September 2025

Samuel M. Maione

smaione1@jh.edu | https://sammaione.github.io/

EDUCATION

Binghamton University *Binghamton, NY*
Thesis advisor: Peter Gerhardstein *May 2023*
BSc in Integrative Neuroscience | Sociology (Minor)

RESEARCH EXPERIENCE

Laboratory Technician / Manager *Johns Hopkins University*
Look, Infer, Understand (LIU) Lab *July 2023 - Present*
Principal Investigator: Shari Liu

- Pre-registered and conducted novel research to investigate the relationship between the neural correlates of spatial working memory and intuitive physics using a series of fMRI analyses
- Mentored part-time research staff during their own fMRI analysis
- Created lab standard for fMRI analysis pipeline (based in Python, Jupyter, Bash)
- Created lab standard for looking time analysis using computer vision (based in Python, Jupyter, Bash)
- Created IRB protocols for fMRI, behavioral testing, and developmental studies
- Managed lab budget and reimbursement procedures for all members of the lab
- Organized lab events, inventory, project board, and lab manual
- Presented research to lab members, department members (Psychological and Brain Sciences Seminar), and outside lab members (Harvard Laboratory for Developmental Studies)

Research Assistant *Binghamton University*
Binghamton Baby Lab *Jan 2022 - June 2023*
Principal Investigator: Peter Gerhardstein

- Led partnership with Victoria Pelak (University of Colorado) and Peter Gerhardstein to create a novel survey to characterize the psychological and epidemiological profile of visual snow syndrome
- Completed an honors thesis and earned the Undergraduate Research Award and Steven W. Kovacs Memorial Award for my commitment to psychological research
- Ran in-person experiments with adults and children (aged 3 to 9 years)
- Programmed studies for EEG (using Matlab), eye tracking (using EPrime), and behavioral experiments (in PsychoPy)

PUBLICATIONS

Maione, S.M., Pelak, V.S., Gerhardstein, P. (2025). Assessment of a Novel Patient Reported Outcome for Visual Snow Syndrome: The Colorado Visual Snow Survey 2.0. *Frontiers of Neurology*. [accepted] [PsyArXiv]

Maione, S.M., & Liu, S. (in prep). Shared neural resources between processing of dynamic physical objects and spatial working memory. [OSF]

CONFERENCE PRESENTATIONS

Maione, S.M., & Liu, S. (2024). Frontoparietal regions engaged in physical prediction are also involved in spatial working memory. [Conference abstract]. [Poster]. *Conference on Cognitive Computational Neuroscience*, Boston, MA.

Kim, M., **Maione, S.M.**, Drissi, A., Liu, S. (2024). Cortical regions preferentially engaged during social and physical processing represent obstacles to agent action and object motion. [Conference abstract]. *Conference on Cognitive Computational Neuroscience*, Boston, MA.

Maione, S.M., Gerhardstein, P. (2023). Perception through Visual Snow Syndrome: Faces, Scenes and Self-Reported Symptoms. *Binghamton University Psi Chi Fair*, Binghamton, NY. (**Undergraduate Research Award**).

Maione, S.M., Duggan, N., Gerhardstein, P. (2022). Changing Orientation Anisotropy Influenced by the Digital Age. *Binghamton University Psi Chi Fair*, Binghamton, NY.

SERVICE

Emerging Leaders Program Mentor *Binghamton University*
Supervisor: Tyler Lenga *May 2022 - May 2023*

- Provided a 90-minute, structured, weekly space for 13 newly matriculated students to develop professional skills and become acclimated to college life
- Led a partnership with the Binghamton Rescue Mission, a homeless shelter, and created care packages and presentations for residents

Supplemental Instruction Leader *Binghamton University*
Program Supervisor: Lauren Morris *Aug 2021 - May 2023*
Faculty Supervisor: Brittany Race

- Created 60-minute, structured, weekly review sessions for an introductory psychology lecture, with attendance ranging from 20-135 students per session
- Connected students with campus resources and specific faculty to help students foster research experience and professional development

HONORS/AWARDS

2023 Steven W. Kovacs Memorial Award
2023 Binghamton University Undergraduate Research Award
2022 Dr. Dominick A. and Susan G. Artuso Scholarships

LABORATORY/TECHNICAL SKILLS

Laboratory: Open science framework (pre-registration), fMRI (heudiconv, fMRIprep, FSL, Nilearn), EEG (SSVEP, ERP), eye tracking (iView X), participant recruitment (Cloud research, MTURK, Prolific),

developmental populations (age 3 and above).

Technical: Python, R, machine learning (tidymodels, scikit-learn), MATLAB, PsychoPy, HPC computing (e.g. SLURM), Git, Jupyter, HTML/XML, Singularity, Docker, remote shell servers (SSH/SMB).

Other: Hardware installation & repair, patient consenting, Qualtrics, Adobe/Microsoft/Google/Apache Suite.