# LUKE SHAW

Motor and Vision Systems Neuroscientist

**lukeshawinfo.info**
716.867.6891
luke_shaw@urmc.rochester.edu

2024 Ph.D. Neuroscience, University of Rochester Medical Center (URMC) | Rochester, NY
2020 M.S. Neuroscience, URMC | Rochester, NY
2013 M.F.A. Imaging Arts, Rochester Institute of Technology (RIT) | Rochester, NY
2009 B.S. Neuroscience, UR | Rochester, NY

**2024-Pesent : Postdoctoral Researcher under Dr. Jude Mitchell**
Targeting and Electrophysiology of Direct V1 to areaMT Projections in the Marmoset Monkey
**2018-2024 : Neuroscience PhD Student advised by Dr. Jude Mitchell and Dr. Kuan Wang**
Manipulating Premotor-Parietal Feedback during Visually Guided Reaching Behavior in the Marmoset
*2025 Neuroscience Department Vincent du Vigneaud PhD Award Nominee*
**2018-2019 : PhD Lab Rotations**
Intracranial Recordings in a Mouse Model of Batten Disease
Novel 3D Reconstruction of Vision in Naturalistic Environment Exploration
Testing Reaching Behavior in Aging Marmosets Using Markerless Motion Tracking
**2015-2018 : Lab Manager at Cognitive Neurophysiology Laboratory, Dr. John Foxe**
Human electroencephalography, electrocorticography, and psychophysics exploring biomarkers

**Selected Papers:**

**Luke Shaw**, Krishnan Padmanabhan, Amy Buckleaw, Jude Mitchell, Kuan Hong Wang. *Projection Specific Intersectional Optogenetics for Precise Excitation and Inhibition in the Marmoset Brain*. (in prep)

**Luke Shaw**, Kuan Hong Wang, Jude Mitchell. *Fast prediction in marmoset reach to grasp movements for dynamic prey*. Curr Biol. 2023 Jun 19;33(12):2557-2565.e4. doi: 10.1016/j.cub.2023.05.032.

Allison Murphy, **Luke Shaw**, J. Michael Hasse, Robbe Goris, Farran Briggs. (2020) Optogenetic activation of corticogeniculate feedback stabilizes response gain and increases information coding in LGN neurons. Journal of Computational Neuroscience. June 06. PMID: 32632511.

**Experimental Experience** (*=Mouse and Non-Human Primate)
Intracranial, extracellular electrophysiology*
Stereotaxic intracranial viral injection and surgery*
Head implant surgery*
Optogenetics*
Eye tracking*
Behavioral tracking and quantification*
Histological analysis and categorization*
Immunohistochemistry*
Custom robotics and controller engineering
Human psychophysics and behavior
Human EEG collection and analysis
Human ECoG collection and analysis

**Technical Expertise**
Matlab
Anaconda//Python
Open Ephys
Arduino // C++
3D Printing workflows
Machine vision powered motion tracking (DeepLabCut and Anipose)
Custom machine learning networks (Keras)
Presentation (NeuroBehavioral Systems)
Brain Electrical Source Analysis (BESA GmbH)
Adobe Creative Suite
Web Design in HTML, CSS