RS. (1998) Protein kinase C-mediated down-regulation of beta1-adrenergic receptor gene expression in rat C6 glioma cells. *Mol. Pharmacol.* 54: 14-21.
21. Cheng ZF, Zuo Y, Li Z, Rudd KE and Deutscher MP. (1998) The *vacB* gene required for virulence in *Shigella flexneri* and *Escherichia coli* encodes the exoribonuclease RNase R. *J. Biol. Chem.* 273:14077-14080.
22. Li Z, Pandit S and Deutscher MP. (1998) 3' exoribonucleolytic trimming is a common feature of the maturation of small, stable RNAs in *Escherichia coli*. *Proc. Natl. Acad. Sci. U.S.A.* 95:2856-2861.
23. Li Z, Pandit S and Deutscher MP. (1998) Polyadenylation of stable RNA precursors *in vivo*. *Proc. Natl. Acad. Sci. U. S. A.* 95:12158-12162.
24. Li Z, Pandit S and Deutscher MP. (1999) Maturation of 23S ribosomal RNA requires the exoribonuclease RNase T. *RNA* 5:139-146.
25. Li Z, Pandit S and Deutscher MP. (1999) RNase G (CafA protein) and RNase E are both required for the 5' maturation of 16S ribosomal RNA. *EMBO J.* 18:2878-2885.
26. Deutscher MP and Li Z. (2001) Exoribonucleases and their multiple roles in RNA metabolism. *Prog Nucleic Acid Res Mol Biol.* 66:67-105.
27. Li Z and Deutscher MP. (2002) RNase E plays an essential role in the maturation of *Escherichia coli* tRNA precursors. *RNA* 8:97-109.
28. Li Z, Reimers S, Pandit S and Deutscher MP. (2002) RNA quality control: degradation of defective transfer RNA. *EMBO J.* 21:1132-1138.
29. Li Z, Gong X, Joshi VH and Li M. (2005) Co-evolution of tRNA 3' trailer sequences with 3' processing enzymes in bacteria. *RNA* 11:567-577.
30. Li Z, Wu J and DeLeo CJ. (2006) RNA damage and surveillance under oxidative stress. *IUBMB Life.* 58: 581-588.
31. Gong X, Tao R, Li Z. (2006) Quantification of RNA damage by reverse transcription polymerase chain reactions. *Anal. Biochem.* 357:58-67.
32. Liao L, and Li Z. (2007) Correlation between Gene Silencing Activity and Structural Features of Antisense Oligodeoxynucleotides and Target RNA. *In Silico Biology* 7:0036.

33. Tsuji S, Yamashita M, Nishiyama A, Shinohara T, Li Z, Myrvik QN, Hoffman DR, Henriksen RA and Shibata Y. (2007) Differential structure and activity between human and mouse intelectin-1: human intelectin-1 is a disulfide-linked trimer, whereas mouse homologue is a monomer. *Glycobiology* 17:1045-1051.
34. Lalonde MS, Zuo Y, Wang J, Gong X, Wu S, Malhotra A and Li Z. (2007) Exoribonuclease R in *Mycoplasma genitalium* can carry out both RNA processing and degradative functions and is sensitive to RNA ribose methylation. *RNA* 13:1957-1968.
35. Wu J and Li Z. (2008) Human polynucleotide phosphorylase reduces oxidative RNA damage and protects HeLa cell against oxidative stress. *Biochem Biophys Res Commun.* 372:288-292.
36. Wu J, Jiang Z, Liu M, Gong X, Wu S, Burns CM and Li Z. (2009) Polynucleotide Phosphorylase Protects *Escherichia coli* against Oxidative Stress. *Biochemistry* 48:2012–2020.
37. Li Z. and Deutscher MP. (2009) Analyzing the decay of stable RNAs. *Methods in Enzymology*, 447:31-45.
38. Bartra SS, Gong X, Lorica CD, Jain C, Nair MKM, Schifferli D, Qian L, Li Z, Plano GV and Schesser K. (2012) The outer membrane protein A (OmpA) of *Yersinia pestis* promotes intracellular survival and virulence in mice. *Microbial Pathogenesis* 52:41-46.
39. Liu M, Gong X, Alluri RK, Wu J, Sablo T and Li Z. (2012) Characterization of RNA damage under oxidative stress in *Escherichia coli*. *Biol. Chem.* 393:123-132.
40. Alluri, RK and Li, Z. (2012) A novel one-step mechanism for tRNA 3' end maturation by the exoribonuclease RNase R of *Mycoplasma genitalium*. *J. Biol. Chem.* 287: 23427-23433.
41. Li Z, Malla S., Shin B and Li J (2014) Battle against RNA oxidation: molecular mechanisms for reducing oxidized RNA to protect cells. *WIREs RNA* 5:335-46.
42. Qian L, Zhang W and Li Z (2014) Essential Gene Identification for a Microarray Data of *Yersinia Pestis 2014 IEEE 14th International Conference on Bioinformatics and Bioengineering*. Pages:185 – 190.
43. Rehman O, Zhuang H, Muhamed A, Ibrahim A, Li Z (2019) Validation of miRNAs as Breast Cancer Biomarkers with a Machine Learning Approach. *Cancers (Basel)* 11(3):431.
44. Louis P, Mercer B, Cirone AM, Johnston C, Lee ZJ, Esiobu N, Li Z, Wei J, Dorey CK, Shibata Y and Nan C (2019) Dietary chitin particles, “1 mimetic fungi”, ameliorate colitis in TLR2/CD14- and sex- dependent manners. *Infect Immun.* 23;87(5): e00006-19.
45. Schesser K, Bartra SS, Lorica CD, Qian L, Gong X, Bahnan X, Barreras H, Jr., Hernandez R, Li Z and Plano G (2019) Chromosomally-encoded *Yersinia pestis* type III secretion effector proteins promote infection in cells and in mice. *Front Cell Infect Microbiol.* 9(23):1-9.
46. Malla S. and Li Z (2019) Functions of Conserved Domains of Human Polynucleotide Phosphorylase on RNA Oxidation. *Insights Biomed Res.* 3: 62–67.

#### Book Chapters:

1. Ding J, Zhang Z, Li Z, Shu F and Cui Y. (1988) Nitrogen fixation by free-living *Frankia* strains analyzed by gas chromatography. In *Special Topics of Analytical Microbiology*, Eds. Guangsheng Cheng, Houchu Zhu, Fang Zhou, Academic Press, Beijing. Page 162-164.
2. Wang S, Lin J, Li Z, Xue D, Qi B, Xu G and Zhang X. (1992) Symbiotic nitrogen fixation resources: a study on *Sinorhizobium fredii* and *Bradyrhizobium japonicum* and their

- applications. In *The nitrogen fixation and its research in China*, Ed. Guo-Fan Hong, Springer-Verlag, Berlin Heidelberg. Page 487-499.
3. Ding J, Zhang Z, Shu F, Sun H, Huang Y, Xu Q, Li W, Li Z, Cui Y, Zou H, Wu Y, Zhang D and Li Y. (1992) Studies on the symbiotic nitrogen-fixing actinomycete *Frankia* in China. In *The nitrogen fixation and its research in China*, Ed. Guo-Fan Hong, Springer-Verlag, Berlin Heidelberg. Page 555-566.
  4. Wang S, Li Z, Cui Y and Zhang X. (1993) Genetic studies of symbiotic nitrogen fixation and applications in agricultural development in China. In: *Studies on Soil Microorganisms*, Ed. Xianwu Zhang, Shenyang Academic Press, Shenyang, China. Page 130-138.
  5. Li Z, Wang S, Zhang Q and Zhang X. (1993) Studies on the molecular mechanism of symbiotic nodulation of *Rhizobium fredii* and soybean. In: *Studies on Soil Microorganisms*, Ed. Xianwu Zhang, Shenyang Academic Press, Shenyang, Page 156-177.
  6. Ding J, Zhang Z, Shu F, Sun H, Huang Y, Xu Q, Li W, Li Z, Wu Y, Cui Y, Zhang D, Li Y, Zou H and Hermann W. (1993) Studies on symbiotic nitrogen fixation by the actinomycete *Frankia* and non-legume plants. In: *Studies on Soil Microorganisms*, Ed. Xianwu Zhang, Shenyang Academic Press, Shenyang, China. Page 184-195.
  7. Li Z, Wang J, Li X, Wang S, Zhang W, Lin J, Xue D, Xu G and Zhang X. (1993) Analysis of the composition of *Rhizobium fredii* exopolysaccharides. In: *Studies on Soil Microorganisms*, Ed. Xianwu Zhang, Shenyang Academic Press, Shenyang, China. Page 254-259.
  8. Li Z, Wang S, Zhang Q and Zhang X. (1993) Identification of bacterial plasmids. In: *Studies on Soil Microorganisms*, Ed. Xianwu Zhang, Shenyang Academic Press, Shenyang, China. Page 561-564.
  9. Li Z, Wang S, Zhang Q and Zhang X. (1993) Transposon Tn5 mutagenesis and construction of exopolysaccharide deficient mutants of *Rhizobium fredii*. In: *Studies on Soil Microorganisms*, Ed. Xianwu Zhang, Shenyang Academic Press, Shenyang, China. Page 565-573.
  10. Wang S, Li Z, Cui Y, Hou Y, Li J, Zhang X. (1994) Application of microbial genetics in the development of agriculture. In *Current perspectives in microbial genetics*, Eds. Zhuji Sheng and Yongqing Chen, Fudan University Press, Shanghai, China. Page 217-222.
  11. Wang S, Fu P, Lin J, Xue D, Qi B, Li Z, Xu G, Zhang X. (2004) Ecological distribution and characteristics of *Glycine soja* plants and their microsymbiont *Sinorhizobium fredii* in China. In *Studies on Terrestrial & Marine Microorganisms*, Eds. Wang S, Liaoning Science and Technology Press, Shenyang, China. Page 148-152.
  12. Li Z. and Deutscher M.P. (2004) Endoribonucleases and exoribonucleases. In *Escherichia coli and Salmonella: Cellular and Molecular Biology*, the EcoSal Edition, Chapter 4.6.3 (<http://www.ecosal.org/ecosal/index.jsp>). American Society for Microbiology.
  13. Li Z. and Kollipara, G. (2007) RNA metabolism and genetic diseases. In *Current Topics in Human Genetics: Studies of Complex Diseases*. Chapter 21, Eds. Deng, H, Shen, H, Liu, Y. and Hu, H, World Scientific Publishing, Toh Tuck Link, Singapore, Page 581-615.
  14. Li Z. (2011) Pre-tRNA and Pre-rRNA processing in bacteria. In *Encyclopedia of Biological Chemistry 2nd Edition*, Ch. 277. Eds. Lennarz W. and Lane MD, Elsevier, New York, NY.
  15. Li Z. (2020) Pre-tRNA and Pre-rRNA processing in bacteria (update). In *Encyclopedia of Biological Chemistry 3rd Edition*, MRW-BCH3. Elsevier, New York, NY.

**Conference Presentations (\*Platform):**

1. \*Li, Z., Wang, S., Zhang, Q., and Zhang, X. Tn5 mutagenesis of *Rhizobium fredii* SC2 and characterization of exopolysaccharide-deficient mutants for nodulation of soybean. *Joint Symposium of the 6<sup>th</sup> Chinese Biochemical Conference and the 4<sup>th</sup> Meeting of International Union of Biochemistry and Molecular Biology (IUBMB)*, Abstract No. K005. Nanjing, China. Nov. 11-14, 1988.
2. \*Deutscher M.P., Reuven N.B., Kelly K.O. and Li Z. Multiple exoribonucleases and their role in tRNA metabolism. *Keystone Meeting on Nucleases*, Feb. 1992.
3. \*Deutscher M.P., Reuven N.B., Li Z. and Kelly K.O. Multiple exoribonucleases participate in tRNA processing in *E. coli*. *15<sup>th</sup> Int'l tRNA Workshop*, Cap d'Agde, France, May 1993.
4. \*Tuohy T.M.F., Li Z., Atkins J.F. and Deutscher M.P. A functional mutant of tRNA<sup>Arg2</sup> with 10 extra nucleotides in its TFC arm. *15<sup>th</sup> Int'l tRNA Workshop*, Cap d'Agde, France, May 1993.
5. \*Li Z. and Deutscher M.P. The specific role of RNases in 3' tRNA processing. *ASM Conference on the role of RNA decay and processing in biological systems*. Cape Cod, MA, 1994.
6. Li Z., Zhan L. and Deutscher M.P. A cysteine residue required for the activity of *Escherichia coli* RNase T. *ASM Conference on the role of RNA decay and processing in biological systems*. Cape Cod, MA, 1994.
7. \*Li Z. and Deutscher M.P. The specific role of exoribonucleases in the 3' processing of *E. coli* tRNA precursors in vivo. *16<sup>th</sup> Int'l tRNA Workshop*, Madison, WI, May 1995.
8. \*Deutscher M.P., Callahan C., Li Z., Reuven N., Zhang X., Zhou Z. and Zhu L. *E. coli* exoribonucleases and their role in RNA metabolism. *Second Int'l Meeting on Ribonucleases*, 1996, Groningen, Netherlands.
9. Li, Z. and Deutscher, M.P. Maturation of the *Escherichia coli* TyrT transcript: involvement of multiple endo- and exoribonucleases. Abstract No. 593, *17<sup>th</sup> Int'l Congr. of Biochem. Mol. Biol.*, San Francisco, CA, Aug. 24-29, 1997.
10. \*Duman, R.S., Chen, J.S., Li, Z., Kelz, M.B., Zeng, G.O., Picciotto, M.R. and Nestler, E.J. Development of inducible, tissue specific CREB and dominant negative CREB transgenic mice. Abstract No. 164.10, *SFN 27th Annual Meeting*. New Orleans, LA, Oct. 25-30, 1997.
11. Li Z., Pandit, S. and Deutscher M.P. 3' Exoribonucleolytic trimming is a common feature of the maturation of small, stable RNAs in *Escherichia coli*. *Third Annual RNA Society Meeting*, Madison, WI. 1998
12. \*Li Z., Pandit, S. and Deutscher M.P. Maturation and polyadenylation of stable RNA precursors. *FASEB Summer Conference on Mechanism of RNA Maturation and Decay*. July 1998, Portland, OR.
13. \*Deutscher, M.P., Li Z. and Pandit S. RNase G (CafA protein) and RNase E are both required for the 5' maturation of 16S ribosomal RNA. *Fourth Annual RNA Society Meeting*. 1999.
14. Li Z., Pandit, S. and Deutscher M.P. The CafA protein (RNase G) together with RNase E is required for the maturation of 16S rRNA in *Escherichia coli*. *ASBMB 1999*. San Francisco, CA.
15. \*Deutscher M.P., Ghosh, S., Li Z., Pandit, S. and Zuo, Y. Exoribonucleases in RNA processing and decay. *Fifth International Meeting on Ribonucleases*. Warrenton, VA, May 12-16, 1999.

16. \*Li, Z. Pandit S, and Deutscher, M.P. Degradation of denatured tRNA by a poly(A) polymerase-dependent pathway. *Annual Conference on tRNA*. Cambridge, England, April 6-12, 2000.
17. \*Li Z., Pandit, S. and Deutscher M.P. A role for poly(A) polymerase in the degradation of a mutant tRNA in *E. coli*. *Annual Conference on tRNA*. Cambridge, England, April 6-12, 2000.
18. \*Li, Z. and Deutscher, M.P. An Important Role for RNase E in the Maturation of tRNA. *Annual Conference on tRNA*. Cambridge, England, April 6-12, 2000.
19. \*Li Z. and Deutscher M.P. An important role for RNase E in the maturation of tRNA. *Fifth Annual RNA Society Meeting*. Madison, WI, 2000.
20. \*Deutscher M.P., Li Z., Pandit S and Reimer S. RNases in bacterial RNA processing and decay. *FASEB Summer Conference*, Snowmass Village, CO, 2000.
21. Zhongwei Li, John Strobel, Alex van-Duser, Fan Wang, Wen-Ying Wang, Rita Dharmavaram and Pat Wyant. Use of SRS to Integrate and Manage Proprietary or Customized Genomic Data Products. *Techcon 2001*. Hershey, PA, May 6-9, 2001.
22. Li Z., Gong X.. (2003) Identification of non-coding RNAs and function prediction in *Escherichia coli*. *Biotech 2003*. Boca Raton, FL, March 13, 2003.
23. Liao L., Li Z.. (2003) Correlation between antisense activity and secondary structure of oligonucleotide sequences. *Intelligent Systems for Molecular Biology 2003 (ISMB 2003)*. Brisbane, Australia, June 29 to July 3, 2003.
24. Li Z., Wu S. and Gong X. (2004) RNA quality control under oxidative stress in *Escherichia coli*. *FASEB Summer Conference on Post-translational Regulation of Gene Expression and RNA Decay*. Tucson, AZ, June 26 – July 1, 2004.
25. Li Z. and Wu S. (2004) Degradation of oxidatively damaged RNA in *Escherichia coli*. *Ninth RNA Society Meeting*, Madison, WI, June 1-June 6, 2004.
26. \*Li, Z., Joshi, V.H., Li, M. and Gong, X.. (2004) Genomic analysis of RNA processing. *The Fourth Annual Emerging Information Technology Conference (EITC04)*. Princeton, NJ, USA, Oct. 28-29, 2004.
27. Li, Z., Gong, X., Joshi, V.H. and Li, M. (2005) AU-rich elements are selectively conserved in tRNA 3' trailer sequences in bacteria having RNase E. *Tenth RNA Society Meeting*, Banff, Canada, May 24-29, 2005.
28. \*Li, Z., Gong, X., Liao L. and Craig R. (2005) Identification of essential genes of *Yersinia pestis* as possible drug target by genomic analysis. *Sixth Annual Meeting of the Consortium of Biodefense Researchers*. Clearwater, Florida. May 31-June 3, 2005.
29. Li, Z., Gong, X., Liao L. and Craig R. (2005) Identification of unique sequence tags for improved diagnoses of bacterial bioterrorism agents. *Sixth Annual Meeting of the Consortium of Biodefense Researchers*. Clearwater, Florida. May 31-June 3, 2005,
30. Li, Z., Gong, X., Wu, J. and Wu, S. (2005) RNA quality control protects cells against oxidative stress. *FAU Research Day*. Boca Raton, Florida. Oct. 20, 2005.
31. Liao, L. and Li, Z. (2006) Correlation between gene silencing activity and the structural features of antisense oligodeoxynucleotide and target RNA. *24th Scientific Conference of Society for Physical Regulation in Biology and Medicine (SPRBM)*. Cancun, Mexico. Jan. 11-13, 2006.



32. Li, Z. and Xin Gong (2006) Reduced production of full length cDNA from oxidatively damaged RNA. *Annual Meeting of American Society for Biochemistry and Molecular Biology*. San Francisco, CA, April 1-5, 2006.
33. \*Li, Z. (2006) Identification of essential genes in bacterial bioterrorism agents and prediction of antimicrobial targets. *Seventh Annual Meeting of the Consortium of Biodefense Researchers*. Clearwater, Florida. May 30-June 2, 2006.
34. Li, Z., Gong, X., Wu, J., Jiang, Z. and Wu, S. (2006) RNases degrade damaged RNA and protect *Escherichia coli* against oxidative stress. *FASEB Summer Conference on Post-transcriptional Control of Gene Expression: Mechanisms of mRNA Decay*. Snowmass, Colorado. June 24-29, 2006.
35. \*Li, Z., Gong, X., Wu, J., Jiang, Z., Kollipara, G., Bhagavatula, N., Liu, M. and Wu, S. (2006) RNA damage and surveillance under oxidative stress. FAU Biomedical Science Research Day, Boca Raton, Florida. July 31, 2006.
36. \*Li, Z. (2007) Ribonucleases (RNases): roles in RNA metabolism and application in biotechnology. Enzyme Engineering Conference, Dalian, China. July 22-27, 2007.
37. Li, Z. (2007) Ribonucleases: roles in RNA metabolism and application in biotechnology. Proceedings of Enzyme Engineering Conference, China Biotechnology (Suppl.), pp 41-42.
38. Wu, J., Gong, X., Kollipara, G., Wu, S., Liu, M., Jiang, Z., Zhang, J., Jiang, Y., Bhagavatula, N., and Li, Z. (2007) RNA damage and surveillance under oxidative stress. FAU Biomedical Science Research Day, Boca Raton, Florida. Oct. 4, 2007.
39. \*Li, Z. (2008) Genome-wide identification of essential genes in *Yersinia pestis*. The 8<sup>th</sup> Annual Meeting of the Consortium of Biodefense Researchers, Clearwater, Florida, June 11-13, 2008.
40. Gong, X. and Li, Z. (2008) A genomics approach for high-throughput identification of essential genes in *Yersinia pestis* KIM. The 8<sup>th</sup> Annual Meeting of the Consortium of Biodefense Researchers, Clearwater, Florida, June 11-13, 2008.
41. Li, Z. Gong, X., Wu, J. Wu, S. and Jiang Z. (2008) RNA Damage Control. Gordon Research Conference on Post-transcriptional Gene Regulation, The Biology of. Colby College, Waterville, ME, June 29-July 4, 2008.
42. Liu M and Li Z. (2009) RNA damage and degradation under oxidative stress. *FASEB J*. 2009 23:667.1. Experimental Biology 2009, April 18-22, New Orleans, LA. (Refereed on basis of abstract).
43. Li, Z. (2009) Genome-wide identification of essential genes in *Yersinia pestis*. The 9<sup>th</sup> Biodefense Consortium, June 9-10, 2009, Tampa, FL.
44. Alluri, R.K. and Li, Z. (2009) Multiple factors influence tRNA 3' end maturation by RNase R in *Mycoplasma genitalium*. FAU Biomedical Research Day, Boca Raton, Oct. 22, 2009.
45. Liu M and Li Z. (2009) Control of damaged ribosomal RNA under oxidative stress. FAU Biomedical Research Day, Boca Raton, Oct. 22, 2009.
46. Alluri, R.K. and Li, Z. (2010) Multiple factors influence tRNA 3' end maturation by RNase R in *Mycoplasma genitalium*. FAU Graduate Research Day, Boca Raton, Apr. 9, 2010. FAU Graduate Research Day, Boca Raton, Apr. 9, 2010.
47. Alluri, R.K. and Li, Z. (2010) A novel exonucleolytic tRNA processing pathway by RNase R in *Mycoplasma genitalium*. RNA 2010 (RNA Society Meeting 2010), Seattle, WA, June 22-27, 2010. Refereed on the basis of abstract.

48. Louda, D. and Li, Z. (2011) Incorporating Biochemistry into an Integrated Patient-Focused Curriculum. Third International Meeting of Association for Biochemistry Course Directors. April 30-May 4, 2011, Myrtle Beach, SC, USA.
49. Darsi, S. and Li, Z. (2011) On the level and elimination of oxidative stress-induced abasic RNA in *Escherichia coli*. Florida American Society of Microbiology 2011 Annual Meeting, Islamorada, FL. September 23-25, 2011. Refereed on the basis of abstract.
50. Alluri, R.K. Gong, X. and Li, Z. (2011) A novel role of *E. coli* tRNA pseudouridine synthase TruD under oxidative stress. Florida American Society of Microbiology 2011 Annual Meeting, Islamorada, FL. September 23-25, 2011. Refereed on the basis of abstract.
51. Zhongwei Li. (2013) RNA Metabolism and Its Application in Agricultural Biotechnology. The 6<sup>th</sup> World Congress of Industrial Biotechnology (ibio-2013), Nanjing, China, April 24-27, 2013. Refereed on the basis of abstract. Published as abstract.
52. Zhongwei Li. (2013) The Roles and Application of Microbial Ribonucleases in Biotechnology. The 6<sup>th</sup> World Congress of Industrial Biotechnology (ibio-2013), Nanjing, China, April 24-27, 2013. Refereed on the basis of abstract. Published as abstract.
53. Min Liu and Zhongwei Li. (2013) Ribosomal RNA damage and degradation under oxidative stress. College of Medicine Research Day. May 17, 2013. Published as abstract.
54. Cherish Lorica, Sara Schesser Bartra, Wael Bahnan, Lianfen Quian, Xin Gong, Zhongwei Li, Kurt Schesser, Gregory V. Plano. (2013) Characterization of novel chromosome-encoded type III secretion effector proteins of *Yersinia pestis*. Denver, CO, May 18-21, 2013. Refereed on the basis of abstract. Published as abstract.
55. Zhongwei Li. (2012) Control of oxidized rRNA and mRNA in *E. coli* under oxidative stress. RNA Club, Miami, FL. Nov. 14, 2012.
56. Min Liu and Zhongwei Li. (2013) Ribosomal RNA damage and degradation under oxidative stress. College of Medicine Research Day. May 17, 2013. Poster presentation.
57. Zhongwei Li. (2013) Deciphering life and disease at the molecular level and a study of RNA damage". Physics Colloquium Series, FAU Department of Physics, Boca Raton, FL, Sept., 27, 2013.
58. Zhongwei Li (2013) Mechanisms for eliminating oxidized RNA in *E. coli*. RNA Club, University of Miami Miller School of Medicine, Miami, FL, Nov. 18, 2013.
59. D. Mills, N. Martin, G. Rodriguez, and Z. Li. TruD's Effect on RNA Oxidation. FAU Undergraduate Research Symposium, Boca Raton, FL. March 28, 2014. (the team won Undergraduate Research Award at the symposium).
60. S. Malla and Z. Li. "Control of RNA oxidation as a potential novel mechanism for preventing mitochondrial dysfunction. FAU Graduate Research Day April 4, 2014. (The poster presentation was awarded the 3<sup>rd</sup> place in the competition).
61. Sulochan Malla, and Zhongwei Li. "ROLE OF hPNPASE IN REGULATING OXIDIZED RNA". NCI Symposium RNA Biology 2015, March 11-12, 2015, Natcher Conference Center, NIH, Bethesda, Maryland. (Refereed abstract).
62. Sulochan Malla, and Zhongwei Li. "ROLE OF hPNPASE IN REGULATING OXIDIZED RNA". FAU Graduate and Professional Research Day, March 13, 2015, Boca Raton, Florida. (Non-refereed abstract, poster presentation).

63. Daniel Bryan, Delaram Pourkalbassi Esfahani, Zhongwei Li. "Detection of oxidized RNA in living mammalian cells". FAU Medical Student Research, Scholarship and Service Learning Day 2015, March 13, 2015, Boca Raton, Florida. (Non-refereed abstract, poster presentation).
64. Darius Mills, Zhongwei Li. "Novel Protein, TruD, Binds to Oxidized RNA and Increases Cell Viability in E.coli under Oxidative Stress". National Council on Undergraduate Research 19<sup>th</sup> Annual Posters on the Hill Conference, Washington, DC, April 15-16, 2015. (Refereed abstract, poster presentation).
65. Sulochan Malla, Zhongwei Li (2015) Role of human polynucleotide phosphorylase (hPNPase) in controlling oxidized RNA. 2015 Symposium on RNA Biology XI: RNA Tool and Target. October 16-17, 2015, Durham, NC.
66. Giovana Jaen, Pamela Ferrera and Zhongwei Li (2016) RNA Damage and Modification on Protein Synthesis. FAU 6<sup>th</sup> Annual Undergraduate Research Symposium, April 1, 2016. Boca Raton, FL.
67. Delaram Pourkalbassi Esfahani, Michael Lu and Zhongwei Li. (2016) The Potential Role of Stress Granules and Processing Bodies in Eliminating Oxidatively Damaged RNA. FAU College of Medicine Spring Graduate Student Research Day. April 15, 2016. Boca Raton, FL.
68. Sulochan Malla, Zhongwei Li (2016) Human polynucleotide phosphorylase (hPNPase) reduces oxidized RNA and protects cells under oxidative stress. FAU College of Medicine Spring Graduate Student Research Day. April 15, 2016. Boca Raton, FL.
69. Jules Chatoff, Zhongwei Li, James Silver, Michael Band, Haiyun Fu, Irving Itzkan. Development of Mie Scattering Spectrometry for quick diagnosis of infectious bacteria in clinical samples, 2016 Military Health System Research Symposium, Orlando, FL, August 15-18, 2016.
70. Sulochan Malla, Zhongwei Li (2017) A Role for human polynucleotide phosphorylase (hPNPase) in controlling oxidized RNA. FAU College of Medicine Spring Graduate Student Research Day. April 14, 2017. Boca Raton, FL.
71. Sulochan Malla, Zhongwei Li (2017) Role of human polynucleotide phosphorylase (hPNPase) in controlling oxidized RNA. NCI RNA Biology 2017, April 24th - 25th, 2017. Natcher Conference Center, NIH Bethesda, Maryland.
72. \*Zhongwei Li (2017) Selective degradation of oxidized RNA. 2nd International Conference on Nucleic Acids, Molecular Biology and Biologics, August 31- September 01, 2017, Philadelphia, PA.
73. Patricia Louis, Janet Menzie, Zhongwei Li, Minoru Koi, C Kathy Dorey, Changlong Nan, Yoshimi Shibata (2018) Dietary anti-IBD effects of chitin in both sexes. 2018 International Congress on Integrative Medicine and Health, 5/11/18, Baltimore, MD.
74. Sulochan Malla & Zhongwei Li (2018) Unraveling the molecular mechanism of human polynucleotide phosphorylase (hPNPase) in downregulating oxidized RNA in human cells and associated human diseases. RNA 2018, May 29-June 3, 2018, Berkeley, CA.
75. \*Zhongwei Li. "Selective Elimination of Oxidized RNA: A General Mechanism of Cellular RNA Quality Control". BIT 2018, March 26-28, 2018, Miami, FL.
76. Sulochan Malla, Sarvika Bommakanti and Zhongwei Li (Poster) "Exploring the molecular mechanisms of human polynucleotide phosphorylase (hPNPase) in controlling oxidized RNA and cell viability", College of Medicine Graduate Research Day, April 5, 2019, Boca Raton, FL.

77. Alexander Kwakye and Zhongwei Li (Poster) Analyses of Alzheimer's Disease Genomic Data Using Computational and Statistical Models. College of Medicine Graduate Research Day, April 5, 2019, Boca Raton, FL.
78. Alexander Kwakye and Zhongwei Li (Poster) Analyses of Alzheimer's Disease Genomic Data Using Computational and Statistical Models. Graduate and Professional Research Day, April 5, 2019, Boca Raton, FL.
79. Sarvika Bommakanti, Sulochan Malla and Zhongwei Li (Poster) "The role of human polynucleotide phosphorylase (hPNPase) in downregulating oxidized RNA". FAU 9th Annual Undergraduate Research Symposium, Apr. 8, 2019.  
\*\* My student Sarvika Bommakanti won FIRST PLACE for her poster presentation.
80. Colleen Silva, Zhongwei Li, Andrea Chen, Chere Lucas Anthony. Microbiologic Characteristics of Skin and Soft Tissue Infections. 24th World Congress of Dermatology (WCD), June 10-15, 2019, Milan, Italy.
81. Min Liu, Ravi K. Alluri, Haiyun Fu and Zhongwei Li (2020) RNA oxidative damage is affected by RNA structures. RNA 2020 (25th Annual Meeting of the RNA Society, online this year), May 26-31, 2020.
82. Alexander Kwakye and Zhongwei Li (2020) Gene Expression analyses of Alzheimer's Disease (AD). Graduate Program in Genetics Retreat, Stony Brook University, February 10, 2020.
83. Alexander Kwakye and Zhongwei Li (2020) Analyses of Alzheimer's Disease (AD) genomic data using computational and statistical models. 12th Annual Integrative Biology (IB) Retreat, Florida Atlantic University. Boca Raton, FL, February 14, 2020.

# CURRICULUM VITA

**Xingquan (Hill) Zhu**, PhD, Professor

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## Research Interests

Artificial Intelligence, large scale machine learning, and data mining

Real-time analytics and decision support systems

Biomedical, bioinformatics, and health information systems

## Employment

- August 2018 Professor, Dept. of Computer & Electrical Engineering and Computer Science, Florida Atlantic University, FAU, Boca Raton, FL 33431, USA
- August 2012 Associate Professor, Dept. of Computer & Electrical Engineering and Computer Science, Florida Atlantic University, FAU, Boca Raton, FL 33431, USA

## Research Grants (Award Total: \$6,326,557.0; PI Amount: \$1,621,876.0)

### List of Projects as the Principal Investigators (recent five years)

1. RAPID: COVID-19 Coronavirus Testbed and Knowledge Base Construction and Personalized Risk Evaluation  
**Xingquan Zhu** (PI), Michael DeGiorgio (Co-PI), Massimo Caputi (Co-PI)  
Sponsor: National Science Foundation (NSF) Duration: 2020-2021 Amount: \$90,000
2. Artificial Intelligence for Tackling Online Cruelty, Toxicity, and Bullying  
**Xingquan Zhu** (PI), Sameer Hinduja (Co-PI), Borivoje Furht (Co-PI), and Kevin Lanning (Co-PI)  
Sponsor: FAU College of Eng. & Computer Science Duration: 2020-2021 Amount: \$25,000
3. MRI: Acquisition of Artificial Intelligence & Deep Learning (AIDL) Training and Research Laboratory  
**Xingquan Zhu** (PI), Taghi Khoshgoftaar (Co-PI), Dimitris Pados (Co-PI), Hanqi Zhuang (Co-PI), and Laurent Cherubin (Co-PI)  
Sponsor: National Science Foundation Duration: 2018-2021 Amount: \$652,850
4. III: Medium: Collaborative Research: KMELIN: Knowledge Mining and Embedding Learning for Complex Dynamic Information Networks  
**Xingquan Zhu** (PI), Ankur Agarwal (Co-PI), and Dingding Wang (Co-PI)  
Sponsor: National Science Foundation Duration: 2018-2022 Amount: \$599,983
5. Real-Time Bidding Price Optimization  
Sponsor: Bidtellect.com Duration: 2016 – 2019 **Xingquan Zhu** (PI) Amount: \$89,915
6. NSF I/UCRC: Machine Learning Algorithms for Uses Cases in Auto Industry  
**Xingquan Zhu** (PI) and Borko Furht  
Sponsor: NSF (FAU I/UCRC, JM Family) Duration: 2016 – 2017 Amount: \$39,809
7. RED-CAKE: Novel Data Mining Approaches for Knowledge Based Skill Matching for Employers (research study)  
**Xingquan Zhu** (PI) and Borko Furht (Co-PI)  
Sponsor: NSF (FAU I/UCRC, incVersity) Duration: 2014 Amount: \$ 5,000

## Keynote Speech

- ITExpo Panel on AI & Cybersecurity, February 19 2020. Ft Lauderdale, FL, USA
- *IEEE DSC 2017 Workshop on Data Science and Web Analytics*, June 26, 2017, Shenzhen, China.
- Data Mining track of the *30th Florida Artificial Intelligence Research Society annual conference (FLAIRS-30)*, May 16-18, 2016, Key Largo, Florida, USA
- *IEEE ICDM 2014 Workshop on Scalable Data Analytics: Theory and Applications*, Dec. 14-17, 2014, Shenzhen, China.
- *The First International Conference on Data Science*, May 27-28, 2014, Beijing, China.

## Tutorial

- *The 2<sup>nd</sup> IEEE International Conference on Data Science in Cyberspace*, June 26-29, 2017, Shenzhen, China.
  - Title: Data Science in Online Digital Advertising

## Conference Panellist

- *ITExpo Panel on AI & Cybersecurity*, February 19 2020. Ft Lauderdale, FL, USA
- *Florida International University Critical Technology and Intelligence Summit*, Jack D. Gordon Institute for Public Policy, Florida International University, Miami, FL, September 17 2019.

## Best Paper Award

- M. Wu, S. Pan, and X. Zhu, OpenWGL: Open-World Graph Learning, Proc. of the 20th IEEE International Conference on Data Mining, Sorrento, Italy, Nov 17-23, 2020 (**Best Student Paper Award**)
- Z. Gharibshah and X. Zhu, TriNE: Network Representation Learning for Tripartite Heterogeneous Networks, Proc. Of the 11<sup>th</sup> IEEE International Conference on Knowledge Graph (ICKG-2020), August 9-11, 2020, Nanjing China (**Best Student Paper Award**)
- G. Rasario, T. Sonderman, and **X. Zhu**, Deep Transfer Learning for Traffic Sign Recognition, *IEEE International Conference on Information Reuse and Integration (IRI-2018)*, July 6-9, 2018, Salk Late City, USA (**Best Paper Award**)
- L. Chi, B. Li, and **X. Zhu**, Fast Graph Stream Classification Using Discriminative Clique Hashing, Proc. Of the 17<sup>th</sup> Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD-2013), April 14-17, Brisbane, Australia. (**Best Paper Award**)
- M. Fang and **X. Zhu**, I Don't Know the Label: Active Learning with Blind Knowledge, Proc. Of the 21<sup>st</sup> International Conference on Pattern Recognition (ICPR-12), November 11-15, 2012, Tsukuba, Japan. (**Best Student Paper Award**)
- Y. Zhang, **X. Zhu**, X. Wu, and J. P. Bond, ACE: An Aggressive Classifier Ensemble with Error Detection, Correction and Cleansing, *Proc. of the 17th IEEE International Conference on Tools with Artificial Intelligence (ICTAI)*, Hong Kong, November 14-16, 2005. (**Best Paper Award**)

## IEEE Digital Library Most Popular Papers

- Xindong Wu, **Xingquan Zhu**, Gong-Qing Wu, Wei Ding: Data Mining with Big Data. *IEEE Transactions on Knowledge and Data Engineering*, 26(1): 97-107, 2014.  
Cited over 2,923 times, and No. 4 most popular article (evidenced in the Scholarly citations)
- Daokun Zhang, Jie Yin, **Xingquan Zhu**, and Chengqi Zhang, Network Representation Learning: A Survey, *IEEE Trans. On Big Data*, 6(1):3-28, 2020.  
Ranked No. 1 most popular article (evidenced in the Scholarly citations)

## Award and Membership

- Outstanding Engineering Achievement Merit Award: The Engineers' Council, 2019
- Excellence in Research Award (Senior Faculty): College of Engineering and Computer Science, Florida Atlantic University, 2019
- IEEE Senior Member, 2012

## Selected Publications (105 journal articles and 160 conference proceeding papers)

### Selected Books:

- **Xingquan Zhu**, Haicheng Tao, Zhiang Wu, Jie Cao, Kris Kalish, and Jeremy Kayne, *Fraud Prevention in Digital Advertising*, Springer Briefs in Computer Science, ISBN 978-3-319-56792-1, 2017.
- **X. Zhu**, R. Alhajj, T. Khoshgoftaar, and N. Bourbakis, Proceedings of the IEEE 14<sup>th</sup> International Conference on Bioinformatics and Bioengineering, Boca Raton, FL, USA, Nov. 10-12, November 2014.

### Selected Journal Articles (Peer Reviewed):

1. Min Shi, Yufei Tang, **Xingquan Zhu**, Jianxun Liu, and Haibo He, Topical Network Embedding, *Data Mining and Knowledge Discovery*, 34:75-100, 2020.
2. Huimei Han, **Xingquan Zhu**, and Ying Li, Generalizing Long Short-Term Memory Network for Deep Learning from Generic Data. *ACM Trans. on Knowledge Discovery from Data*. 14(2):13:1-13:28, 2020.
3. Min Shi, Yufei Tang, and **Xingquan Zhu**, MLNE: Multi-Label Network Embedding, *IEEE Trans. on Neural Network and Learning Systems*, 31(9): 3682-3695, 2020.
4. Haishuai Wang, Jia Wu, **Xingquan Zhu**, Yixin Chen, and Chengqi Zhang, Time-Variant Graph Classification, *IEEE Trans. on Systems, Man, and Cybernetics: Systems*, 50(8): 2883-2896, 2020.
5. Daokun Zhang, Jie Yin, Xingquan Zhu, Chengqi Zhang, Network Representation Learning: A Survey, *IEEE Trans. On Big Data*, 6(1): 3-28, 2020.
6. Min Shi, Yufei Tang, Xingquan Zhu, Jianxun Liu, Topic-aware Web Service Representation Learning, *ACM Trans. On Web*, 14(2): 9:1-9:23, 2020.
7. Ting Guo, Shirui Pan, **Xingquan Zhu**, Chengqi Zhang, CFOND: Consensus Factorization for Co-Clustering Networked Data. *IEEE Trans. Knowledge & Data Engineering*, 31(4): 706-719 (2019)
8. Daokun Zhang, Jie Yin, **Xingquan Zhu**, and Chengqi Zhang, Attributed Network Embedding via Subspace Discovery, *Data Mining and Knowledge Discovery*, 33(6):1953-1980, 2019.
9. Huimei Han, Ying Li, **Xingquan Zhu**, Convolutional neural network learning for generic data classification. *Information Sciences*, 477: 448-465, 2019.
10. Eric Golinko, **Xingquan Zhu**, Generalized Feature Embedding for Supervised, Unsupervised, and Online Learning Tasks. *Information Systems Frontiers*, 21(1): 125-142, 2019.
11. Bozhong Liu, Ling Chen, **Xingquan Zhu**, Weidong Qiu, Encrypted data indexing for the secure outsourcing of spectral clustering. *Knowledge and Information Systems*, 60(3): 1307-1328, 2019.
12. Jia Wu, Shirui Pan, **Xingquan Zhu**, Chengqi Zhang, and Philip S. Yu, Multiple Structure-View Learning for Graph Classification, *IEEE Transactions on Neural Networks and Learning Systems*, 29(7):3236-3251, 2018.
13. Lianhua Chi, Bin Li, **Xingquan Zhu**, Shirui Pan, Ling Chen, Hashing for Adaptive Real-Time Graph Stream Classification with Concept Drifts. *IEEE Trans. on Cybernetics*, 48(5): 1591-1604, 2018.
14. Youxi Wu, Yao Tong, **Xingquan Zhu**, Xindong Wu, NOSEP: Nonoverlapping Sequence Pattern Mining With Gap Constraints. *IEEE Trans. on Cybernetics*, 48(10): 2809-2822, 2018.
15. Jia Wu, Shirui Pan, **Xingquan Zhu**, Chengqi Zhang, and Xindong Wu, Towards Multi-instance Learning with Discriminative Bag Mapping. *IEEE Trans. on Knowledge and Data Engineering*, 30(6):1065-1080, 2018.
16. Wei Wu, Bin Li, Ling Chen, **Xingquan Zhu**, Chengqi Zhang, K-Ary Tree Hashing for Fast Graph Classification. *IEEE Trans. Knowledge and Data Engineering*, 30(5): 936-949, 2018.
17. Yisen Wang, Shu-Tao Xia, Qingtao Tang, Jia Wu, **Xingquan Zhu**, A Novel Consistent Random Forest Framework: Bernoulli Random Forests. *IEEE Trans. on Neural Network and Learning Systems*, 29(8): 3510-3523 (2018)
18. Ankur Agarwal, Christopher Baechele, Ravi S. Behara, **Xingquan Zhu**, A Natural Language Processing Framework for Assessing Hospital Readmissions for Patients With COPD. *IEEE J. Biomedical and Health Informatics* 22(2): 588-596 (2018)
19. Lianhua Chi and **Xingquan Zhu**, Hashing Techniques: A Survey and Taxonomy, *ACM Computing Surveys*, 50(1): 11:1-11:36, 2017.

20. Ting Guo, Jia Wu, **Xingquan Zhu**, and Chengqi Zhang, Combining Structured Node Content and Topology Information for Networked Graph Clustering, *ACM Transactions on Knowledge Discovery from Data*, 11(3): 29:1-29:29, 2017.
21. Shirui Pan, Jia Wu, **Xingquan Zhu**, Guodong Long, and Chengqi Zhang, Task Sensitive Feature Exploration and Learning for Multitask Graph Classification, *IEEE Trans. on Cybernetics*, 47(3): 744-758, 2017.
22. Jia Wu, Shirui Pan, **Xingquan Zhu**, Chengqi Zhang, and Xindong Wu, Positive and Unlabeled Multi-Graph Learning *IEEE Transactions on Cybernetics, IEEE Trans. Cybernetics* 47(4): 818-829, 2017.
23. Haishuai Wang, Peng Zhang, **Xingquan Zhu**, Ivor Wai-Hung Tsang, Ling Chen, Chengqi Zhang, and Xindong Wu, Incremental Subgraph Feature Selection for Graph Classification, *IEEE Transactions on Knowledge and Data Engineering*, 29(1):128-142, 2017.
24. Shirui Pan, Jia Wu, **Xingquan Zhu**, Guodong Long, Chengqi Zhang, Boosting for graph classification with universum, *Knowledge and Information Systems*, 50(1): 53-77, 2017.
25. Fei Xie, Xindong Wu, **Xingquan Zhu**, Efficient sequential pattern mining with wildcards for keyphrase extraction, *Knowledge-Based Systems*, 115: 27-39, 2017.
26. Dongkuan Xu, Jia Wu, Dewei Li, Yingjie Tian, **Xingquan Zhu**, Xindong Wu, SALE: Self-adaptive LSH encoding for multi-instance learning. *Pattern Recognition* 71: 460-482, 2017.
27. Christopher Baechle, Ankur Agarwal, **Xingquan Zhu**, *Big data driven co-occurring evidence discovery in chronic obstructive pulmonary disease patients*. *Journal of Big Data* 4: 9 (2017)
28. Jose L. Hurtado, Ankur Agarwal, and **Xingquan Zhu**, Topic discovery and future trend forecasting for texts, *Journal of Big Data*, 3(7), 2016.
29. Shirui Pan, Jia Wu, **Xingquan Zhu**, Chengqi Zhang, and Philip S. Yu, Joint Structure Feature Exploration and Regularization for Multi-Task Graph Classification, *IEEE Transactions on Knowledge and Data Engineering*, 28(3):715-728, 2016.
30. Meng Fang, Jie Yin, and **Xingquan Zhu**, Active Exploration for Large Graphs, *Data Mining and Knowledge Discovery*, 30(3):511-549, 2016.
31. Jia Wu, Zhibin Hong, Shirui Pan, **Xingquan Zhu**, Zhihua Cai, Chengqi Zhang, Multi-graph-view subgraph mining for graph classification, *Knowledge and Information Systems*, 48(1): 29-54, 2016.
32. Jia Wu, Shirui Pan, **Xingquan Zhu**, Peng Zhang, Chengqi Zhang, SODE: Self-Adaptive One-Dependence Estimators for classification. *Pattern Recognition*, 51: 358-377, 2016.
33. Meng Fang, Jie Yin, **Xingquan Zhu**, Supervised sampling for networked data, *Signal Processing*, 124: 93-102, 2016.
34. Shirui Pan, Jia Wu, and **Xingquan Zhu**, CogBoost: Boosting for Fast Cost-sensitive Graph Classification, *IEEE Transactions on Knowledge and Data Engineering*, 27(11):2933-2946, 2015.
35. Bin Li, **Xingquan Zhu**, Ruijiang Li, and Chengqi Zhang, Rating Knowledge Sharing in Cross-Domain Collaborative Filtering, *IEEE Transactions on Cybernetics*, 45(5):1054-1068, May 2015.
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41. Boyu Li, Ting Guo, **Xingquan Zhu**, Zhanshan Li: Reverse twin plant for efficient diagnosability testing and optimizing. *Engineering Application of Artificial Intelligence*, 38: 131-137, 2015.