

ASHLEY LAUREN JUAVINETT, PHD

University of California, San Diego
Division of Biological Sciences
Neurobiology Section
ajuavinett@ucsd.edu

EDUCATION

- 2011 – 2016 University of California San Diego (La Jolla, CA)
Ph.D. in Neuroscience
- 2007 – 2011 Lafayette College (Easton, PA)
B.S. in Neuroscience with Honors, Summa Cum Laude
Minor: Anthropology & Sociology

PROFESSIONAL APPOINTMENTS

- 2018 – present Assistant Teaching Professor, UC San Diego, Division of Biological Sciences
- 2016 – 2018 Postdoctoral Research Fellow, Cold Spring Harbor Laboratory

FUNDING

- 2020 – 2026 NATIONAL INSTITUTES OF HEALTH BP-ENDURE R-25 Grant (Award #R25NS119707)
Role: Co-PI
Title: "Preparing Diverse Transfer Students for Research Careers in Neuroscience"
- 2020 – 2021 THE KAVLI FOUNDATION NWB SEED GRANT
Role: PI
Title: "Training students and educators to use Neurodata Without Borders for learning Neural Data Science"

PEER-REVIEWED PUBLICATIONS

- Juavinett, A.L.** (2020). Learning How to Code While Analyzing an Open Access Electrophysiology Dataset. *Journal of Undergraduate Neuroscience*.
- Kim, E.J. Zhang, Z., Huang, L., Ito-Cole, T., Jacobs, M.W., **Juavinett, A.L.**, Senturk, G., Hu, M., Ku, M., Ecker, J.R., Callaway, E.M. (2020). Extraction of Distinct Neuronal Cell Types from within a Genetically Continuous Population. *Neuron*. doi: 10.1016/j.neuron.2020.04.018.
- Juavinett, A.L.**, Bekheet, G., Churchland, A.K. (2019). Chronically-implanted Neuropixels probes enable high yield recordings in freely moving mice. *eLife* 8:e47188. doi: 10.7554/eLife.47188.
- Juavinett, A.L.**, Kim, E.J., Collins, H.C., Callaway, E.M. (2019). A systematic topographical relationship between mouse lateral posterior thalamic neurons and their visual cortical projection targets. *Journal of Comparative Neurology*. doi: 10.1002/cne.24737.
- Musall, S.M. Kaufmann, M.T., **Juavinett, A.L.**, Gluf, S. Churchland, A.K. (2019). Single-trial neural dynamics are dominated by richly varied movements. *Nature Neuroscience* 22, 1677-1686. doi: 10.1038/s41593-019-0502-4.
- Juavinett, A.L.**, Nauhaus, I., Garrett, M.G., Callaway, E.M. (2017). Automated identification of mouse visual areas with intrinsic signal imaging. *Nature Protocols* 12(1):32-43. doi: 10.1038/nprot.2016.158.
- Kim, E.J., **Juavinett, A.L.**, Kyubwa, E.M., Jacobs, M.W., Callaway, E.M. (2015). Three Types of Cortical Layer 5 Neurons That Differ in Brain-wide Connectivity and Function. *Neuron* 88(6): 1253-67. doi: 10.1016/j.neuron.2015.11.002.

Juavinett, A.L., Callaway, E.M. (2015). Pattern and Component Motion Responses in Mouse Visual Cortex. *Current Biology* 25(13): 1759-64. doi: 10.1016/j.cub.2015.05.028.

Stewart, J.L., **Juavinett, A.L.**, May, A.C., Davenport, P.W., Paulus, M.P. (2015). Do You Feel Alright? Attenuated Neural Processing of Aversive Interoceptive Stimuli in Current Stimulant Users. *Psychophysiology* 52(2): 249-62. doi: 10.1111/psyp.12303

PRE-PRINTS

van Viegen, T. Neuromatch Academy: Teaching Computational Neuroscience with global accessibility. *ArXiv* <https://arxiv.org/abs/2012.08973>.

BOOKS, BOOK CHAPTERS, & REVIEWS

Juavinett, A.L. (2020). *So You Want to Be a Neuroscientist?* Columbia University Press (New York, NY).

Baker, A., Kalmbach, B., Morishima, M., Kim, J., **Juavinett, A.L.**, Li, N. & Dembrow, N. (2018). Specialized Subpopulations of Deep-Layer Pyramidal Neurons in the Neocortex: Bridging Cellular Properties to Functional Consequences. *Journal of Neuroscience*, 38(24):5441-5455.

Juavinett, A.L., Erlich, J., Churchland, A.C. (2018). Decision-making behaviors: weighing ethology, complexity, and sensorimotor compatibility. *Current Opinion Neurobiology* 49:42-50.

Juavinett, A.L., Datko, M., Pineda, J. (2014). Rationale for Neurofeedback Training in Children with Autism. In *The Comprehensive Guide to Autism*, edited by Vinood B. Patel, Victor R. Preedy and Colin R. Martin.

Pineda, J.A., **Juavinett, A.L.**, Datko, M. (2012). Self-regulation of brain oscillations as a treatment for aberrant brain connections in children with autism. *Medical Hypotheses* 79(6): 790-8.

INVITED TALKS AND WORKSHOPS

Juavinett, A.L. (2021). "An honest look at an evolving field" (book talk), *UCSC MCD Biology Seminar Series*.

Juavinett, A.L. (2021). "An honest look at an evolving field" (book talk), *Harvard Brain Science Initiative*.

Juavinett, A.L. (2021). "Growing up in science," *University of Oxford Cortex Club*.

Juavinett, A.L. (2021). "From neuropixels to neuropaths" (research seminar/book talk), *University of Sussex Neuroscience Seminar Series*.

Juavinett, A.L. (2020). "Defining cell types by their electrophysiology." *Allen Institute Webinar*. Available here: <https://youtu.be/OQUOEKXPX8M>.

Juavinett, A.L. (2020). "Learning how to code while analyzing an open access electrophysiology dataset." *Faculty for Undergraduate Neuroscience Conference*.

Juavinett, A.L. (2019). "How to make the most of your PhD when you don't know what comes next." *Bernstein Computational Neuroscience PhD Symposium*.

Juavinett, A.L. (2018). "What tiny mouse brains can tell us about visual perception." *Lehigh Valley Society for Neuroscience Keynote Talk*.

Juavinett, A.L. (2017). "Layer 5 cells in visual cortex with defined projections have distinct response properties." *Society for Neuroscience Minisymposium*.

CONFERENCE POSTERS

Juavinett, A.L., Bekheet, G., Churchland, A.K. "Multisensory enhancement during audiovisual looming responses in mice." *Society for Neuroscience Abstract*, November 2017.

- Juavinett, A.L.**, Kim, E.J., Collins, H. "A precise connectivity map between the mouse thalamic nucleus LP and visual cortical areas." *Society for Neuroscience Abstract*, November 2016.
- Juavinett, A.L.**, Kim, E.J., Callaway, E.M. "Exploring the function of the secondary visual nucleus of the mouse in vivo." *Janelia Thalamus and Corticothalamic Interactions Conference*, April 2015.
- Juavinett, A.L.**, Callaway, E.M. "Plaid motion responses in mouse V1 and extrastriate areas." *Society for Neuroscience Abstract*, October 2013.
- Juavinett, A.L.**, "From neurons to perception: Using art to elucidate the visual system." *Society for Neuroscience Theme H Abstract*, October 2013.
- Juavinett, A.L.**, Stewart, J.L., May, A.C., Migliorini, R., Tapert, S.F., Paulus, M.P. "An interoceptive view of the adolescent brain." *Society for Neuroscience Abstract*, October 2012.
- Stewart, J.L., **Juavinett, A.L.**, Shukla, A., Paulus, M.P. "Altered Interoceptive Processing during Inspiratory Breathing Load in Stimulant Users who Develop Problems versus Those who Do Not." *International Society of the Advancement of Respiratory Psychophysiology Abstract*, September 2012.
- Juavinett, A.L.**, Stewart, J.L., Shukla, A., Paulus, M.P. "Something feels different: Altered interoceptive processing in problem stimulant users versus Desisters." *College on Problems of Drug Dependence Abstract*, June 2012.
- Juavinett, A.L.**, Reynolds, E. "Race, Crime, and the Power of Unconscious Stereotypes." Presented at Student Research in Social Justice Conference at Muhlenberg College & Lehigh Valley SfN, April 2011.

OTHER GRANTS & AWARDS

2013	National Science Foundation Graduate Research Fellowship Program
2012	National Science Foundation GK-12 Grant, Socrates Fellowship Program
2011	William C. Rappolt '67 & Walter Oechsle '57 Neuroscience Prize
2010	Amgen Foundation Scholar, Columbia University
2009	Kathryn Wasserman Davis Projects for Peace Grant

COMMUNITY & UNIVERSITY LEADERSHIP

2020 – present	STARTneuro Program Co-Director
2020 – present	BS/MS Program Director, UC San Diego
2020	Neuromatch Academy Organizer
2019 – present	Neurobiology Major Faculty Advisor, UC San Diego
2014 – 2016	UC San Diego Neurosciences Admission Committee, Student Representative
2014 – 2016	Pint of Science San Diego, Organizing Team Member
2011 – 2014	Neurosciences Outreach Program, Member
2011 – 2014	Neurosciences Social Committee, Coordinator
2012 – 2013	Graduate Student Association, Neurosciences Representative
2011	The Franklin Institute, Philadelphia Science Festival Intern
2008 – 2009	Lafayette College Student Government, President

PRIOR RESEARCH EXPERIENCE

2012 – 2016	Doctoral student, The Salk Institute for Biological Studies
2011 – 2012	Rotation student, UC San Diego Psychiatry
2012	Rotation student, UC San Diego Cognitive Sciences
2010 – 2011	Honors Thesis Student, Lafayette College
2010	Intern, Columbia University Motor Neuron Center
2008	Intern, Louisiana State University

TEACHING EXPERIENCE

2015	Instructor, UC San Diego Psychology Department
2015	Visiting Educator, High Tech High San Marcos
2013 – 2015	UCSD Outreach Teacher Training Program
2012 – 2013	National Science Foundation GK-12 Socrates Fellow
2012	Teaching Assistant, UC San Diego, Dept. of Neuroscience
2008 – 2011	Northampton County Jail, Music Therapy Class Coordinator
2009	Santa Cruz County Jail, Kathryn W. Davis Projects for Peace Fellow

WRITING EXPERIENCE *

2020 – present	Blogger for Psychology Today (https://www.psychologytoday.com/us/blog/neuroscience-paths)
2018 – present	Writer for <i>The Spike</i> (https://medium.com/the-spike)
2017 – 2020	Assistant Editor & Writer, Massive Science
2016 – 2017	Contributor to Shmoop Online Anatomy & Physiology Course
2013 – 2016	Co-founder and Director of NeuWrite San Diego
2015	Contributor to Anatomy & Physiology Coloring Book (Quarto)
2013 – 2015	Staff writer for Proteintech Blog
2013	Staff writer for “Core Concepts” at Oxbridge Biotech Roundtable

* Writing samples available at ashleyjuavinett.com/portfolio/writing/

REVIEWING

2020 – present	<i>eLife</i>
2020 – present	<i>Science Advances</i>
2020 – present	<i>Journal for Undergraduate Neuroscience Education</i>