Alisa Braun

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EDUCATION

University of California – Berkeley   **Berkeley, CA**
PhD. Candidate in Vision Science, Center for Innovation in Vision & Optics Fellow   **Expected graduation: May 2024**
Focus areas: Visual perception, experimental design, eye movements and tracking, ocular motor dynamics, psychophysics
Wonderfest Envoy Member: Science communication and popularization focus

University of Denver   **Denver, CO**
B.S. in Psychology, Concentration in Cognitive Neuroscience   **Class of 2018**

PUBLICATIONS & TALKS

Publications
• Braun, A., & Sweeny, T. D. (2019). Anisotropic visual awareness of shapes. Vision research, 156, 17-27.
Talks
• Braun, A., Otero-Millan, J., Roorda, A., Tuten, W. S. (2021). The benefits of naturally moving over stabilized stimuli for acuity increase with longer presentation times. Optical Society of America's Fall Vision Meeting, Virtual. (see awards)
• Braun, A., Groth, I., Otero-Millan, J., Tuten, W. S. (2023). Motion blur near the resolution limit of the parafoveal retina. Vision Science Society, St. Pete Beach. (see awards)

EXPERIENCE

PhD Graduate Student   **Berkeley, CA**
PI: William Tuten (collaborators: Jorge Otero-Millan & Austin Roorda)   **March 2021-Present**
• Dissertation work focuses on using psychophysical methods to measure visual acuity while tracking eye motion in the AOSLO
• Work with soft- and hardware engineers to ensure proper functioning of AOSLO, collaboratively design new features in the system
• Write and deploy MATLAB code to collect photoreceptor mosaic images and response data in the AOSLO, and create analysis pipelines
• Develop a deep understanding of ocular motor function to apply computational modeling concepts to eye motion patterns
• Lead group trainings and mentor individual students on proper use of AOSLO, data collection, research design and analysis

Visiting Researcher   **Denver, CO**
NASA Ames, San Jose State University Research Foundation, Fatigue Countermeasures Lab   **June 2023-Present**
• Research focuses on ISS astronaut sleep, including disruptions, countermeasures and impacts of deprivation
• Analyzed and created visualizations of highly sensitive astronaut data in Python
• Presented a poster and gave two presentations to over 40+ research faculty at across NASA campuses
• Submitted abstracts to present findings at NASA spaceflight-specific internal conferences

Lecturer   **Kazakhstan and Thailand**
Princeton in Asia   **August 2018-March 2020**
• Collaborated across multiple cultures to teach English courses to 1st – 4th year undergraduate students

SKILLS

Visual psychophysics
• Detection, discrimination, reaction times, psychometric function fitting (including QUEST+)
• Human experimental design and conduct
• MATLAB - Psychtoolbox, data analysis and statistical computations
Human factors research
• Literature review
• Python for data cleaning, analysis and visualizations

AWARDS & HONORS

Honorable Mention, National Science Foundation Graduate Research Fellowship Program (2022)
• Application proposes using AOSLO to study if individual eye movements are optimal for spatial vision

Optical Society of America, Young Investigator Award (2021), John I. Yellott Travel Award for Vision Science (2023)

LEADERSHIP & COMMUNITY SERVICE

Diversity, Equity, Inclusion and Belonging (DEIB) Committee, Chair   **Berkeley, CA**
Vision Science Program, University of California, Berkeley   **January 2021-Present**
• Fundraised $24k for a new Underrepresented Undergraduate Research Program and $10k for VS DEIB Initiatives
• Organized a racial violence de-escalation training for all VS and Optometry students and postdocs
• Implemented new recruiting strategies for students from historically underrepresented backgrounds