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Engineering & Scientific Consulting

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Professional Profile

As part of Exponent's Human Factors team, Dr. Jahanfard applies her scientific expertise to help clients better understand how cognitive and linguistic factors influence user behavior, perception, and decision-making in real-world settings. Her background in experimental design and neurocognitive research enables her to analyze complex human-system interactions, identify usability risks, and support evidence-based evaluations of product warnings, instructions, and human performance across diverse populations. She also provides support to cases involving vehicles and slips, trips, and falls.

Dr. Jahanfard is a cognitive psychologist, with expertise in bilingual language processing and comprehension. Her work bridges the fields of Cognitive Neuroscience and Psycholinguistics to explore the neurocognitive correlates of predictive processing in bi/multilingual language users. She leverages behavioral tools, electrophysiological methods (EEG/ERPs), and multivariate machine learning algorithms (SVM) to gain a comprehensive understanding of the effects of native/bilingual status on immediate language processing mechanisms. Her work has also explored the downstream consequence of language errors on memory to delineate the degree to which the bilingual experience affects cognitive processes beyond language.

Dr. Jahanfard has over 7 years of research experience, from planning to publication. She has designed multi-method experiments, collected electrophysiological and neuroimaging (fMRI) data, and performed advanced statistical analysis and data visualization in MATLAB and RStudio. The culmination of these experiences has led to her presenting her work at national and international research conferences, including the Cognitive Neuroscience Society and the Society for the Neurobiology of Language.

Academic Credentials & Professional Honors

Ph.D., Psychology, University of California, Davis, 2025

B.A., Psychology, University of California, Davis, 2020

Recipient of the Society for the Neurobiology of Language 2024 Trainee Scholarship Award

Prior Experience

Graduate Teaching Assistant, UC Davis Psychology Department, 2021-2025

Research Consultant, Movano Health, 2023-2024

Professional Affiliations

Human Factors and Ergonomics Society, Member, 2025-Present

Society for the Neurobiology of Language, Member, 2022-Present

Publications

Bales KL, Hang S, Paulus J, Jahanfard E, Manca C, Jost G, Boyer C, Bern R, Yerumyan D, Rogers S, Mederos S. Individual differences in social homeostasis. *Frontiers in Behavioral Neuroscience* 2023; 17:1068609.

Jahanfard ES. Do bilinguals and monolinguals differ in their predictive language processing? An ERP Investigation. UC Davis. ProQuest 2025

Presentations

Sendek K, Jahanfard E, Swaab TY. How bilingual experience shapes anticipatory brain activity and prediction in language processing. Poster presentation, CNS 2025 Convention, Boston, MA, 2025.

Jahanfard E, Swaab TY. Effects of disconfirmed linguistic predictions on memory in bilinguals. Poster presentation, SNL 2024 Convention, Brisbane, Australia, 2024.

Trammel T, Jahanfard E, Traxler M, Swaab TY. Decoding anticipated semantic and visual word features in Spanish-English heritage speakers. Poster presentation, SNL 2024 Convention, Brisbane, Australia, 2024.

Sendek K, Jahanfard E, Swaab TY. Signal coherence reflects changes in predictive processing for bilinguals in L2: an EEG study. Poster presentation, CNS 2024 Convention, Toronto, Canada, 2024.

Jahanfard E, Zhu H, Swaab TY. Predictive processing in Spanish-English and Chinese-English bilinguals: an ERP investigation. Poster presentation, SNL 2023 Convention, Marseille, France, 2023.

Jahanfard E, Swaab TY. Do Spanish-English bilinguals pre-activate word-form information when predicting in L2? Poster presentation, CNS 2023 Convention, San Francisco, CA, 2023.

Jahanfard E, Gao A, Swaab TY. Do Spanish-English bilinguals pre-activate word-form information when predicting in L2? Poster presentation, SNL 2022 Convention, Philadelphia, PA, 2022.

Jahanfard E, Biegler K, Mollica R, Sim S, Nicholas E, Chandler M, Ngo-Metzger Q, Paigne K, Paigne S, Sorkin D. Medication adherence and the use of complementary and alternative medication among Cambodian refugees and Cambodian immigrants. Poster presentation, SBM 2018 Convention, New Orleans, LA, 2018.

Jahanfard E, Biegler K, Mollica R, Sim S, Nicholas E, Chandler M, Ngo-Metzger Q, Paigne K, Paigne S, Sorkin D. Cambodian American immigrants' cultural preferences and perceptions of complementary and alternative medicine compared to Western medicine. Poster presentation, WPA 2018 Convention, Portland, OR, 2018.

Hecht H, Cervantes B, Benjamin L, Jahanfard E, Lam L, Laurent G, Ensink K, Borelli J. Emotional understanding, aggression, and social functioning in preschoolers. Poster presentation, SRCD 2019 Convention, Baltimore, MD, 2019.