John Nadra john.nadra@gmail.com

EDUCATION

Ph.D. Psychology, University of California, Davis — August 2024
M.A. Psychology, University of California, Davis — December 2021
B.A. Psychology, Cum Laude, Sonoma State University — May 2019
A.A., Psychology (with Honors) and A.A., Sociology (with Honors), Cosumnes River College — May 2017

RESEARCH EXPERIENCE

Laboratory for the Neural Mechanisms of Attention, UC Davis, CA — 2019 – Present
Cognitive neuroscience research, EEG/fMRI lab

Postdoctoral Scholar (9/2024-Present)
Leading a team of researchers to conduct cognitive neuroscience studies using simultaneous EEG/fMRI/eye-tracking to investigate the neural correlates of attention and free will.

Graduate Student Researcher (7/2019-9/2024)
Conducted EEG and eye-tracking studies under the supervision of Dr. George R. Mangun to investigate visual attention.

Lumos Labs/Lumosity, San Francisco, CA — 2025 – Present
Neuroimaging research on brain training efficacy

Contract Researcher – Neuroimaging & Cognitive Training
Conducting product research to evaluate the efficacy of a brain training program using neuroimaging methods.

Bengson Laboratory, Sonoma State University, CA — 2018 – 2019
Cognitive neuroscience research, EEG lab

Research Assistant
Conducted data analysis and assisted with data collection in an electroencephalogram laboratory.

GRANTS AND FELLOWSHIPS

NSF BCS 2318886 (P.I., Mangun, G.R.) “Mechanisms of Willed Attention” — 2023-2026
Role: Postdoctoral Scholar

NEI T32 EY015387 (P.I., Burns, M.) “Training Program in Vision Science” — 2022-2024
Role: Trainee

NIMH R01 MH117991 (P.I., Mangun, G.R.) "Mechanisms of attentional control: Structure and dynamics from simultaneous EEG-fMRI and machine learning" — 2019-2022
Role: Graduate Student Researcher

HONORS AND AWARDS

Dukes Travel Award, University of California, Davis — 2024
Trainee Professional Development Award, Society for Neuroscience — 2023
Michael S. Gazzaniga Prize, UC Davis Center for Mind and Brain — 2023
Psychology Department Best Poster Award, University of California, Davis — 2023
Graduate Student Association Travel Award, University of California, Davis — 2023
Early Career Scientist Travel Grant, National Eye Institute — 2023
Psychology Diverse Mentoring Initiative Award, University of California, Davis — 2021-2024
Dukes Travel Award, University of California, Davis — 2021

Student Research Award, Sonoma State University 2018-2019
School of Social Sciences Student Travel Award, Sonoma State University 2018-2019

PUBLICATIONS

Nadra, J. G., Bengson, J. J., & Mangun, G. R. (2025). Unconscious Neural Activity Predicts Overt Attention in Visual Search. bioRxiv. doi: 10.1101/2025.02.21.639607.

Nadra, J. G., & Mangun, G. R. (2023). Placing willed attention in context: A review of attention and free will. *Frontiers in Cognition*, 2. doi: 10.3389/fcogn.2023.1205618.

Nadra, J. G., Bengson, J. J., Morales, A. B., & Mangun, G. R. (2023). Attention Without Constraint: Alpha Lateralization in Uncued Willed Attention. *eNeuro*, 10(6):ENEURO.0258-22.2023. doi: 10.1523/ENEURO.0258-22.2023. PMID: 37236786

Nadra, J. G., Sullivan, G., & Mangun, G. R. (manuscript in preparation). Volitional Attention to Color: Breaking Willed Attention Out of the Spatial Domain.

INVITED TALKS

Nadra, J. G. (2025, July). *Decoding the Electrophysiological Correlates of Willed Attention: Investigating Temporal Freedom and Visual Search*. Invited talk, Wu Tsai Institute, Yale University.

Nadra, J. G. (2025, May). *Decoding the Electrophysiological Correlates of Willed Attention*. Invited talk, Neuronal Oscillations Group/Centre for Human Brain Health, University of Birmingham and University of Oxford.

Nadra, J. G. (2025, April). *Decoding the Electrophysiological Correlates of Willed Attention*. Invited talk, Vrije Universiteit Amsterdam.

Nadra, J. G. (2024, December). *Breaking into Research: Cognitive Neuroscience with EEG and Machine Learning*. Invited talk, Neurotech@Davis, University of California, Davis.

Nadra, J. G. (2024, February). *The Electrophysiological Correlates of Willed Attention*. Invited talk, Joint Lab Meeting (Courtney, Egeth, and Fischer labs), Johns Hopkins University (virtual).

Nadra, J. G. (2024, January). *Does Volitional Attention Operate the Same Across Domains? An Investigation of Willed Attention to Color*. Invited talk, Center for Vision Science, University of California, Davis.

Nadra, J. G. (2023, January). *The Neural Mechanisms of Willed Attention to Vision*. Invited talk, Center for Vision Science, University of California, Davis.

Nadra, J. G. (2022, April). *The Temporal Dynamics of Willed Attention*. Invited talk, Hickey Laboratory Meeting, University of Birmingham (virtual).

CONFERENCE PRESENTATIONS

*Denotes undergraduates mentored by Dr. Nadra

Fischel, S.*, **Nadra, J.**, Das, S., & Mangun, G. (2025, May). An Investigation of Alpha Band Oscillations Within a Distractor Suppression Paradigm. Poster presentation. UC Davis Psychology Spring Conference, Davis, CA.

Hutchins, A.*, **Nadra, J.**, Sullivan, G.*, Fischel, S.*, Meyyappan, S., Ding, M., & Mangun, G. (2025, May). Attention Without Constraint: Decoding the Neural Correlates of Volitional Attention. Poster presentation. UC Davis Psychology Spring Conference, Davis, CA.

Sullivan, G.*, Hutchins, A.*, Fischel, S.*, **Nadra, J.**, Mangun, G. R., (2025, May). Modulating Pseudoneglect in Visual Search: A Study of Overt Willed Attention. Poster presentation. UC Davis Psychology Spring Conference, Davis, CA.

Nadra, J., Hutchins, A.*, Sullivan, G.*, Fischel, S.*, Meyyappan, S., Ding, M., & Mangun, G. (2025, March). Choosing When and Where to Attend: Decoding the Electrophysiological Correlates of Self-paced Willed Attention. Poster presentation. Cognitive Neuroscience Society Annual Meeting, Boston, MA.

Seewald, J., Khodayari, N., **Nadra, J.**, Egeth, H. & Courtney, S. (2025, March). Alpha Lateralization from Distractors: Suppression-Specific and Domain-General. Poster presentation. Cognitive Neuroscience Society Annual Meeting, Boston, MA.

Hutchins, A.*, **Nadra, J.**, Bengson, J., Ding, M., & Mangun, G. (2024, May). Overt Willed Attention: Decoding EEG to Predict Saccades. Poster presentation. Psychology Spring Conference at UC Davis, Davis, CA.

Sullivan, G.*, **Nadra, J.**, Ding, M., & Mangun, G. (2024, May). Analyzing Event Related Potentials in Color-Based Attention: An Examination of the Attention Validity Effect. Poster presentation. Psychology Spring Conference at UC Davis, Davis, CA.

Nadra, J., Bengson, J., Ding, M., & Mangun, G. (2024, April). Decoding EEG Correlates of Willed Overt Attention During Visual Search. Poster presentation. Cognitive Neuroscience Society Annual Meeting, Toronto, Canada.

Nadra, J., Ding, M., & Mangun, G. (2023, November). Does volitional attention operate the same across domains? An investigation of willed attention to color. Poster presentation. Neuroscience 2023, Washington D.C.

Nadra, J., Bengson, J., Ding, M., & Mangun, G. (2023, May). Predicting a Volitional Eye Movement Before a Visual Search: An Investigation of Overt Willed Attention. Poster presentation. Vision Sciences Society Annual Meeting, St. Pete's Beach, FL.

Nadra, J., Ding, M., & Mangun, G. (2023, March). The Neural Mechanisms of Color Willed Attention. Poster presentation. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.

Nadra, J., Bengson, J., Ding, M., & Mangun, G. (2022, April). Neural Mechanisms of Willed Attention in Overt Visual Search. Poster presentation. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.

Nadra, J., Bengson, J., Ding, M., & Mangun, G. (2021, May). Tracking the Onset of Willed Attention: EEG, Alpha Oscillations & Machine Learning. Poster presentation. Association for Psychological Science Annual Meeting, Virtual.

Nadra, J., Mittal, A.*, Bengson, J. & Mangun, G. (2020, May). Mechanisms of overt attention in visual search: Eye tracking, hemifield bias and willed attention. Poster presentation. Cognitive Neuroscience Society Annual Meeting, Virtual.

Nadra, J., Holm, A., Falk, R., Liu, D. & Bengson, J.J. (2019, January). Inference of willed attentional focus via local field potentials in humans. Poster presentation. California State University Annual Biotechnology Symposium at Hyatt Regency Orange County, Garden Grove, California.

Nadra, J., Holm, A., Falk, R. & Bengson, J.J. (2018, November). Predicting Where You Will Attend: The Neural Circuitry of Decision Driven Attention. Poster presentation. Southern California Conferences for Undergraduate Research at Pasadena City College, Pasadena, California.

TEACHING

Instructor:

Introduction to Cognitive Neuroscience (Psychology 130)	Summer 2025
Perception (Psychology 131)	Winter 2024
Perception (Psychology 131)	Fall 2024
Introduction to Cognitive Neuroscience (Psychology 130; co-taught with Dr. George R. Mangun)	Winter 2022

Teaching Assistant:

Human Memory (Psychology 130)	Spring 2022
Introduction to Cognitive Neuroscience (Psychology 135)	Winter 2022
Introduction to Cognitive Neuroscience (Psychology 135)	Winter 2021
Introduction to Cognitive Neuroscience (Psychology 135)	Winter 2020
Health Psychology (Psychology 126)	Fall 2020
Human Memory (Psychology 130)	Fall 2019

SERVICE AND VOLUNTEER EXPERIENCE

EMG Demonstration, Neurofest, University of California, Davis	2025
Invited Reviewer, IEEE Transactions on Neural Systems & Rehabilitation Engineering	2024
Invited Reviewer, Brain Research	2023
Marketing Lead, 2022 Games User Research Summit	2022
Invited Reviewer, European Journal of Neuroscience	2021
EEG Laboratory Demonstration, AvenueB, University of California, Davis	2021
Brain Computer Interface Demonstration, Hanna Boys Center for At-Risk Youth	2019