

Plyfaa Suwanamalik-Murphy

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Relevant Skills & Specialties: MATLAB | Python | PsychoPy | Eye-tracking/Pupilometry | EEG | MEG | fMRI
Data & Computational Analysis | Perception & Attention | Visual Cognition & Cognitive Neuroscience

EDUCATION & TRAINING

June 2024 - June 2026	National Institutes of Health (NIH), National Institute of Mental Health (NIMH) Laboratory of Brain and Cognition, Section on Functional Imaging Methods <i>Postbaccalaureate Research Fellow:</i> Awarded two-year NIH Postbaccalaureate Intramural Research Training Award (\$94,300). <i>Mentors:</i> Drs. Peter Bandettini, Sharif Kronemer, Daniel Handwerker
August 2021 - June 2024	University of California, Davis (UC Davis) Bachelor of Arts Major: <i>Cognitive Science</i> GPA: 3.829 / 4.0

PROFESSIONAL MEMBERSHIPS

June 2025 - June 2026	Society for Neuroscience (SfN) — Individual Member
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RESEARCH EXPERIENCES

 (listed in order of relevancy, underscore indicates principal investigator)

June 2024 - June 2026	National Institutes of Health (NIH), National Institute of Mental Health (NIMH) Laboratory of Brain and Cognition, Section on Functional Imaging Methods Postbaccalaureate Research Fellow <i>Mentors:</i> Drs. <u>Peter Bandettini</u> , Sharif Kronemer, Daniel Handwerker
•	Investigated relationship between eye metrics and conscious perception using behavioral, eye-tracking, and MEG methodologies. Preprocessed and analyzed behavioral and eye-tracking data (pupil/blink/microsaccade signal processing) and MEG data (ICA, artifact rejection) in MATLAB; PsychoPy experiment design, created bash scripts, worked with command-line environments and Slurm-based high-performance computing systems, using Git for version control. Recruited 30+ participants; collected fMRI/behavioral data under NIH privacy protocols.
Aug 2023 - June 2024	UC Davis, Dept. of Neurological Surgery, Neuroprosthetics Lab Simons Foundation Fellowship Awardee <i>Mentors:</i> Drs. <u>Sergey Stavisky</u> , Daril Brown, Nicholas Card
•	Developed spike-sorting pipeline in Python to isolate single-neuron activity from four 64-microelectrode arrays implanted in the ventral precentral gyrus of a participant with amyotrophic lateral sclerosis.
June 2023 - Sept 2023	University of Oxford, Dept. of Experimental Psychology, Oxford Perception Lab Visiting Research Scholar <i>Mentors:</i> Drs. <u>Hannah Smithson</u> & Shiwen Li
•	Piloted perception paradigm in PsychToolbox; recruited/tested participants; developed data visualization pipelines in MATLAB for displaying iridescent stimuli in grid layouts annotated with participants' verbal descriptors.
March 2022 - Aug 2023	UC Davis, Center for Mind & Brain, Visual Cognition Lab Research Assistant <i>Mentors:</i> Drs. <u>John Henderson</u> , Alan Lu, Alexandra Therodorus
•	Created an image dataset of 40+ scenes containing objects congruent and incongruent to scene context. Ran eye-tracking sessions, processed 200+ stimuli using Computer Vision Annotation Tool (CVAT), labeling object depth information.

Sept 2022 - June 2023

UC Davis, Center for Mind & Brain

Laboratory for the Neural Mechanisms of Attention + Cognitive Neurolinguistics Laboratory
Research Assistant

Mentors: Drs. George R. Mangun, David Corina, Lee Holcomb, Elizabeth Pierotti

- Managed EEG data acquisition using a 64-channel Synamps2 system with BrainVision active electrodes; conducted impedance measurements, monitored system functionality, and preprocessed 200+ auditory stimuli using Audacity (audio editing software); utilized CURRY software for recording/visualization.
- Processed and analyzed EEG data (ERPLab and EEGLab toolboxes in MATLAB); performed mean amplitude analyses across electrode sites and time windows. Found significant topographic effects in N400 and late N400 time windows, with greater amplitudes at parietal sites compared to other electrode locations.

June 2022 - Aug 2022

Hawaii Pacific Neuroscience

Summer Intern

Mentors: Drs. Jason Viereck, Kore Liow & Shin Chang

- Examined associations between autoimmune comorbidities and psychiatric outcomes in MS patients. Extracted data from electronic medical records; performed statistical analyses using Wilcoxon and Chi-squared/Fisher's tests.

June 2022 - Aug 2022

University of Hawai'i at Mānoa

Brain & Behavior Laboratory + Intergroup Social Perception Lab

Summer Research Assistant

Mentors: Drs. Jonas Vibell, Kristin Pauker, Salena Diaz

- Assembled EEG acquisition systems for neurological rehabilitation studies.
- Performed mixed-design ANOVAs in SPSS/R/Google Sheets; identified demographic effects on face recognition.

ORAL PRESENTATIONS & TALKS

1. **SuwanaMalik-Murphy, P.**, Gobo, V., Gonzalez-Castillo, J., Benitez-Andonegui, A., Bandettini, P., & Kronemer, S. (2025, November 19). *Neural Dynamics of Visual Consciousness and Awareness* [Oral presentation]. Society for Neuroscience Annual Meeting, San Diego, CA, USA. [Not presented due to government shutdown].
2. **SuwanaMalik-Murphy, P.** (2025, September 25). *The Eyes Know What the Brain Hears*. NIMH IRP Fellows' Scientific Training Day, Washington, D.C., USA. Selected to present research in a 10-minute Lighting Talk; one of two postbacs chosen for a presentation typically reserved for PhD students and postdocs. [Lightning Talk Slides.pdf](#)
3. **SuwanaMalik-Murphy, P.**, Gobo, V., Gonzalez-Castillo, J., Benitez-Andonegui, A., Bandettini, P., & Kronemer, S. (2025, September 25). *Examining How Spontaneous Eye Measures Indicate Conscious and Unconscious Sensory Neural Processing* [Oral presentation]. NIMH IRP Fellows' Scientific Training Day, Washington, D.C., USA. [Training Day Poster.pdf](#)
4. **SuwanaMalik-Murphy, P.**, (2025, September 3). *What the Eyes Reveal about the Brain*. NIMH Three Minute Talk Competition, Preliminary Round, Bethesda, MD, USA. [Three Minute Talk Slide.pdf](#)
5. **SuwanaMalik-Murphy, P.**, Gobo, V., Gonzalez-Castillo, J., Benitez-Andonegui, A., Bandettini, P., & Kronemer, S. (2025, July 6–9). *Investigating Eye Metrics as an Indicator of Sensory Neural Processing, Behavior, and Conscious Perception* [Oral presentation]. Association for the Scientific Study of Consciousness, Heraklion, Crete, Greece. [ASSC Poster.pdf](#)
6. **SuwanaMalik-Murphy, P.**, Gobo, V., Gonzalez-Castillo, J., Benitez-Andonegui, A., Bandettini, P., & Kronemer, S. (2025, May 9). *How Brain States Associated with Spontaneous Pupillary Fluctuations Alter Conscious and Unconscious Sensory Neural Processing* [Oral presentation]. NIH Postbac Poster Day, Bethesda, MD. [NIH Postbac Poster Day.pdf](#)
7. **SuwanaMalik-Murphy, P.**, Shehabi, S., Laurie, N., Pierotti, E., & Corina, D. (2023, April 27). *The Impact of Audiovisual Cues on Speech Recognition: An ERP Study* [Oral presentation]. Undergraduate Research Conference, Davis, CA, USA. [URC Poster.pdf](#)

8. Chang, S., **Suwanamalik-Murphy, P.**, Okazaki, J., Roy, D., Goo, C., Liow, K., Viereck, J., & Carrazana, E. (2023, April 22). *Investigating the Prevalence of Psychiatric Disorders in Multiple Sclerosis with Autoimmune Comorbidities* [Oral presentation]. American Academy of Neurology Annual Meeting, Boston, MA, USA. [AAN Poster.pdf](#)
9. Shehabi, S., **Suwanamalik-Murphy, P.**, Pierotti, E., & Corina, D. (2023, April 17). *An ERP Study Investigating the Influence of Audiovisual Cues on Speech Recognition* [Oral presentation]. Stanford University, Stanford, CA, USA. [SRC Poster.pdf](#)
10. Mason, T., **Suwanamalik-Murphy, P.**, Tenorio, K., Diaz, S., Pauker, K., Gaither, S., Halim, M., Dunham, Y., & Olson, K. (2023, February 24). *Variability in the Cross-Race Effect Among Geographically Diverse White Children* [Oral presentation]. Society for Personality and Social Psychology Annual Convention, Atlanta, GA, USA. [SPSP Poster.pdf](#)

PUBLISHED ABSTRACTS

Chang, S., **Suwanamalik-Murphy, P.**, Okazaki, J., Roy, D., Matsunaga, M., Goo, C., Carrazana, E., Viereck, J., & Liow, K. (2023). Investigating the Prevalence of Psychiatric Disorders in Multiple Sclerosis with Autoimmune Comorbidities (P5-3.008). *Neurology*, 100(17 Suppl 2). [Neurology DOI 2023](#)

AWARDS & GRANTS

Sept 2025	NIMH Trainee Travel Award: Competitively awarded for research excellence to fund scientific meeting expenses (\$1000).
May 2025	ASSC Travel Award for Early Career Researchers: Competitively awarded for early career researchers for research excellence to fund international scientific conference travel expenses (\$500).
Jan 2024	UC Davis Undergraduate Travel Award: Competitively awarded to undergraduates for research excellence to fund scientific meeting travel expenses (\$500).
Aug 2023	Simons Foundation Shenoy Undergraduate Research Fellowship in Neuroscience: Awarded selective research fellowship providing hands-on neuroscience research training with direct faculty mentorship in Simons Foundation-supported laboratories (\$11,598).
June 2023	UC Davis Experiential Learning Opportunity Grant: Competitively awarded to top undergraduates to support research (\$3,600).
June 2023	UC Davis Provost's Undergraduate Fellowship: Competitive fellowship funding for independent undergraduate research projects designed and proposed by students (\$808).
May 2023	UK Rank Prize Undergraduate Vacation Grant: Competitive vision science award funding undergraduate summer research placements at universities in the United Kingdom (\$5,500).
April 2023	Maximizing Access to Research Careers Program: Competitive NIH traineeship providing undergraduate biomedical research training (\$22,338).

SERVICE & LEADERSHIP ACTIVITIES

Jan 2025 - present	Naloxone Network, Community Health Outreach , <i>Weekend Volunteer</i> — Washington, D.C., USA Distributed naloxone, food, and provided HIV testing to communities in need.
June 2023 - June 2024	Cognitive Science Student Association , <i>Project Manager</i> — Davis, CA, USA Led networking events to support cognitive science students' research development.
Jan 2023 - June 2024	The Aggie Transcript: Psychology , <i>Treasurer & Senior Editor</i> — Davis, CA, USA Secured journal funding through competitive grant applications; reviewed and edited undergraduate research manuscripts before publication.
Sept 2020 - Sept 2021	San Francisco Youth Commission , <i>Vice-Chair</i> — San Francisco, CA, USA Represented San Francisco youth residents as an elected advisor to the San Francisco Mayor and Board of Supervisors, publicly spoke alongside California state senators at environmental advocacy events.
May 2020	COVID-19 Relief Fundraiser , <i>Fundraiser Organizer/Head</i> — San Francisco, CA, USA Spearheaded online quartet performance raising \$4,115 in COVID-19 relief.