

Seth Koslov, Ph.D.

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Seth.Koslov@pennmedicine.upenn.edu

Education

Ph.D., Psychology (2020)

Area of Cognitive Neuroscience

The University of Texas at Austin

Dissertation: *Dynamics and outcomes of strategies used for prospective remembering*

Advisor: Jarrod Lewis-Peacock, Ph.D.

B.A., Plan II Liberal Arts Honors Program (2012)

University of Texas at Austin

Pre-Medical Course Route

Honors Thesis: *Pitch, Space, and the Brain*

Advisors: Bharath Chandrasekaran, Ph.D. and Art Markman, Ph.D.

Research Experience

Postdoctoral Researcher/Research Associate

October 2020-Present

BRAIN Initiative F32 Fellowship (Aug. 2022 – Aug 2025, F32MH130027)

Director: Brett Foster, Ph.D.

Perelman School of Medicine

University of Pennsylvania

Department of Neurosurgery

Graduate Research Assistant

August 2016-August 2020

The Lewis-Peacock Cognitive Neuroscience of Memory Lab

Director: Jarrod Lewis-Peacock, Ph.D.

University of Texas at Austin

Department of Psychology, Imaging Research Center, Center for Learning & Memory

Graduate Research Assistant

August 2016-August 2017

Learning and Decision-Making Lab

Director: Christopher Beevers, Ph.D.

University of Texas at Austin

Institute of Mental Health Research

Graduate Research Assistant

August 2015 – August 2016

The Laboratory for the Cognitive Neuroscience of Categorization and Decision Making

Director: W. Todd Maddox, Ph.D.

University of Texas at Austin

Department of Psychology

Lab Manager

July 2012 – August 2015

The Laboratory for the Cognitive Neuroscience of Categorization and Decision Making

Director: W. Todd Maddox, Ph.D.

University of Texas at Austin

Department of Psychology

Research Assistant

November 2010 - July 2012

SoundBrain Lab

Director: Bharath Chandrasekaran, Ph.D.

University of Texas at Austin

Communication Sciences and Disorders and the Department of Psychology

Publications

Koslov, S.R., Rey, H.G., Heilbronner, S.R., Provenza, N.R., Sheth, S.A., Davis, K.A., Chen, I., Kable, J.W., Hayden, B.Y., Foster, B.L., (Under Review). Electrophysiological dissociation of human posterior cingulate cortex contributions to value- and memory- based decision-making.

<https://www.biorxiv.org/content/10.64898/2026.08.12.744505v1>

Foster, B.L. & **Koslov, S.R.** (2025). Functions of the posterior cingulate cortex and default network. *Current Opinion in Behavioral Sciences*. 65. <https://doi.org/10.1016/j.cobeha.2025.101560>

Koslov, S.R., Kable, J.W., Foster, B.L. (2024). Dissociable contributions of the medial parietal cortex to recognition memory. *Journal of Neuroscience*. 44(18). <https://doi.org/10.1523/JNEUROSCI.2220-23.2024>

Foster, B.L., **Koslov, S.R.**, Aponik-Gremillion, L., Monko, M.E., Hayden, B.Y., Heilbronner, S.R. (2023). A tripartite view of posterior cingulate cortex. *Nature Reviews Neuroscience*, 24(3), 173-189.

<https://doi.org/10.1038/s41583-022-00661-x>

Willbrand E.H., Parker B.J., Voorhies W.I., Miller J.A., Lyu I., Hallock T., Aponik-Gremillion L., **Koslov S.R.**, Bunge S.A., Foster B.L., Weiner K.S., Alzheimer's Disease Neuroimaging Initiative (2022). Uncovering a tripartite landmark in posterior cingulate cortex. *Science Advances*, 8(36). DOI: 10.1126/sciadv.abn95166

Aponik-Gremillion, L., Chen, Y.Y., Bartoli, E., **Koslov, S.R.**, Rey, H.G., Weiner, K.S., Yoshor, D., Hayden, B.Y., Sheth, S.A., Foster, B.L. (2022) Distinct population and single-neuron selectivity for executive and episodic processing in human dorsal posterior cingulate. *eLife*, 11. <https://doi.org/10.7554/eLife.80722>

Koslov, S.R., Bulls, L.S., Lewis-Peacock, J.A. (2022). Distinct monitoring strategies underlie costs and performance in prospective memory. *Mem Cogn.*, 50(8), 1772-1788. <https://doi.org/10.3758/s13421-022-01275-5>

Scullin, M.K., **Koslov, S.R.**, Lewis-Peacock, J.A. (2020). Prospective memory forgetting. In M. Eysenck & D. Groome (Eds.), *Forgetting: Explaining Memory Failure*. Sage, 69-84.

Koslov, S.R., Mukerji, A., Hedgpeth, K., Lewis-Peacock, J.A. (2019). Cognitive Flexibility Improves Memory for Delayed Intentions. *eNeuro*, 6(6). DOI: <https://doi.org/10.1523/ENEURO.0250-19.2019>

Pearson, R.H., **Koslov, S.**, Hamilton, B., Shumake, J., Carver, C.C., Beevers, C.G. (2018). Acetaminophen Enhances the Reflective Learning Process. *Social Cognitive and Affective Neuroscience*. 13(10), 1029-1035. [10.1093/scan/nsy074](https://doi.org/10.1093/scan/nsy074)

Maddox, W.T., **Koslov, S.**, Yi, H., Chandrasekaran, B. (2016). Performance Pressure Enhances Speech Learning. *Applied Psycholinguistics*, 37(6), 1369-1396. DOI: 10.1017/S0142716415000600

Maddox, W.T., Gorlick, M.A, **Koslov, S.**, McGeary, J.E., Knopik, V.S., & Beevers, C.G. (2015). Serotonin transporter genetic variation is differentially associated with reflexive- and reflective-optimal learning. *Cerebral Cortex*. DOI: 10.1093/cercor/bhv309

Maddox, W.T., Chandrasekaran, B., Smayda, K., Yi, H., **Koslov, S.**, Beevers, C.G. (2014). Elevated Depressive Symptoms Enhance Reflexive but not Reflective Auditory Category Learning. *Cortex*. 58, 186-198. <https://doi.org/10.1016/j.cortex.2014.06.013>

Chandrasekaran, B., **Koslov, S.**, Maddox, W.T. (2014). Toward A Dual-Learning Systems Model of Speech Category Learning. *Frontiers in Psychology*. 5(825), 1-17. <https://doi.org/10.3389/fpsyg.2014.00825>

Presentations

Koslov, S.R., Common electrophysiological dynamics of human posterior cingulate cortex engagement during memory and value based decisions. Data blitz presentation at the Cognitive Neuroscience Society Annual Meeting, Vancouver, BC, Canada, March 2026.

Koslov, S.R. Examination of human posterior cingulate cortex electrophysiology during reward-based decisions. Society for Neuroscience Annual Meeting, Chicago, IL, October 2024.

Koslov, S.R. Dissociable contributions of the medial parietal cortex to episodic memory, Penn Memory Seminar, Philadelphia, PA, May 2024.

Koslov, S.R. Posterior cingulate contributions to memory. Computational Neuroscience Initiative +/- Meeting, Philadelphia, PA, January, 2023.

Koslov, S.R. Eye tracking of attention allocation during prospective remembering. Dallas & Austin Area Memory Meeting, August, 2020.

Koslov, S.R. Profiles of strategy implementation during prospective memory. Department of Psychology and Biomedical Imaging Center Seminar, Austin, TX, April, 2020.

Koslov, S.R. Managing cognitive control for prospective memory in dynamic environments. Center for Learning and Memory Annual Retreat, Austin, TX, November, 2018.

Koslov, S.R. Managing cognitive control for prospective memory in dynamic environments. Society for Neuroscience Annual Meeting, San Diego, CA, November, 2018.

Koslov, S.R. Dynamics of Prospective Memory. Cognitive Neuroscience and Biomedical Imaging Center Seminar, September, 2017.

Koslov, S.R. Dynamics of Prospective Memory. Dallas & Austin Area Memory Meeting, September, 2017.

Posters

Koslov, S.R., Dominguez Zesata, A.S., Rey, H.G., Sheth, S.A., Davis, K., Chen, I., Kable, J.W., Hayden, B.Y., Foster, B.L., Common electrophysiological dynamics of human posterior cingulate cortex engagement during memory and value based decisions. Poster presented at the Cognitive Neuroscience Society Annual Meeting, Vancouver, BC, Canada, March 2026.

Koslov, S.R., Dominguez Zesata, A.S., Rey, H.G., Sheth, S.A., Davis, K., Chen, I., Kable, J.W., Hayden, B.Y., Foster, B.L., Electrophysiology of human posterior cingulate cortex during value- and memory-based decision-making. Poster presented at the Society for Neuroscience Annual Meeting, San Diego, CA, November 2025.

Koslov, S.R., Kable, J. W., Foster, B.L., Posterior cingulate cortex contributions to mnemonic and executive functions. 10th Annual BRAIN Initiative Conference, Rockville, MD, June 2024.

Koslov, S.R., Kable, J. W., Foster, B.L., Dissociation of medial parietal cortex contributions to episodic memory. 9th Annual BRAIN Initiative Conference, Rockville, MD, June 2023.

Koslov, S.R., Kable, J. W., Foster, B.L., Dissociation of posterior cingulate contributions to episodic memory. Poster presented at the Society for Neuroscience Annual Meeting, San Diego, CA, November 2022.

Koslov, S.R., Bulls, L.S., Lewis-Peacock, J.A. Eye tracking of attention allocation during prospective remembering. Poster presented virtually at the 21st Annual Meeting of the Vision Sciences Society, June 2020.

Koslov, S.R., Bulls, L.S., Lewis-Peacock, J.A. Eye tracking of attention allocation during prospective remembering. Poster presented virtually at the Annual Conference of the Cognitive Neuroscience Society, May 2020.

Koslov, S., Hedgpeth, K., & Lewis-Peacock, J.A. Changing Cognitive Control for Prospective Memory in Dynamic Environments. Poster presented at the Society for Neuroscience Annual Meeting, San Diego, CA, November 2018.

Koslov, S., Hedgpeth, K., & Lewis-Peacock, J.A. Changing Cognitive Control for Prospective Memory in Dynamic Environments. Poster presented at 26th Annual ARMADILLO conference for Cognition and Cognitive Neuroscience, Houston, TX, September 2018.

Koslov, S. & Lewis-Peacock, J. Adaptive Cognitive Flexibility Improves both Prospective and Long-Term Remembering. Poster presented at the Society for Neuroscience Annual Meeting, Washington, DC, November 2017.

Koslov, S. & Lewis-Peacock, J. Fluid and Adaptive Changes of Prospective Memory Control. Poster presented at the 17th Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL, May 2017.

Koslov, S. & Lewis-Peacock, J. Cognitive Flexibility Improves Both Prospective and Long-Term Remembering. Poster presented at the Austin Conference on Learning & Memory, Austin, TX, April 2017.

Koslov, S., Sapuram, V., Cooper, J., Capanzana, J., Gorlick, M., Maddox, W.T. Stress Attenuates Valence Driven Deficits in Decision-Making. Poster presented at the 23rd Annual Meeting of the Cognitive Neuroscience Society, New York City, NY, April 2016.

Han, Y.C., **Koslov, S.**, Maddox, W.T., Chandrasekaran, B. Motivation and Speech Category Learning: A Dual-Learning Systems Approach. Poster presented at the 23rd Annual Meeting of the Cognitive Neuroscience Society, New York City, NY, April 2016.

Yi, H. **Koslov, S. R.**, Maddox, W. T., & Chandrasekaran, B. Mapping the auditory corticostriatal pathway in humans using diffusion tensor imaging. Poster to be presented at the Association for Research in Otolaryngology 2016 MidWinter Meeting, San Diego, CA, February 2016.

Yi, H. **Koslov, S. R.**, Maddox, W. T., & Chandrasekaran, B. Corticostriatal white matter connectivity predicts speech category learning success. Poster presented at the 7th Annual Meeting of the Society for the Neurobiology of Language, Chicago, IL, October 2015.

Koslov, S.R., Blanco, N.J., Maddox, W.T., Chandrasekaran, B. Using Real-Time Computational Modeling to Individually Optimize Tone Category Learning. Poster presented at the 37th Annual Conference of the Cognitive Science Society, Pasadena, CA, July 2015.

Koslov, S., Chandrasekaran, B., and Maddox, W.T. Performance Pressure Enhances Novel Speech Category Learning. Poster to be presented at the Auditory Perception, Cognition, and Action Meeting, Long Beach, California, November 2014.

Chandrasekaran, B., **Koslov, S.**, Luther, E., Ress, D. High-resolution imaging reveals tonotopic organization in human auditory midbrain. Poster presented at the Cognitive Neuroscience Society annual conference, Chicago, Illinois, April 2012.

Awards

BRAIN Initiative F32 Fellowship, 2022-2025

Provost Graduate Excellence Fellowship, 2015-2020

Professional Development Award, Spring 2015, Spring 2017, Fall 2018

Society for Neuroscience Trainee Professional Development Award, Fall 2018

Accepted to Methods in Neuroscience at Dartmouth Computational Summer School, Summer 2017

Clubs and Societies

University of Texas Psychology Graduate Diversity Committee Secretary/Treasurer, 2019-2020

Society for Neuroscience (SfN) Member

Methods and Experiments in RealTime Imaging and Neurofeedback (MERLIN) Group Member, 2016-2019

Working and Long-Term Memory Journal Club Member – UT Austin, 2018-2020

Computational Neuroimaging Journal Club Member – UT Austin, 2019

Computational Neuroscience Initiative Brain Computer Interface journal club member – Penn, 2023-2026

Mentoring

Student Mentees:

Alisha Aristel: Linking Eye Tracking and Posterior Cingulate Neurophysiology in Decision-Making

- Poster presented at the MindCORE DivE In Resource Fair and Poster Session, Spring 2025
- Post-bac research assistant, NIH

Abigail Hanna: The Effect of Childhood Trauma on Explicit and Implicit Category Learning.

- Undergraduate Research Fellowship Award: \$1000
- Poster presented at University of Texas Psychology Honors Society Poster Session, Spring 2016
- Doctoral Student, Clinical Psychology, University of Houston

Vaibhav Sapuram: The Effects of Stress on Reflexive Processing

- Undergraduate Research Fellowship Award: \$1000
- Presented at University of Texas Psychology Honors Society Poster Session, Spring 2015
- Doctoral Student, Psychology, University of North Carolina at Greensboro

Yuan Han: Effects of Emotion on Speech Category Learning

- Undergraduate Research Fellowship Award: \$1000
- Doctoral Student, Psychology, Northwestern University

Bettina Bustos: The Interaction of Depression and Cognitive Control on Prospective Memory

- Low-level light therapy effects on proactive and reactive control
- Doctoral Student, Psychology & Brain Sciences, University of Iowa

Bahareh Sharafi: Intellectual Entrepreneurship Pre-Grad Intern

- Project Title: A Comprehensive Meta-Analysis of Gender Driven Differences in Visual-Spatial Working Memory

Landry Bulls: Transcranial Infrared Neural Stimulation and Cognitive Control

- Undergraduate Research Fellowship Award: \$600
- Doctoral Student, SCRAP Lab, Dartmouth College

Katlyn Hedgpeth: Examining the role of maintenance and monitoring in prospective memory

- Presentation given at Dallas and Austin Area Memory Meeting, 2019
- Technical Analyst, Indeed.com

Roles:

Leader for the Coding Club for Research Assistants in the Lewis-Peacock Lab, 2016 – 2020

Mentor through the Intellectual Entrepreneurship (IE) Pre-Graduate School Internship, 2017

Summer Undergraduate Research Experience (SURE) program mentor, 2017-2019

MindCORE DivE In Admissions and Logistics committees, 2022-Present (member), 2023-2026 (leadership)

Programs, Languages, and Skills

Programming Languages: MATLAB, Python, R, Bash

Experiment and Analysis Software: Psychtoolbox (2.54 & 3), E-Prime/SR Experiment Builder, EyeLink Toolbox

Neuroimaging Acquisition & Analysis: FSL, ANTs, Freesurfer, AFNI, SUMA, SPM; experience with 3T and 7T fMRI data analysis

Intracranial Electrophysiology: Blackrock and Ripple recording systems, WaveClus and Combinato spike sorting

Eye-Tracking Systems: SR EyeLink, Pupil Labs

Computational Modeling & Multivariate Analysis: Category-learning and reinforcement-learning computational modeling, decision-bound/ modeling, multivariate analyses (MVPA/RSA), feature extraction and analysis using pre-trained language and vision models (Google Universal Sentence Encoder, ResNet, ResMem).

Audio Analysis: Audacity, PRAAT

Certifications: Texas Advanced Computing Center User, MRI User (Siemens 3T), e-Mini-International Neuropsychiatric Interview, Low-Level Light Therapy Technique

Journal Reviewer

Cognition

Communications Biology

Consciousness and Cognition

Frontiers in Human Neuroscience

Frontiers in Neuroimaging

Frontiers in Psychology

Memory & Cognition

PLOS Biology

PLOS One

Psychological Research

Scientific Reports