Sam Cooler

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Education

2021-ongoing	Postdoctoral research in Neurosurgery, Stanford University, Stanford, California
2014-2021	Ph.D. Neuroscience, Northwestern University, Chicago, Illinois
2010-2012	M.S. Electrical and Computer Engineering, The Ohio State University, Columbus, Ohio
2006-2010	B.S. Electrical and Computer Engineering, The Ohio State University, Columbus, Ohio

Research Experience

2021-ongoing	Postdoctoral Researcher with Professor E.J. Chichilnisky, Stanford University Retinal neuron physiology and classification, brain-computer interfacing, vision restoration and enhancement
2014-2020	Graduate Researcher with Professor Greg Schwartz, Northwestern University Electrophysiology in the mouse retina for system analysis and typology Focus on visual responses, gap junction networks, feature selectivity, receptive fields
2014	Graduate rotation with Professor Konrad Kording, Northwestern University Modeling analysis of primate motor cortex during behavior and reward
2012	Graduate Researcher with Professor Kannan Srinivasan, The Ohio State University Wireless medium access schema for full-duplex hardware technology
2010-2011	Graduate Researcher with Professor Hesham El Gamal, The Ohio State University Deterministic network capacity bound model for the star-relay network
2009-2010	Student Research Assistant with Professor Siddharth Rajan, The Ohio State University Simulations of nano-structure P-N junction geometries

Publications

1. "Unified classification of mouse retinal ganglion cells using function, morphology, and gene expression". Jillian Goetz, Zachary F. Jessen, Anne Jacobi, Adam Mani, Sam Cooler, Devon Greer, Sabah Kadri, Jeremy Segal, Karthik Shekhar, Joshua Sanes, Gregory W. Schwartz. (2021) *In review*
2. "An offset ON-OFF receptive field is created by gap junctions between distinct types of retinal ganglion cells". Sam Cooler and Gregory W. Schwartz. (2020). *Nature Neuroscience*
3. "Premotor and Motor Cortices Encode Reward". Pavan Ramkumar, Brian Dekleva, Sam Cooler, Lee Miller, and Konrad Kording. (2016). PLoS One *11*, e0160851.
4. "RCTC: Rapid concurrent transmission coordination in full duplex wireless networks" Wenjie Zhou, Srinivasan, K., and Sinha, P. (2013). (Non-author collaboration in network simulation software) In 2013 21st IEEE International Conference on Network Protocols (ICNP), (IEEE)

Presentations

- Posters: FASEB Retinal Neurobiology and Visual Processing Conference 2016 and 2018, Association for Research in Vision and Ophthalmology 2019, European Retina Meeting 2019, Society for Neuroscience 2016, 2018, 2019
- Talk: Northwestern University Interdepartmental Neuroscience Retreat 2018

- Talk: Northwestern University Vision Research Advanced Topics Seminar Series 2017, 2019
- Talk: Bay Area Vision Research Day 2021

Awards and Funding
- NIH NEI Kirschstein-NRSA F31 Predoctoral Fellowship 2018-2021
- Best Graduate Student Poster Award: FASEB *Retinal Neurobiology and Visual Processing 2018*
- NIH NEI T32 Vision Science Training Grant at Northwestern University Dept. of Ophthalmology
- NIH NEI T32 Stanford Vision Training Program at Stanford University
- The Ohio State University Presidential Fellowship

Professional Experience

2013-2014 Engineer, Qualcomm Technologies, Inc, San Diego, CA
Performed wireless modem software and hardware testing using wireless environmental simulations and post-hoc behavioral analysis

2008 Engineering Intern, Honda of America Manufacturing, Marysville, OH
Investigated and resolved defects in supplied vehicle electronic components as part of an in-factory engineering team

2007 Student Research Assistant, Center for Automotive Research, Columbus, OH
Modified electronic tools for work on a research vehicle, generated lab equipment procedure documentation

Teaching Experience

2017 Teaching Assistant, Northwestern University
MyData Program, Introduction to Programming for Neuroscientists workshop

2015, 2016 Graduate Teaching Assistant, Northwestern University
Taught recitation sections of NUIN 408, Quantitative Methods and Experimental Design

2011-2012 Graduate Instructor, The Ohio State University
Taught introductory electrical engineering lab course, updating older syllabus with modern examples

2009-2010 Student tutor with the Eta Kappa Nu honor society, The Ohio State University
Assisted undergraduate ECE students with studies and homework