

Samuel M. Maione

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EDUCATION

Binghamton University

Thesis advisor: Peter Gerhardstein

BSc in Integrative Neuroscience | Sociology (Minor)

Binghamton, NY

May 2023

RESEARCH EXPERIENCE

Laboratory Technician / Manager

Look, Infer, Understand (LIU) Lab

Principal Investigator: Shari Liu

Johns Hopkins University

July 2023 - Present

- 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 Baby Lab

Principal Investigator: Peter Gerhardstein

Binghamton University

Jan 2022 - June 2023

- 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 Measure for Visual Snow Syndrome: The Colorado Visual Snow Survey 2.0. *Frontiers in Neurology*, *16*, 1664310. [[OSF](#)] [[Paper](#)]

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 on Cognitive Computational Neuroscience*, Boston, MA. [[Conference abstract](#)]. [[Poster](#)].

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 on Cognitive Computational Neuroscience*, Boston, MA. [[Conference abstract](#)].

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 (univariate, multivariate), EEG (SSVEP, ERP), eye tracking, general 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), iView X eye-tracking, fMRI modeling (heudiconv, fMRIPrep, FSL, Nilearn)

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