Soroush Mirjalili

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EMPLOYMENT

University of Oregon **2024 -**
Postdoctoral Researcher, Department of Psychology, Advisor: Brice A. Kuhl

The University of Texas at Austin **2023 - 2024**
Postdoctoral Researcher, Department of Psychology, Advisor: Audrey L. Duarte

EDUCATION

Ph.D., Psychology, The University of Texas at Austin **2021 - 2023**
Advisor: Audrey L. Duarte
Dissertation: *More than the sum of its parts: investigating episodic memory as a multidimensional cognitive process*

M.Sc., Psychology, Georgia Institute of Technology **2018 - 2021**
Advisor: Audrey L. Duarte

B.Sc., Computer Science, Sharif University of Technology **2015 - 2018**

B.Sc., Electrical Engineering, Sharif University of Technology **2013 - 2018**

FELLOWSHIPS, HONORS, AND AWARDS

Hui Undergraduate Research Scholars Fellowship (Mentor Award), University of Oregon	2025
Outstanding Dissertation Award, Department of Psychology, UT Austin	2024
University of Texas at Austin Graduate School Fellowship	2023
The Best Poster Award, Research for Y'all: Psychology Research Showcase at UT Austin	2023
Professional Development Travel Award, Department of Psychology, UT Austin	2023
Sigma Xi Grants in Aid of Research Award	2022
Professional Development Travel Award, Department of Psychology, UT Austin	2022
Graduate School Recruitment Fellowship, UT Austin	2021
Outstanding Paper Award, eNeuro	2021
Ranked 10th nationally (~250,000 participants), Iranian national university entrance exam	2013
Semi-finalist in Mathematics, Computer, and Physics national Olympiad competitions	2011-2012

PUBLICATIONS

* indicates individuals with equal contributions.

Preprints (under review/revision)

Mirjalili, S., Rahnev, D., & Duarte, A. (2026). Toward process-level decoding of cognition with cross-domain transfer. Under review at *Trends Open*. doi:10.31234/...

Peer-reviewed journal articles

Mirjalili, S., Wanjia, G.*, Graetz, D.*, Wang, E., Mayr, U., & Kuhl, B. (2026). Hippocampal transformations occur along dimensions of memory interference. *Nature Communications*. In Press. doi:10.1038/...

Mirjalili, S. & Duarte, A. (2025). Using machine learning to simultaneously quantify multiple cognitive components of episodic memory. *Nature Communications*, 16(1), 2856. doi:10.1038/...

Cutler, R.A., **Mirjalili, S.**, Pham, P., Devulapalli, H., Zafar, S., & Duarte, A. (2025). Semantic memory space becomes denser with age. *Neuropsychologia*, 208, 109083. doi:10.1016/...

Justus, S.*, **Mirjalili, S.***, Powell, P., & Duarte, A. (2023). Neural reinstatement of context memory in adults with Autism Spectrum Disorder. *Cerebral Cortex*, bhad139. doi:10.1093/...

Lee, K., **Mirjalili, S.**, Quadri, A., Corbett, B., & Duarte, A. (2022). Neural Reinstatement of Overlapping Memories in Young and Older Adults. *Journal of Cognitive Neuroscience*, 34(8), 1376-1396. doi:10.1162/...

Hokett, E., **Mirjalili, S.**, & Duarte, A. (2022). Greater Sleep Variance Related to Decrements in Memory Performance and Event-Specific Neural Similarity: A Racially/Ethnically Diverse Lifespan Sample. *Neurobiology of Aging*, 117, 33–43. doi:10.1016/...

Mirjalili, S., Powell, P., Strunk, J., James, T., & Duarte, A. (2022). Evaluation of classification approaches for distinguishing brain states predictive of episodic memory performance from electroencephalography. *NeuroImage*, 247, 118851. doi:10.1016/...

Mirjalili, S., Powell, P., Strunk, J., James, T., & Duarte, A. (2021). Context Memory Encoding and Retrieval Temporal Dynamics are Modulated by Attention across the Adult Lifespan. *Eneuro*, 8(1). doi:10.1523/...

Conference proceedings (peer-reviewed)

Seraji, M., **Mirjalili, S.**, Wiafe, L., Duarte, A., & Calhoun, V. (in press). The Role of Sleep Duration and Age in Neural Reactivation and Episodic Memory Performance Across the Adult Lifespan. *2025 47th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*.

Seraji, M., **Mirjalili, S.**, Duarte, A., & Calhoun, V. (2025). Investigating the Impact of Habitual Sleep Quality on Episodic Memory Performance: An EEG-Based Representational Similarity Analysis. *2025 IEEE 22nd International Symposium on Biomedical Imaging (ISBI)*, 1–5. IEEE. doi:10.1109/...

Mirjalili, S., Hajipour Sardouie, S., & Samiee, N. (2018). A Novel Algorithm Based on Decision Trees in Multiclass Classification. *2018 25th National and 3rd International Iranian Conference on Biomedical Engineering (ICBME)*, 1–6. IEEE. doi:10.1109/...

Manuscripts in preparation

Mirjalili, S., Wanjia, G., Rait, L., Wang, E., Hedman, K., Mayr, U., & Kuhl, B. (In prep). Prospective differentiation between overlapping routes in hippocampus.

INVITED TALKS

Society for Neuroscience [Forthcoming]	November 2026
Department of Psychology, University of Southern Denmark	October 2026
Institute of Neuroscience, University of Oregon	September 2026
Context and Episodic Memory Symposium (CEMS)	May 2026
Department of Psychology, Zhejiang University	May 2026
Department of Psychology, Columbia University	February 2026
Penn Computational Cognitive Neuroscience Lab, University of Pennsylvania	December 2025
Oregon Memory group, University of Oregon	December 2025
The Favila Lab, Brown University	December 2025
Episodic Memory and Psychopathology Workshop, University of Oregon	May 2025
Dallas and Austin Memory Meeting (DAAMM!)	November 2022
Big Data Neuroscience Workshop, University of Texas at Austin	September 2022
Developmental Cognitive Neuroscience Lab, University of Texas at Austin	March 2022

CONFERENCE PRESENTATIONS

First-author Posters

Mirjalili, S., Ram, S., Lamphier, S., Liang, I., Pham, P., Duarte, A. (August 2026). *A multidimensional framework for episodic memory reveals age-related changes in underlying cognitive processes.* Cognitive Computational Neuroscience. New York City, NY.

Mirjalili, S., Wanjia, G., Graetz, D., Wang, E., Mayr, U., Kuhl, B. (November 2025). *CA3 and dentate gyrus adaptively inverse the behaviorally-relevant dimensions of visual similarity.* Society for Neuroscience Society. San Diego, CA.

Mirjalili, S., Duarte, A. (March 2025). *Memory under the microscope: Investigating episodic memory as a multidimensional cognitive process.* Cognitive Neuroscience Society. Boston, MA.

Mirjalili, S., Duarte, A. (May 2024). *More than the sum of its parts: investigating episodic memory as a multidimensional cognitive process.* Context and Episodic Memory Symposium. Philadelphia, PA.

Mirjalili, S., Duarte, A. (October 2023). *More than the sum of its parts: investigating episodic memory as a multidimensional cognitive process.* Research for Y'all: Psychology Research Showcase at The University of Texas at Austin. Austin, TX.

Mirjalili, S., Duarte, A. (March 2023). *Investigating episodic memory as a multi-dimensional cognitive process.* Cognitive Neuroscience Society. San Francisco, CA.

Mirjalili, S., Duarte, A. (February 2023). *Evaluation of classification approaches for distinguishing brain states predictive of episodic memory performance from electroencephalography.* Dallas Aging and Cognition Conference. Dallas, TX.

Mirjalili, S., Duarte, A. (September 2022). *Investigating episodic memory as a multi-dimensional cognitive process.* Big Data Neuroscience Workshop. Austin, TX.

Mirjalili, S., Duarte, A. (April 2022). *Evaluation of classification approaches for distinguishing brain states predictive of episodic memory performance from electroencephalography.* Cognitive Neuroscience Society. San Francisco, CA.

Mirjalili, S., Duarte, A. (April 2021). *Comparison of Different Classification Approaches Using EEG Signals to Decode Memory States.* Cognitive Neuroscience Society. Virtual.

Mirjalili, S., Duarte, A. (May 2020). *The reversion of information processing between episodic learning and retrieval across the adult lifespan.* Cognitive Neuroscience Society. Virtual.

Co-author Posters

Simon, S., Kuhl, B., **Mirjalili, S.** (May 2025). *Optimizing Memory Discrimination Using Rhythmic Brain Stimulation.* University of Oregon's Undergrad Research Symposium. Eugene, OR.

Nyan, C., Ram, S., Wachnin, A., Seraji, M., **Mirjalili, S.**, Duarte, A. (March 2025). *Sleep efficiency during the retention period predicts episodic memory reconstruction across young and old adults.* Cognitive Neuroscience Society. Boston, MA.

Romero, A., **Mirjalili, S.**, Graetz, D., Wanjia, G., Wang, E., Mayr, U,. Kuhl, B. (March 2025). *Hippocampal Repulsion as a Function of Memory Similarity and Experience.* Cognitive Neuroscience Society. Boston, MA.

Nyan, C., Ram, S., Wachnin, A., Seraji, M., **Mirjalili, S.**, Duarte, A. (February 2025). *Sleep efficiency during the retention period predicts associative memory consolidation in young and old adults.* Dallas Aging and Cognition Conference. Dallas, TX.

Graetz, D., Wanjia, G., **Mirjalili, S.**, Wang, E., Mayr, U,. Kuhl, B. (October 2024). *Hippocampal Repulsion as a Function of Memory Similarity and Experience.* Society for Neuroscience. Chicago, Il.

Nyan, C., Ram, S., Chhabra, I., Wachnin, A., **Mirjalili, S.**, Duarte, A. (June 2024). *Individual differences in habitual sleep discontinuity predict memory consolidation and supporting neural activity.* Sleep. Houston, TX.

Justus, S., **Mirjalili, S.**, Powell, P., Duarte, A. (April 2022). *Different patterns of episodic neural*

reinstatement support intact context memory performance in adults, Autism Spectrum. Cognitive Neuroscience Society. San Francisco, CA.

Hokett, E., **Mirjalili, S.**, Duarte, A. (February 2020). *Better Sleep Quality Related to Greater Neural Reactivation of Associative Memory in Racially Diverse Adults Across the Lifespan*. CRIDC career fair. Atlanta, GA.

TEACHING EXPERIENCE

Guest lecture, Learning and Memory, University of Oregon	2026
Advanced Teaching Preparation Certificate, UT Austin	2022
Teaching Assistant, Neuroscience of Behavior, Georgia Techn	2019
Teaching Assistant, General Psychology, Georgia Tech	2018
Teaching Assistant, Linear Control Systems, Sharif University of Technology	2017
Teaching Assistant, Industrial Control, Sharif University of Technology	2017

MENTORSHIP

Undergraduate Students

Sam Simon (University of Oregon; now Ph.D. student at Oregon Health and Science University; recipient of *Hui Undergraduate Research Scholars Fellowship*; recipient of the *Best Poster Award in Psychology* at University of Oregon's Undergrad Research Symposium)

Priscilla Pham (UT Austin, class of 2025)

Sydney Lamphier (UT Austin, class of 2025; now Psy.D. student at Nova Southeastern University)

Ivy Liang (UT Austin, class of 2025; now M.D. student at McGovern Medical School)

Sahana Ram (UT Austin, class of 2025)

Chuu Nyan (UT Austin, class of 2023; now M.Sc. student at UTHealth Houston)

MEDIA COVERAGE

The Daily Texan, "UT researchers find consideration of brain activity important in predicting memory", (April 8, 2025)

Georgia Tech Newsletter, "A Colorful Explanation for How We Remember Things" (February 2, 2021)

PROFESSIONAL SERVICE

Ad hoc Reviewer

Annals of the New York Academy of Sciences; Behavioral Sciences; Biological Psychology; Cognitive, Affective, and Behavioral Neuroscience; Frontiers in Human Neuroscience; Human Brain Mapping; Imaging Neuroscience; Learning and Motivation; NeuroImage; Philosophical Transactions of the Royal Society B; Psychology and Aging

Conference Service

Abstract reviewer, Association for Psychological Science

Volunteer Experience and Community Outreach

Mentor, Diversity and Inclusiveness Via Education Program, UT Austin (2023-2024)
Workshop speaker, Diversity and Inclusiveness Via Education Program, UT Austin (2022)
Mentor, Summer Undergraduate Research Experience program, UT Austin (2022)
Application reviewer, Summer Undergraduate Research Experience program, UT Austin (2022)
Mentor, Peer Mentorship Program, Department of Psychology, UT Austin (2022)