

Scott C. Harris

Email: scott.harris@ucsf.edu

Phone: 650.245.9321

EDUCATION

- 2018 – present **University of California, San Francisco**, San Francisco, CA
Ph.D. Neuroscience (in progress)
- 2014 – 2018 **Duke University**, Durham, NC
B.S. Neuroscience, Philosophy, *magna cum laude*

RESEARCH EXPERIENCE

- 2018 – present **Ph.D. Candidate**
Neuroscience Graduate Program, University of California, San Francisco.
- Investigated signal transformation and retinal circuitry underlying the vertical optokinetic reflex
 - Patch clamp electrophysiology, mouse behavior, biophysical modeling
 - Thesis Committee Members: Drs. Evan Feinberg (Chair), Kevin Bender, Felice Dunn, Marla Feller, Massimo Scanziani
 - Advisor: Dr. Felice Dunn
- 2015 – 2018 **Undergraduate Researcher**
Hull Laboratory, Department of Neurobiology, Duke University School of Medicine.
- Developed an optogenetic technique to selectively label olivocerebellar climbing fibers and probe the limits of cerebellar learning in awake, behaving mice
 - *In vivo* electrophysiology, mouse behavior, histology
 - Thesis Committee Members: Drs. Lindsey Glickfeld, Court Hull, Thomas Newpher
 - Advisor: Dr. Court Hull
- 2016 **Research and Development Intern**
Neuroscience Department, Genentech Inc., South San Francisco, CA.
- Characterized safety liabilities associated with Alzheimer's therapeutics in the company pipeline
 - Protein quantification, cell culture, live cell imaging
 - Advisor: Dr. Jasvinder Atwal

PUBLICATIONS

Harris, S.C., & Dunn, F.A. (Submitted 2022, June). Asymmetric retinal direction tuning predicts optokinetic eye movements across stimulus conditions.
[biorxiv.org/content/10.1101/2022.06.10.495717v1](https://www.biorxiv.org/content/10.1101/2022.06.10.495717v1)

Della Santina, L., Alfred, K. Y., **Harris, S. C.**, Soliño, M., Ruiz, T. G., Most, J., ... & Ou, Y. (2021, August). Disassembly and rewiring of a mature converging excitatory circuit following injury. *Cell Reports*, 36(5), 109463.

Newpher, T. M., **Harris, S.**, Pringle, J., Hamilton, C., & Soderling, S. (2018, May). Regulation of spine structural plasticity by Arc/Arg3.1. *Seminars in cell & developmental biology* (Vol. 77, pp. 25-32). Academic Press.

PRESENTATIONS

Harris S.C., & Dunn, F.A. (2022, May) *Asymmetries in the vertical optokinetic reflex result from disproportionate excitation to complementary ON direction-selective retinal ganglion cell types*. Paper at the Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting. Funded. Denver, CO.

Harris, S.C., & Dunn, F.A. (2022, April) *Retinal direction tuning predicts gaze stabilizing eye movements*. Introductory talk for the Annual Roy Steinberg Invited Lecture, UCSF Dept. of Ophthalmology, San Francisco, CA.

Harris, S.C., & Dunn, F.A. (2022, March) *Retinal direction tuning predicts gaze stabilizing eye movements*. Research in progress talk for UCSF Neuroscience Graduate Program. San Francisco, CA.

Harris, S.C., & Dunn, F.A. (2021, November) *Disproportionate excitation generates asymmetric direction tuning in complementary retinal ganglion cell types*. Poster at UCSF Neuroscience Program Retreat, San Francisco, CA.

Harris, S.C., Zahler, S., & Feinberg, E. (2019, April) *Anatomic constraints on orienting circuitry in the superior colliculus*. Presented findings of rotation project to the UCSF Neuroscience community, San Francisco, CA.

Harris, S.C., & Hull, C. (2018, May) *Development of an optical tool for studying cerebellar-dependent sensorimotor associations*. Undergraduate thesis defended in front of a three-member faculty committee and poster presented to the general public and local neuroscience community, Durham, NC.

Harris, S.C., Wetzel-smith, M.K. & Atwal, J.K. (2016, August) *Exploring safety limitations of blood-brain barrier-crossing bispecific antibodies*. Poster at Genentech Inc. Intern Poster Day, South San Francisco, CA.

FELLOWSHIPS AND AWARDS

2022	Knights Templar Eye Foundation Travel Grant to attend the Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting
2021 – 2024	Ruth L. Kirschstein Predoctoral Individual National Research Service Award (NIH/NEI F31 Fellowship) Award Number: F31 EY-033225
2021	Blackstone Charitable Foundation LaunchPad Ideas Competition National Grand Prize Winner – For the invention of a novel visual prosthetic
2020 – 2023	Moritz-Heyman Discovery Fellowship, University of California, San Francisco
2020	National Science Foundation Graduate Research Fellowship Program Honorable Mention
2017	Duke Institute for Brain Sciences, Summer Neuroscience Program Fellowship

TEACHING EXPERIENCE

2020	Instructor , Introduction to Computer Programming, University of California, San Francisco
2020	Teaching Assistant , Organ Systems and Human Pathophysiology, University of California, San Francisco
2020	Guest Instructor , Lowell High School Science Club

SELECTED PROGRAMMING PROJECTS

- **Bassoon**: software for designing, organizing, and deploying stimuli for vision science experiments (Python)
- Web-integrated analysis pipeline for electrophysiology data (Python, MATLAB)
- Computer vision algorithms for eye tracking and image analysis (MATLAB)
- Custom website development and database automation (JavaScript, PHP, SQL)

SELECTED COURSEWORK

Neurosciences (20+ courses), Biology, Chemistry, Physics, Linear Algebra, Calculus, Statistics, Philosophy of Neuroscience, Philosophy of Mind, Philosophy of Science, Ethics

MISCELLANEOUS

Languages: English, Español