

# Megan Finnegan

## Curriculum Vitae

### Education

- in progress* **Psychology, Ph.D.**, *University of Illinois, Urbana-Champaign, Clinical-Community.*
- in progress* **Neuroscience, Ph.D.**, *University of Illinois, Urbana-Champaign.*  
*Major - Computational Neuroscience; Minors - Machine Learning and Neuroimaging*
- 2020 **Psychology, M.S.**, *University of Illinois, Urbana-Champaign.*
- 2012 - 2015 **Cognitive Science, B.S.**, *University of California, Merced.*

### Publications

- 2022 Davis, M. M., Modi, H. M., Skymba, H. V., **Finnegan, M. K.**, Haigler, K., Telzer, E. H., Rudolph, K. D., "Thumbs Up or Thumbs Down: Neural Processing of Social Feedback and Links to Social Motivation in Adolescent Girls". In: *SCAN. under review.*
- Richier, C. J., **Finnegan, M.**, Fielder, K., Heller, W., "Leveraging Unsupervised Machine Learning to Map Neural Mechanisms of Psychopathology: A Review and User Guide". In: *Neuroimage: Clinical. under review.*
- 2021 Bjertrupa, A., Macoveanu, J., Laurent, H., Moszkowicz, M., **Finnegan, M. K.**, Egmo, I., Fisher, P. M., Nielsen, R., Pagsberg, A. K., Kessing, L., Væver, M., Miskowiak, K., "Reduced prefrontal cortex response to own vs unknown emotional infant faces in mothers with bipolar disorder". In: *European Neuropsychopharmacology* 54.
- Finnegan, M. K.**, Kane, S., Heller, W., Laurent, H., "Mothers' neural response to valenced infant interactions predicts postpartum depression and anxiety". In: *PLoS one* 16.4.
- 2020 Laurent, H. K., Sbrilli, M., Dawson, D., **Finnegan, M.**, Ramdas-Neal, D., "Disentangling levels of mother–infant neuroendocrine attunement and longitudinal relations with maternal risk and protective factors". In: *Developmental Psychobiology.*
- 2019 Husain, F. T., Zimmerman, B., Tai, Y., **Finnegan, M. K.**, Kay, E., Khan, F., Menard, C., Gobin, R. L., "Assessing mindfulness-based cognitive therapy intervention for tinnitus using behavioural measures and structural MRI: a pilot study". In: *International Journal of Audiology*, pp. 1–13.
- Zimmerman, B. J., **Finnegan, M. K.**, Paul, S., Schmidt, S. A., Tai, Y., Roth, K. A., Chen, Y., Husain, F. T., "Functional Brain Changes During Mindfulness-Based Cognitive Therapy Associated with Tinnitus Severity". In: *Frontiers in Neuroscience* 13, p. 747.
- 2018 Laurent, H. K., Wright, D., **Finnegan, M.**, "Mindfulness-Related Differences in Neural Response to Own Infant Negative versus Positive Emotion Contexts". In: *Developmental cognitive neuroscience.*
- 2017 Carlile, S., Ciccarelli, G., Cockburn, J., Diedesch, A. C., **Finnegan, M. K.**, Hafter, E., Henin, S., Kalluri, S., Kell, A. J., Ozmeral, E. J., "Listening Into 2030 Workshop: An Experiment in Envisioning the Future of Hearing and Communication Science". In: *Trends in Hearing* 21, p. 2331216517737684.

- 2016 Husain, F. T., Tai, Y., **Finnegan, M. K.**, “Emotional Processing and Non-Auditory Based Interventions in Tinnitus”. In: *Perspectives of the ASHA Special Interest Groups 1.7. invited, not peer-reviewed*, pp. 13–23.
- Warlaumont, A. S., **Finnegan, M. K.**, “Learning to Produce Syllabic Speech Sounds via Reward-Modulated Neural Plasticity”. In: *PLoS one* 11.1.

## Posters/Presentations

- 2021 Bjertrup, A., Macoveanu, J., Laurent, H., Moszkowicz, M., **Finnegan, M.**, Egmore, I., Fisher, P., Nielsen, R., Pagsberg, A., Kessing, L., Væver, M., Miskowiak, K., *Reduced prefrontal cortex response to own vs unknown emotional infant faces in mothers with bipolar disorder*. ECNP Workshop for Early Career Scientists, Virtual.
- 2019 Laurent, H., **Finnegan, M.**, *Getting inside postpartum depression: Maternal affective symptoms and neural response to infant emotion cues*. Marcé of North America Conference on Perinatal Mental Health, Chapel Hill, North Carolina.
- 2018 **Finnegan, M.**, Kern, S., Newberry, D., Heller, W., Laurent, H., *Addressing the atlas concordance problem in fMRI*. Annual Convention for the Society for Neuroscience, San Diego, California.
- Laurent, H., **Finnegan, M.**, Kern, S., *Relations between mothers' neural response to their infant's positive emotion and risk for psychopathology*. Society for Research in Psychopathology, Indianapolis, Indiana.
- 2017 **Finnegan, M.**, Khan, F., Meno, C., Tai, Y., Menard, C., Husain, F., *Assessing the Effectiveness of Mindfulness-Based Therapy in the Management of Distressing Tinnitus*. ASHA 2017 Convention, Los Angeles, California.
- Finnegan, M.**, Schweizer, T., *Mindfulness-Based Cognitive Therapy*. Presence Medical Center, Champaign Illinois (*invited*).
- Husain, F., **Finnegan, M.**, Khan, F., *Mindfulness-Based Therapies for Communication Disorders: Emerging Directions in Research*. ASHA 2017 Convention, Los Angeles, California.
- 2015 **Finnegan, M.**, Warlaumont, A., *Parameter and Speed Comparisons of the Articulatory Synthesizers used by DIVA and Praat*. University of California, Merced: Research Week Poster Competition.
- 2014 **Finnegan, M.** *Emergence of canonical babbling in neural networks: A model for language acquisition*. University of California, Merced: NSF Undergraduate Research Fellowship Summary Presentation.
- Warlaumont, A., **Finnegan, M.**, “Linking infant communication behavior to neurophysiology using computational modeling”. In: *17th World Conference of Psychophysiology*. Hiroshima, Japan.

## Data Sets

Laurent, H., **Finnegan, M. K.**, Haigler, K., *Postnatal Affective MRI Dataset*. Data set. OpenNeuro. DOI: 10.18112/openneuro.ds003136.v1.0.0. URL: <https://openneuro.org/datasets/ds003136/versions/1.0.0>.

## Awards

**Teacher Ranked as Excellent by Their Students**, *University of Illinois*, Champaign-Urbana, 2021.

*For PSYC 593 – Seminar in Neuroimaging Methods taught in Fall 2020.*

**Love of Learning Award**, *Phi Kappa Phi*, Honor Society, 2018.

*For development of new brain functional localization technology.*

**Trainee Professional Development Award**, *Society for Neuroscience*, San Diego, 2018.

**Mary Jane Neer Scholarship**, *University of Illinois*, Champaign-Urbana, 2018.

**Listening into 2030**, Berkeley, California, 2016.

NSF grant to participate in design thinking workshop between industry leaders and academic expertise to envision technological advancements in communication science achievable by 2030.

**Irl H. Marshall Scholarship**, *University of Illinois*, Champaign-Urbana, 2016.

**Elaine Paden Award**, *University of Illinois*, Champaign-Urbana, 2015.

**Illinois Distinguished Fellowship**, *University of Illinois*, Champaign-Urbana, 2015.

**Outstanding Graduating Undergraduate Student Award**, *University of California*, Merced, 2015.

*School of Social Sciences, Humanities and Arts*

**NSF Undergraduate Research Mentorship Fellowship**, *University of California*, Merced, 2014.

*For research in computational biology.*

**Chancellor's Honors**, *University of California*, Merced, 2013,2015.

**Dean's Honors**, *University of California*, Merced, 2012–2014.

## Reviewing Activities

2021 **Progress in Neuropsychopharmacology & Biological Psychiatry**, *Reviewed 1 primary research manuscript*, 2021.

## Assistantships

University of Illinois **Librarian**, WEB DEVELOPMENT, under supervision of Dr. Dan Simons, Fall 2018 - Fall 2021.

Creating the next generation of the UIUC Psychology Department website. Involved in initial site deployment and serving as communication liaison between web development and faculty oversight committees. Currently responsible for online content management.

University of Illinois **Departmental Statistics Tutor**, Fall 2019 - Fall 2021.

Designated statistics tutor for the Psychology Department's first-year graduate-level statistics sequence

University of Illinois **Teaching Assistant**, GRADUATE SEMINAR IN NEUROIMAGING METHODS, under supervision of Dr. Sepideh Sadaghiani, Fall 2020.

Created course content and served as a comprehensive TA for a graduate-level seminar in advanced neuroimaging methods. Responsibilities include preparing, attending, and delivering lectures, assisting students during in-class exercises, and assisting students during office hours

University of Illinois **Research Assistant**, DATA ACQUISITION, under supervision of Dr. Heidemarie Lurnet, Summer 2019.

Collecting behavioral and physiological data for an NIH funded study of peripartum and infant psycho-physiological stress response.

University of Illinois **Programmer**, NEUROIMAGING EXPERIMENTAL DESIGN, under supervision of Dr. Heidemarie Lurnet, Spring 2019.

Created stimuli presentation code for an fMRI study used at the Beckman Institute Bioimaging Center.

University of Illinois **Programmer**, NEUROIMAGING EXPERIMENTAL DESIGN, under supervision of Dr. Karen Rudolph, Summer 2018.

Created a Python version of an fMRI social evaluation task for use at the Beckman Institute Bioimaging Center. Served as supervisory expertise in updating a MATLAB version of a similar experiment for behavioral piloting.

- University of Illinois, Urbana-Champaign **MATLAB Programming Workshop**, TEACHING ASSISTANT, under supervision of Dr. Alejandro Lleras, Summer 2017.  
Designed class website and organized lab section of a MATLAB programming workshop for graduate students. Provided supplementary lectures and feedback on in-class assignments.
- University of California, Merced **Emergence of Communication Lab**, RESEARCH ASSISTANT, under supervision of Dr. Anne Warlaumont, 2013–2015.  
Utilized spiking neural networks to model the emergence of canonical babbling in infants through reinforcement based learning. Developed code to analyze and visualize network data, created new reinforcement policies, designed human listening experiments and documented and maintained existing code.

## Undergraduate Mentoring

- 2020 Kumar, G. *Research Mentor for James Scholar Program (started 2018)*. University of Illinois at Urbana-Champaign.
- 2019 Vu, T. *Research Mentor for Steen Fellowship*. St. Olaf's University.  
Wang, Y. *Research Supervisor for James Scholar Program*. University of Illinois at Urbana-Champaign.
- 2017 Kay, E., Zimmerman, B., **Finnegan, M.**, Husain, F., *Assessing differences in grey matter anatomy after mindfulness-based practice in tinnitus patients*. University of Illinois at Urbana-Champaign Undergraduate Research Symposium.

## Service

- NeuroTechX, UIUC, IL**, 2019-current, Graduate Mentor - *Software Development Team*.  
Mentor for the undergraduate NeuroTechX team competitions providing domain expertise in software development for analysis of neural data.
- Computational Neuroscience Club, UIUC, IL**, 2016-current.  
Co-founded a group focused on exploring the information processing properties of the brain and mind. Activities center around a weekly journal club with explicit focus on encouraging interdisciplinary insights and collaborations.
- MSPS Virtual Research Fair, UIUC, IL**, 2021.  
Member of organizing committee and session host for a virtual research fair highlight recent and ongoing research being conducted by Masters students in Psychology.
- fMRI Reading and Work Group, UIUC, IL**, 2019, 2020.  
Organizer for a reading and work group focused on developing deeper understanding of fMRI analysis methodology. Activities center on weekly readings, discussions, and work sessions.
- Interdisciplinary Graduate Society, UIUC, IL**, 2016-2020.  
Officer serving in a "graduate-focused student community at the University of Illinois at Urbana-Champaign, connecting all disciplines, with emphasis on joining historically unrelated departments."
- Brain Awareness Day, UIUC, IL**, 2016,2018.  
Volunteer engaging young children in activities designed to foster an interest in neuroscience.

## Press Coverage

- 2021 Dolan, E. W. *How a new mother's brain responds her infant's emotions predicts postpartum depression and anxiety*. URL: <https://www.psypost.org/2021/06/how-a-new-mothers-brain-responds-her-infants-emotions-predicts-postpartum-depression-and-anxiety-61116>.