Mark Agrios

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Education

PhD Neuroscience, Northwestern University

- September 2020 - present

B.S. Neuroscience & Mathematics, *cum laude*, College of William & Mary

- Graduated Spring 2019

Positions

Research Technologist: The Miri Lab, Northwestern University [https://mirilab.org]

- August 2019 - September 2020

Teaching Experience

Lecturer:

Walter Payton College Preparatory High School Lecturer for Northwestern University Brain Awareness Outreach Program, Introduction to Computational Neuroscience

- October 27th 2021

Teaching Assistant:

Fundamentals of Neuroscience, Northwestern University

- Fall 2021

Biostatistics, College of William and Mary

- August 2018 - May 2019

Tutor:

Calculus, statistics, physics, linear algebra, biophysics. College of William and Mary

- August 2018 - May 2019

Publications [* first author]

*Ishikawa, A., *Agrios, M., *Forrest, A., *Savya, S., Sroussi, H., Xu, F., Miri, A. (in preparation) *Functional Connectivity and Dynamics in Mouse Motor Cortex*.

Leadership Positions

Pi Mu Epsilon Math honors society at the College of William & Mary

- President: Fall 2018 - Spring 2019
- Vice-President: Fall 2017 - Spring 2018

Grants Awarded

William & Mary honors fellow

- Summer 2018
- Project: *Simplicial Homology and Burst-Synchronizing Neural Networks*
  Advisors: Prof Sarah Day (department of mathematics) Prof Drew LaMar (department of biology)

National Science Foundation, College of William & Mary EXTREEMS-QED program

- Summer 2017

Conference Presentations

Society for Neuroscience, Chicago (poster, co-author)	October 2019
SIAM, the University of Delaware (talk)	September 2018
Summer research colloquium, William and Mary (talk, invited)	June 2018
SIAM-SEAS, UNC (talk, invited)	March 2018
JMM national conference, San Diego (talk)	January 2018
SUMS, James Madison University (talk)	October 2017
Summer research colloquium, William and Mary (talk)	July 2017

Computational Experience [https://github.com/markagrios]

Python: Computational topology/homology (GUDHI, PHAT), biological neuron simulation (NEST, Brian2, NEURON), scientific computing (Scipy, Numpy), data analysis and visualization (Pandas, Seaborn)
Matlab: Data analysis/statistics, dimensionality reduction (PCA, ISOMAP, t-SNE, UMAP), parallel computing
Microcontroller software: Arduino, Raspberry Pi
Electrophysiology and spike-sorting software: SpikeGLX, Kilosort/Kilosort2, Phy