Paula P. Brooks

Doctoral Candidate, Princeton Neuroscience Institute

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EDUCATION

Princeton University, Ph.D., Neuroscience, 2017 – present
Advisor: Professor Kenneth Norman
Thesis Committee: Professors Kenneth Norman, Uri Hasson, Yael Niv, & Maureen Ritchey (Boston College)

Princeton University, M.A., Neuroscience, September 2019

Princeton University, A.B., Psychology, June 2015
Certificate in Neuroscience

RESEARCH EXPERIENCE

Visiting Scholar, 2019 – present
Memory Modulation Lab, Boston College

Graduate Researcher, 2017 – present
Princeton Computational Memory Lab, Princeton University

Laboratory Manager, 2016 – 2017
Princeton Computational Memory Lab, Princeton University

Research Assistant, 2015 – 2017
Princeton Computational Memory Lab, Princeton University

Undergraduate Researcher, 2014 – 2015
Princeton Computational Memory Lab, Princeton University

Undergraduate Researcher, 2013
Developmental Psychology Lab, Princeton University

PUBLICATIONS

Wang, B., Antony, J.W., Lurie, S., **Brooks, P.P.**, Paller, K., & Norman, K.A. (2019). Targeted memory reactivation during sleep elicits neural signals related to learning content. *Journal of Neuroscience*.

Antony, J., Cheng, L.Y., **Brooks, P.P.**, Paller, K., & Norman, K.A. (2018). Competitive learning modulates memory consolidation during sleep. *Neurobiology of Learning and Memory*.

Rafidi, N.S., Hulbert, J.C., **Brooks, P.P.**, & Norman, K.A. (2018). Reductions in retrieval competition predict the benefit of repeated testing. *Scientific Reports*.

Antony, J., Piloto, L., Wang, M., **Pacheco, P.**, Norman, K.A., & Paller, K. (2018). Sleep spindle refractoriness segregates periods of memory reactivation. *Current Biology*.

FELLOWSHIPS & HONORS

Harvey Fellowship ($32,000), 2020 – 2022
Mustard Seed Foundation

Diversity Supplement ($107,805), 2020 – 2021
National Institutes of Health

Neuroscience Scholars Program Fellow ($6,000), 2019 – 2021
Society for Neuroscience

Neuroscience Scholars Program Associate ($1,000), 2018 – 2019
Society for Neuroscience

Summer Fellowship ($3,000), 2014
Program on U.S. Health Policy, the Keller Center for Innovation in Engineering Education, and Princeton Internships in Civic Service

OPEN SCIENCE

Brooks, P.P., McDevitt, E.A., Mennen, A.C., Visconti di Oleggio Castello, M., & Nastase, S.A. (2020). Princeton Handbook for Reproducible Neuroimaging (Version v0.1.0). Zenodo. http://doi.org/10.5281/zenodo.3688789

OPEN DATASETS

OpenNeuro ds002345
Nastase, S. A., Liu, Y.-F., Hillman, H., Zadbood, A., Hasenfratz, L., Keshavarzian, N., Chen, J., Honey, C. J., Yeshurun, Y., Regev, M., Nguyen, M., Chang, C. H. C., Baldassano, C. B., Lositsky, O., Simony, E., Chow, M. A., Leong, Y. C., **Brooks, P. P.**, Micciche, E., Choe, G., Goldstein, A., Halchenko, Y. O., Norman, K. A., & Hasson, U. Narratives: fMRI data for evaluating models of naturalistic language comprehension.

Nastase, S.A., Mennen, A.C., **Brooks, P.P.**, & McDevitt, E.A. (2020). Princeton Handbook for Reproducible Neuroimaging: Sample Data (Versions 1.0.0) [Data set]. Zenodo. http://doi.org/10.5281/zenodo.3677090

CONFERENCE PRESENTATIONS

Brooks, P.P., Hulbert, J., Lormestoire, A., Ritchey, M., & Norman, K.A. (2019). Investigating the impact of memory reactivation on the successful forgetting of negative memories. Poster presented at the Society for Neuroscience annual meeting, Chicago, IL.

Antony, J.W., Piloto, L.R., Wang, M., **Brooks, P.P.**, Paller, K.A., & Norman, K.A. (2018). Sleep spindle refractoriness segregates periods of memory reactivation. Poster will be presented at the Society for Neuroscience annual meeting, San Diego, CA.

Antony, J.W., Cheng, L.Y., **Pacheco, P.**, Wang, B., Paller, K.A. & Norman, K.A. (2017). Competition between items during learning influences targeted memory reactivation during sleep. Poster presented at the Society for Neuroscience annual meeting, Washington, DC.

Wang, B., Antony, J.W., Lurie, S., **Pacheco, P.**, Paller, K.A. & Norman, K.A. (2017). Detecting content-specific patterns using targeted memory reactivation. Poster presented at the Society for Neuroscience annual meeting, Washington, DC.

Antony, J.W., Piloto, L.R., Wang, B., Wang, M., **Pacheco, P.**, Paller, K.A., & Norman, K.A. (2017). Mechanisms of targeted memory reactivation during sleep: The role of pre- and post-cue spindles. Poster presented at the Cognitive Neuroscience Society annual meeting, San Francisco, CA.

Cheng, L.Y., Antony, J.W., **Pacheco, P.**, Norman, K.A. & Paller, K.A. (2017). Sensory stimulation during sleep to selectively strengthen memories: Sounds

can be arbitrarily associated with visuospatial learning. Poster presented at the Cognitive Neuroscience Society annual meeting, San Francisco, CA.

Antony, J. W., Piloto, L. R., Cheng, L., **Pacheco, P.**, Paller, K. A., & Norman, K. A. (2016). Competition between items during learning influences targeted memory reactivation during sleep. Poster presented at the International Conference on Memory, Budapest, Hungary.

Pacheco, P. (2014). Rough sleepers: Who they are and what we can learn from them. Talk given at the Center for Health and Wellbeing Student Research Symposium, Princeton, NJ.

TEACHING & MENTORING

Mentor, 2019 – present
Princeton Computational Memory Lab, Princeton University
- Arlene Lormestoire († research assistant)

Graduate Student Mentor, 2019 – 2020
McNair Scholars Program, Boston College

Guest Instructor for MATLAB Summer Workshop, 2019
Princeton Neuroscience Institute Summer Internship Program, Princeton University

Assistant-in-Instruction, 2018 – 2019
Neuroscience Department, Princeton University
- NEU 200: Functional Neuroanatomy
- NEU 202: Introduction to Cognitive Neuroscience
  - Guest Lecturer: *The Lobotomist and Ethics in Human Subjects Research*

Resident Graduate Student, 2018 – 2019
Forbes College, Princeton University

Graduate Fellow, 2017 – 2018
Scholars Institute Fellows Program, Princeton University

Panelist, 2017, 2018
HISPA Latinos in College Conference, Princeton University

Mentor, 2016 – 2017
Princeton Computational Memory Lab, Princeton University
- Erin Chatman (* visiting student)
- Jesse McDonough**
- Margaret Wang**
- Sarah Lurie (** Princeton senior)
- Gianna Perez*

Co-Project Coordinator, 2012 – 2015
Princeton One-on-One Mentoring, Princeton University

SCIENCE COMMUNICATION

"Surprising events create event boundaries in memories", Princeton Insights

"Beyond the Science: 4 Lessons Learned from the Kanwisher Award Talk", Guest post for the 2020 Cognitive Neuroscience Society annual conference

PROFESSIONAL ACTIVITIES & SERVICE

Co-Organizer, 2019, 2020
Brainhack Princeton Conference

Participant, 2020
Communicating Science Conference – Michigan (ComSciCon-MI)

Reviewer, 2020 – present
Association for Psychological Science Student Caucus competitions

Co-Student Organizer, 2019
Manhattan Area Memory

Professional Affiliations

Cognitive Neuroscience Society, 2020 – present

Association for Psychological Science, 2018 – present

Society for Neuroscience, 2016 – present

Skills & Special Knowledge

Languages

- Spanish: fluent (speaking, reading, writing)
- French: competent (speaking, reading, writing)

Programming

- MATLAB (Psychtoolbox-3, EEGlab, sleepSMG)
- Python (Psychopy)
- R
- Inquisit
- HTML/CSS

Certifications

- Human Subjects Protection (CITI)
- EEG
- MRI Level 1 and Level 2