

SARAH RICUPERO

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EDUCATION

The Pennsylvania State University

August 2019 - Present

PhD in Neuroscience

University of Scranton

2019

Bachelor of Science with Honors

Neuroscience

Biomathematics

RESEARCH INTERESTS

Cognitive neuroscience and cognitive modeling of learning and memory

ACADEMIC AWARDS

Excellence in Neuroscience (University of Scranton, 2019)

Undergraduate Honors Program (University of Scranton)

Nu Rho Psi (Neuroscience) Honor Society

Pi Mu Epsilon (Mathematics) Honor Society

PROFESSIONAL MEMBERSHIPS

Society for Mathematical Psychology

PUBLICATIONS

Papers:

Ricupero, s., Carpenter, C.M., Steinkrauss, A.C., Gerver, C.R., Chamberlain, J.D., Monkman, R.G., Overman, A.A., Dennis, N.A. (submitted). Neural Distinctiveness and Reinstatement of Hippocampal Representations Support Unitization for Associations.

Ricupero, S., Ritter, F.E. (submitted to SAGE Case Studies). Running Behavioral Studies with Human Participants: Online

In Prep:

Ritter, F.E., Ricupero, S.R., Yeh, M. K.-C., Workman, D., Oury, J.D., Stager, S., McDermott, A.F. (in prep). Testing a Learning and Retention Theory Using a Troubleshooting Task.

Posters:

Ricupero, S., Ritter, F., McDermott, A., Oury, J. D., Workman, D. (2022, July). Testing the KRK predictions: Testing knowledge too much leads to learning. Paper presented at Virtual MathPsych/ICCM 2022. Via mathpsych.org/presentation/813.

Ricupero, S. L., Oury, J. D., Yeh, M. K.-C., Tehranchi, F., McDermott, A. F., Norsworthy, W., Workman, D., Stager, S. J., Ritter, F.E. (2021). Learning and forgetting curves for a complex task with 3- to 14-day retention intervals: Implications for ACT-R. Talk presented at the Twenty-Eighth Annual ACT-R Workshop.

Ricupero, S. L., Oury, J. D., Yeh, M. K.-C., Tehranchi, F., McDermott, A. F., Norsworthy, W., Workman, D., Ritter, F. E. (2021). Testing a learning and retention theory with a complex task with 3- to 14-day retention intervals. Presented at Virtual MathPsych/ICCM 2021.

RESEARCH EXPERIENCE

Cognitive Aging and Neuroimaging Lab, Pennsylvania State University — University Park, PA

- *Collaborating Graduate Student*

January 2021 - Present

- Conducted analysis of fMRI data (preprocessing, univariate, multivariate)
- Created novel implicit learning task

Applied Cognitive Science Lab, Pennsylvania State University — University Park, PA

- *Graduate Research Assistant*

August 2019 - Present

- Ran participants through KRK learning theory study
- Trained RAs on KRK study
- Conducted literature review of Caffeine and Cognition

Dr. Marc Seid's Neuroethology Lab, University of Scranton — Scranton, PA

- *Faculty-Student Research Program*

September 2016 - May 2019

- Conducted behavioral assays on *Camponotus floridanus*
- Modeled network of *Camponotus floridanus* colonies
- Presented pilot project at poster session (May 2017)
- Wrote program in Python to analyze video data
- Honors Thesis defended

MIT Summer Undergraduate Research Program — Cambridge, MA

- *Research Intern*

June 2018 - August 2018

- Data analysis in MATLAB to produce probability distributions
- Conducted behavioral assays on mice
- Learned basics of electrophysiology
- Presented research at two poster sessions (August 2018)

TECHNICAL STRENGTHS

Programming Languages: Python, R, MATLAB, LaTeX

Tools: SPM, fMRIPrep, Excel

Laboratory:

- Immunohistochemistry staining of ant brains
- Dissection and slide-mounts of ant brains
- Laser confocal microscopy
- Animal behavior assays (insect, crayfish, and mouse)
- Running human participants through an online study
- fMRI Data Analysis