Pamela D. Rivière Ruiz

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EDUCATION

University of California, San Diego Sept 2016 - Jun 2023
Ph.D. in Cognitive Science
- ***Advisor:*** *Dr. Lara Rangel*

Boston University Sep 2011 - May 2015
B.A. in Neuroscience with Honors
- ***Honors Committee:*** *Dr. Howard Eichenbaum, Dr. Nancy Kopell, Dr. Mark Kramer*

PRIOR RESEARCH EXPERIENCE

Research Assistant Jun 2013 - Aug 2015
Howard Eichenbaum Laboratory
Center for Memory and Brain, Boston University

TEACHING & CONSULTING EXPERIENCE

Graduate Writing Consultant Sep 2021 - Aug 2022
Teaching & Learning Commons
University of California, San Diego

Seminar Lead: Writing Research Fellowships & Grants Aug 2022
CoB-KIBM Summer Fellowship Program Workshop
Colors of the Brain-Kavli Institute of Brain & Mind (CoB-KIBM)
University of California, San Diego

Seminar Lead: How to Read a Research Article Jul 2021
Summer Research Program
University of California, San Diego

Seminar Lead: Data Practices in the 21st Century Apr 2019 - Jun 2019
Department of Cognitive Science
University of California, San Diego

- Hosted discussions of ethical questions surrounding data collection, storage, ownership, privacy, and analysis. Guest speakers included representatives from UCSD's Institutional Review Board, scholars from the Indigenous Studies program, renowned statisticians, among others.

Graduate Teaching Assistant
Department of Cognitive Science
University of California, San Diego
Courses:
- COGS14B: Introduction to Statistical Methods Apr 2022 - Jun 2022
- COGS14A: Introduction to Research Methods Jan 2022 - Mar 2022

- COGS1: Introduction to Cognitive Science — Sept 2021 - Dec 2021
- COGS14A: Introduction to Research Methods — Jul 2021 - Aug 2021
- COGS107A: Neuroanatomy and Neurophysiology — Sep 2017 - Dec 2017
- COGS107C: Cognitive Neuroscience — Mar 2017 - Jun 2017
- COGS1: Introduction to Cognitive Science — Jan 2017 - Mar 2017

Undergraduate Learning Assistant — Aug 2012 - Aug 2014
Chemistry Department
Boston University
Course: General Chemistry (8 consecutive semesters, Summer included)

COMMUNITY OUTREACH

Colors of the Brain — Sep 2016 - Present
Co-founder, Active Member, Mentor

- Mentorship program for minority students interested in Cognitive Science and Neurosciences. Through one-on-one mentorship as well as small workshop series, we aim to facilitate the transition of minority students into research.
- **CoB-KIBM Summer Fellowship Program**: We have now partnered with the Kavli Institute for Brain and Mind (KIBM) at UCSD to fund four undergraduate researchers belonging to underrepresented minority groups. The first cohort of summer fellows began in 2021. Our finalists will receive mentorship from CoB members throughout the school year.

San Diego Refugee Tutoring — Dec 2016 - Feb 2017
Volunteer

- Program based in the City Heights community in San Diego, which is home to a large refugee population. I participated as a volunteer in the after-school Ibarra Elementary School tutoring sessions, which serve students from refugee backgrounds.

Program for Student Success in Engineering (POSSE) — Jun 2016
Volunteer

- Program through which volunteers carry out fun STEM activities at Gompers Preparatory Academy to encourage high school student engagement in science and engineering.

PUBLICATIONS

- **Rivière PD**, Rangel LM (in prep) Behaviorally dependent hippocampal interneuron entrainment to multiple rhythms.
- **Rivière PD**, Schamberg G, Coleman TP, Rangel LM (2022) Modeling relationships between rhythmic processes and neuronal spike timing. *Journal of Neurophysiology, 128(3), 593-610*
- **Rivière PD**, Rangel LM (2018) Spike-field coherence and firing rate profiles of CA1 interneurons during an associative memory task. *In: Deines A., Ferrero D., Graham E., Im M., Manore C., Price C. (eds) Advances in the Mathematical Sciences. AWMRS 2017. Association for Women in Mathematics Series, vol 15. Springer, Cham.*
- **Rivière PD** (2017) Entorhinal Cortex. *Chapter in Encyclopedia of Animal Cognition and Behavior. Springer.*

- **Rivière PD** (2017) Medial Entorhinal Area. *Chapter in Encyclopedia of Animal Cognition and Behavior. Springer.*

- Rangel LM, Rueckemann JW, **Rivière PD**, Keefe KR, Porter BS, Heimbuch IS, Budlong CH, Eichenbaum H (2016) Rhythmic coordination of hippocampal neurons during associative memory processing. *eLife, doi: 10.7554/eLife.09849*

- McKenzie S, Frank AJ, Kinsky NR, Porter B, **Rivière PD**, Eichenbaum H (2014) Hippocampal representation of related and opposing memories develop within distinct, hierarchically organized neural schemas. *Neuron, 83(1), 202-215.*

POSTERS & PRESENTATIONS

- Mechanisms of hippocampal olfactory information processing for successful goal-directed behavior (**Learning & Memory 2023**) **Rivière PD**, Bladon J, Symanski C, Kullberg E, Jadhav S, Rangel LM.

- Dentate gyrus representations of spatial and sensory cue conjunctive information (**Learning & Memory 2023**) Heyman CR, Borzello M, **Rivière PD**, Rangel LM
- Recommendations for serving students from historically marginalized groups in neuroscience (**Cognitive Neuroscience Society 2023**) Cazares C, **Rivière PD**, Gorman JC, Ali S, Preston MJ.

- Modeling neuronal engagement in rhythmic network activity (**Society for Neuroscience 2021**) **Rivière PD**, Schamberg G, Coleman TP, Rangel LM.

- Model selection approach for identifying rhythmic entrainment profiles of CA1 interneurons (**Cosyne 2020**) **Rivière PD**, Rangel LM.

- Stimulation of the lateral entorhinal cortex reveals optimal frequencies for rhyhtmic entrainment of downstream hippocampal neurons. (**Society for Neuroscience 2015**) Rangel LM, Keefe KR, **Rivière PD**, Eichenbaum H

- Single cell and ensemble odor-place representations in the dentate gyrus and CA1 of the hippocampus. (**Society for Neuroscience 2014**) Rangel LM, Keefe KR, **Rivière PD**, Budlong CH, Heimbuch IS, Porter BS, Eichenbaum H

FELLOWSHIPS AWARDS

Chancellor's Postdoctoral Fellowship *Jul 2023 - Jun 2024*
University of California San Diego

SD IRACDA *Jul 2023 - Jun 2026*
Institutional Research and Academic Career Development Award
University of California San Diego

UC President's Dissertation Year Fellowship *Jul 2022 - Jun 2023*
University of California San Diego

Honorable Mention *May 2022*
Edward A. Bouchet Graduate Honor Society

Innovative Research Grant *Sep 2018 - May 2019*
Kavli Institute for Brain and Mind

Graduate Research Fellowship Program *Sep 2018 - 2021*
National Science Foundation

San Diego Fellowship Award *Sep 2017 - June 2018*
Temporal Dynamics of Learning Center, UCSD

Most Available Teaching Assistant Award *June 2017*
Department of Cognitive Science, UCSD

Senior Honors in Neuroscience *May 2015*
Department of Neuroscience, Boston University

Silvio O. Conte Grant *June 2013, 2014*
Department of Neuroscience, Boston University

TECHNICAL SKILLS

Data Analysis & Visualization
Analysis Types: digital signal processing, statistical modeling
Data Types: neural time series data
Programming Languages: Python, MATLAB

In Vivo Electrophysiology
Single-unit and local field potential recordings
Hyperdrive construction (96-, 128-channel)
Microdrive construction (16-, 32-channel, multi-site)

Behavioral Training
Context-guided associative learning tasks
T-maze alternation task (with and without treadmill)
Circular track
Radial arm maze

LANGUAGES

Spanish
Native speaker

English
Fluent

French
Fluent