Alison R. Preston, Ph.D.

Vice Provost for Faculty Development
Dr. A. Wilson Nolle and Sir Raghunath P. Mahendroo Professor
The University of Texas at Austin

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Academic Degrees

Ph.D., Stanford University 1998 – 2004
Department of Psychology
Dissertation: Medial temporal lobe contributions to declarative memory

B.A., University of Pennsylvania 1993 – 1997
Major: Psychology
Summa cum laude with departmental highest honors

Professional Appointments

Vice Provost for Faculty Development 2021 – present
The University of Texas at Austin

Dr. A. Wilson Nolle and Sir Raghunath P. Mahendroo Professor 2018 – present
Departments of Neuroscience and Psychology
Department of Psychiatry (by courtesy)
The University of Texas at Austin

Interim Vice President for Research 2020 – 2021
The University of Texas at Austin

Director 2018 – 2020
Bioimaging Research Center
The University of Texas at Austin

Associate Professor 2013 – 2018
Departments of Psychology and Neuroscience
Department of Psychiatry (by courtesy from 2017)
The University of Texas at Austin

Assistant Professor 2007 – 2013
Department of Psychology
Section of Neurobiology (by courtesy 2008 – 2013)
The University of Texas at Austin

Postdoctoral Fellow 2004 – 2007
Department of Psychology
Stanford University

Center/Institute Memberships at the University of Texas at Austin
Center for Learning and Memory
Center for Theoretical and Computational Neuroscience
Interdisciplinary Neuroscience Program

Research Interests

- Neural basis of memory using fMRI, neurostimulation, ECoG, and computational modeling
- Neurocognitive development of memory and reasoning in childhood and adolescence
- Hippocampal-prefrontal contributions to episodic memory, concept formation, and reasoning
- Attentional and motivational modulation of memory function

Fellowships, Awards, and Honors

Best Article of the Year Award, Cognitive Behavioral and Affective Neuroscience	2019
Charles and Sarah Seay Regents Professor in Developmental Psychology	2018 – 2020
Elected as a Fellow of the Psychonomic Society	2016
Elected as a Fellow of the Association for Psychological Science	2016
Keynote Speaker, Center for Cognitive and Brain Sciences Undergraduate Summer Institute, Ohio State University	2016
Keynote Speaker, Neuroscience Program Retreat, UC Davis	2014
Keynote Speaker, Amsterdam Memory Meeting, Netherlands	2012
National Science Foundation CAREER Award	2011 – 2016
Inducted into the University of Texas Society for Teaching Excellence	2011
Young Investigator Award, NARSAD	2010 – 2012
Selected as University of Arizona/NSF ADVANCE Junior Scientist Lecturer	2010
Young Investigator Award, Army Research Office	2009 – 2012
Postdoctoral Individual National Research Service Award, NIMH	2004 – 2007
Predoctoral Individual National Research Service Award, NIMH	2001 – 2004
Honorable Mention National Science Foundation Graduate Fellowship	1998

Publications

‡ Senior and/or communicating author
† Postdoctoral fellow advisee
* Graduate student advisee
** Undergraduate advisee

Peer-Reviewed Journal Articles

Tran, T.T., Madore, K.P., Tobin, K.E., Block, S.H., Puliyadi, K., Hsu, S.C., **Preston, A.R.**, Bakker, A., & Wagner, A.D. (In press). Age-related differences in the relationship between sustained attention, associative memory, and memory-guided inference. Cognitive, Affective, & Behavioral Neuroscience.

Varga, N.L.†, Roome, H.E.†, Molitor, R.J.*, Martinez, L.**, Hipskind, E.M.**, Mack, M.L., **Preston, A.R.**‡ & Schlichting, M.L. (In press). Differentiation of related events in hippocampus supports memory reinstatement in development. Journal of Cognitive Neuroscience.

Coughlin, C.†, Pudhiyidath, A.*, Roome, H.E.†, Varga, N.L.†, Nguyen, K.V., & **Preston, A.R.**‡ (2024). Asynchronous development of memory integration and differentiation influence temporal memory organization. Developmental Science, 27(2), e13437.

Noh, S.M.*, Bjork R.A., & **Preston, A.R.**‡ (2024). General knowledge and detailed memory benefit from different learning sequences. Journal of Applied Research in Memory and Cognition, 13(3), 329–341.

Vinci-Booher, S., Schlichting, M.L., **Preston, A.R.**, & Pestilli, F. (2023). Development of human hippocampal subfield microstructure related to associative inference. Cerebral Cortex, 33(18),10207-10220.

Morton, NW†, Zippi, E.L.**, & **Preston, A.R.**‡ (2023). Memory reactivation and suppression modulate integration of the semantic features of related memories in hippocampus. Cerebral Cortex, 33(14), 9020-9037.

Sherrill, K.R.†, Molitor, R.J.*, Karagoz, A.B., Atyam, M.**, Mack, M.L.†, & **Preston, A.R.**‡ (2023). Generalization of cognitive maps across space and time. Cerebral Cortex, 33(12), 7971-7992.

Coughlin, C.†, Ben-Asher, E.*, Roome, H.E.†, Varga, N.L.†, Moreau, M.M.**, Schneider, L.L.**, & **Preston, A.R.**‡ (2022). Interpersonal family dynamics relate to hippocampal CA subfield structure. Frontiers in Human Neuroscience, 16, 872101.

Pudhiyidath, A.*, Morton, NW†, Duran, R.V.**, Schapiro, A.C., Momennejad, I., Hinojosa-Rowland, D.M.**, Molitor, R.J.*, & **Preston, A.R.**‡ (2022). Representations of temporal community structure in hippocampus and precuneus predict inductive reasoning decisions. Journal of Cognitive Neuroscience, 34(1), 1736-1760.

Schlichting, M.L.†, Guarino, K.F., Roome, H.E.†, & **Preston, A.R.**‡ (2022). Memory reactivation modulates new encoding and impacts inference in the developing human brain. Nature Human Behaviour, 6(3), 415-428.

Ashmaig, O.*, Hamilton, L.S., Modur, P., Buchanan, R.J., **Preston, A.R.**, & Watrous, A.J. (2021). A platform for cognitive monitoring of neurosurgical patients during hospitalization. Frontiers in Human Neuroscience, 15, 726998.

Carpenter, A.C., Thakral, P.P., **Preston, A.R.**, & Schacter, D.L. (2021). Reinstatement of item-specific contextual details during retrieval supports recombination-related false memories. Neuroimage, 236, 118033.

Molitor, R.J.*, Sherrill, K.R.†, Morton NW†, Miller, A.A.**, & **Preston, A.R.**‡ (2021). Memory reactivation during learning simultaneously promotes dentate gyrus/$CA_{2,3}$ pattern differentiation and CA_1 memory integration. Journal of Neuroscience, 41(4), 726–738.

Morton, NW†, Zippi, E.L.**, Noh, S.M.*, & **Preston, A.R.**‡ (2021). Semantic knowledge of famous people and places is represented in hippocampus and distinct cortical networks. Journal of Neuroscience, 41(12), 2762-2779.

Morton, NW†, & **Preston, A.R.**‡ (2021). Concept formation as a computational cognitive process. Current Opinion in Behavioral Sciences, 38, 83-89.

Witkowski, S., Noh, S., Lee, V., Grimaldi, D., **Preston, A.R.**, & Paller, K.A. (2021). Does memory reactivation during sleep affect specificity and generalization? Neurobiology of Learning and Memory, 182, 107442.

Kim, H.-J., Schlichting, M.L., **Preston, A.R.**, & Lewis-Peacock, J.A. (2020). Predictability changes what we remember in familiar temporal contexts. Journal of Cognitive Neuroscience, 32(1), 124-140.

Morton, NW[†], Schlichting, M.L., & **Preston, A.R.**[‡] (2020). Representations of common event structure in medial temporal lobe and frontoparietal cortex support efficient inference. Proceedings of the National Academy of Sciences USA, 117(47), 29338–29345.

Pudhiyidath, A.*, Roome, H.E.[†], Coughlin, C.[†], Nguyen, K.V., & **Preston, A.R.**[‡] (2020). Developmental differences in temporal schema acquisition impact reasoning decisions. Cognitive Neuropsychology, 37(1-2), 25-45.

Mack, M.L.[†], **Preston, A.R.**[‡], & Love, B.C.[‡] (2020). Ventromedial prefrontal cortex compression during concept learning. Nature Communications, 11, 46.

Frank, L., **Preston, A.R.**, & Zeithamova, D. (2019). Functional connectivity between memory and reward centers across task and rest track memory sensitivity to reward. Cognitive Behavioral and Affective Neuroscience, 19(3), 503-522. Selected as Best Article of the Year for CABN.

Schlichting, M.L.[†], Mack, M.L. [†], Guarino, K.F., & **Preston, A.R.**[‡] (2019). Comparison of semi-automated hippocampal subfield segmentation methods in a pediatric sample. Neuroimage, 191, 49-67.

Mack, M.L.[†], Love, B.C., & **Preston, A.R.**[‡] (2018). Building concepts one episode at a time: The hippocampus and concept formation. Neuroscience Letters, 680, 31-38.

Spalding, K.N., Schlichting, M.L.[†], Zeithamova, D.[†], **Preston, A.R.**, Tranel, D., Duff, M.C., & Warren, D.E. (2018). Ventromedial prefrontal cortex is necessary for normal associative inference and memory integration. Journal of Neuroscience, 38(15), 3767-3775.

Zeithamova, D., Gelman, B.D., Frank, L., & **Preston, A.R.** (2018). Abstract representation of prospective reward in the hippocampus. Journal of Neuroscience, 38(47), 10093-10101.

Liang, J.C.*, & **Preston, A.R.**[‡] (2017). Medial temporal lobe reinstatement of content-specific details predicts source memory. Cortex, 91, 67-78.

Morton, N.W.[†], Sherrill, K.R.[†], & **Preston, A.R.**[‡] (2017). Memory integration constructs maps of space, time, and concepts. Current Opinion in Behavioral Sciences, 17, 161-168.

Schlichting, M.L.[†], Guarino, K.F., Schapiro, A.C., Turk-Browne, N.B., & **Preston, A.R.**[‡] (2017). Hippocampal structure predicts statistical learning and associative inference abilities during development. Journal of Cognitive Neuroscience, 29(1), 37-51.

Zeithamova, D.[†], & **Preston, A.R.**[‡] (2017). Temporal proximity promotes integration of overlapping events. Journal of Cognitive Neuroscience, 29(8), 1311-1323.

Mack, M.L.[†], Love, B.C.[‡], & **Preston, A.R.**[‡] (2016). Dynamic updating of hippocampal conceptual representations through interactions with prefrontal cortex. Proceedings of the National Academy of Sciences USA, 113(46), 13203-13208.

Mack, M.L.†, & **Preston, A.R.**‡ (2016). Decisions about the past are guided by reinstatement of specific memories in the hippocampus and perirhinal cortex. Neuroimage, 127, 144-157.

Martinez, J.E.**, Mack, M.L.†, & **Preston, A.R.**‡ (2016). Knowledge of social affiliations biases economic decisions. PLoS One, 11(7), e0159918.

Schlichting, M.L.†, & **Preston, A.R.**‡ (2016). Hippocampal-medial prefrontal circuit supports memory updating during learning and post-encoding rest. Neurobiology of Learning and Memory, 134, 91-106.

Zeithamova, D.†, Manthuruthil, C., & **Preston, A.R.**‡ (2016). Repetition suppression in the medial temporal lobe and midbrain is altered by event overlap. Hippocampus, 26, 1464–1477.

Schlichting, M.L.*, Mumford, J.A., & **Preston, A.R.**‡ (2015). Learning-related representational changes reveal dissociable integration and separation signatures in hippocampus and prefrontal cortex. Nature Communications, 6, 8151.

Schlichting, M.L.*, & **Preston, A.R.**‡ (2015). Memory integration: Neural mechanisms and implications for behavior. Current Opinion in Behavioral Sciences, 1, 1-8.

Yushkevich, P. et al., (2015). Quantitative comparison of 21 protocols for labeling hippocampal subfields and parahippocampal cortical subregions in in vivo MRI: Towards developing a harmonized segmentation protocol. NeuroImage, 111, 526-41.

Davis, T., Xue, G., Love, B.C., **Preston, A.R.**, & Poldrack, R.A. (2014). Global neural pattern similarity as a common basis for categorization and recognition memory. Journal of Neuroscience, 34(22), 7472-84.

Hutchinson, J.B., Uncapher, M., Weiner, K.S., Bressler, D.W., Silver, M.A., **Preston, A.R.**, & Wagner A.D. (2014). Functional heterogeneity in posterior parietal cortex across attention and episodic memory retrieval. Cerebral Cortex, 24(1), 49-66.

Schlichting, M.L.*, & **Preston, A.R.**‡ (2014). Memory reactivation during rest supports upcoming learning of related content. Proceedings of the National Academy of Sciences USA, 111(44), 15845-50.

Schlichting, M.L.*, Zeithamova, D.†, & **Preston, A.R.**‡ (2014). CA_1 contributions to memory integration and inference. Hippocampus, 24 (10), 1248-1260.

Liang, J.C.*, Wagner, A.D., & **Preston, A.R.**‡ (2013). Content representation in the human medial temporal lobe. Cerebral Cortex, 23(1), 80-96.

Mack, M.L.†, **Preston, A.R.**‡, & Love, B.C.‡ (2013). Decoding the brain's algorithm for categorization from its neural implementation. Current Biology, 23(20), 2023-7.

Preston, A.R.‡, & Eichenbaum, H.‡ (2013). Interplay of the hippocampus and prefrontal cortex in memory. Current Biology, 23(17), R764-R773.

Wolosin, S.M.*, Zeithamova, D.†, & **Preston, A.R.**‡ (2013). Distributed hippocampal patterns that discriminate reward context are associated with enhanced associative binding. Journal of Experimental Psychology: General, 142(4), 1264-76.

Davis, T.H.*, Love, B.C., & **Preston, A.R.**‡ (2012). Learning the exception to the rule: Model-based fMRI reveals specialized representations for surprising category members. Cerebral Cortex, 22(2), 260-273.

Davis, T.H.*, Love, B.C., & **Preston, A.R.**‡ (2012). Striatal and hippocampal entropy and recognition signals in category learning: Simultaneous processes revealed by model-based fMRI. Journal of Experimental Psychology: Learning, Memory, & Cognition, 38(4), 821-39.

Tamminga, C.A., Thomas, B.P., Chin, R., Mihalakos, P., Wagner, A.D., & **Preston, A.R.**‡ (2012). Hippocampal novelty activations in schizophrenia: Disease and medication effects. Schizophrenia Research, 138(2-3), 157-63.

Wolosin, S.M.*, Zeithamova, D.†, & **Preston, A.R.**‡ (2012). Reward modulation of hippocampal subfield activation during successful associative encoding and retrieval. Journal of Cognitive Neuroscience, 24(7), 1532-47.

Zeithamova, D.†, Dominick, A.L., & **Preston, A.R.**‡ (2012). Hippocampal and ventral medial prefrontal activation during retrieval-mediated learning supports novel inference. Neuron, 75(1), 168-179.

Zeithamova, D.†, Schlichting, M.L.*, & **Preston, A.R.**‡ (2012). The hippocampus and inferential reasoning: Building memories to navigate future decisions. Frontiers in Human Neuroscience, 6, 70.

Chen, J., Olsen, R.K., **Preston, A.R.**, Glover, G.H., & Wagner, A.D. (2011). Associative retrieval processes in the human medial temporal lobe: Hippocampal retrieval success and CA_1 mismatch detection. Learning & Memory, 18(8), 523-528.

Dudukovic, N.M., **Preston, A.R.**, Archie, J.J., Glover, G.H. & Wagner, A.D. (2011). High-resolution fMRI reveals match enhancement and attentional modulation in the human medial temporal lobe. Journal of Cognitive Neuroscience, 23(3), 670-682.

Preston, A.R.‡, Bornstein, A.M., Hutchison, J.B., Gaare, M.E., Glover, G.H., & Wagner, A.D. (2010). High-resolution fMRI of content-sensitive subsequent memory responses in human medial temporal lobe. Journal of Cognitive Neuroscience, 22(1), 156-173.

Zeithamova, D.†, & **Preston, A.R.**‡ (2010). Flexible memories: Differential roles for medial temporal lobe and prefrontal cortex in cross-episode binding. Journal of Neuroscience, 30(44), 14676-84.

Ragland, J.D., Cools, R., Frank, M., Pizzagalli, D.A., **Preston, A.**, Ranganath, C., & Wagner, A.D. (2009). CNTRICS final task selection: Long-term memory. Schizophrenia Bulletin, 35(1), 197-212.

Preston, A.R.‡, & Gabrieli J.D.E. (2008). Dissociation between explicit memory and configural memory in the human medial temporal lobe. Cerebral Cortex, 18(9), 2192-207.

Preston, A.R., Shohamy, D., Tamminga, C.A., & Wagner, A.D. (2005). Hippocampal function, memory, and schizophrenia: Anatomical and functional neuroimaging considerations. Current Neurology and Neuroscience Reports, 5(4), 249-256.

Preston, A.R.‡, Shrager, Y., Dudukovic, N.M., & Gabrieli, J.D.E. (2004). Hippocampal contribution to the novel use of relational information in declarative memory. Hippocampus, 14(2), 148-152.

Preston, A.R., Thomason, M.E., Ochsner, K.N., Cooper, J.C., & Glover, G.H. (2004). Comparison of spiral-in/out and spiral-out BOLD fMRI at 1.5T and 3T. NeuroImage, 21(1), 291-301.

Knuttinen, M.-G., Power, J.M., **Preston, A.R.**, & Disterhoft, J.F. (2001). Awareness in classical differential eyeblink conditioning in young and aging humans. Behavioral Neuroscience, 115(4), 747-757.

Weiss, C., **Preston, A.R.**, Oh, M.M., Schwarz, R.D., Welty, D., & Disterhoft, J.F. (2000). The M1 muscarinic agonist CI1017 facilitates hippocampally-dependent trace eyeblink conditioning in aging rabbits and increases the excitability of CA1 pyramidal neurons. Journal of Neuroscience, 20(2), 783-790.

Disterhoft, J.F., Kronforst-Collins, M., Oh, M.M., Power, J.M., **Preston, A.R.**, & Weiss, C. (1999). Cholinergic facilitation of trace eyeblink conditioning in aging rabbits. Life Sciences, 64(6-7), 541-548.

Preprints

Mack, M.L., Love, B.C., & **Preston, A.R.**‡ Distinct hippocampal mechanisms support concept formation and updating. BioRXiv.

Nguyen, K.V., Roome, H.E.†, Coughlin, C.†, Sherrill, K.R.†, & **Preston, A.R.**‡ Spatial preposition use predicts children's spatial map formation. PsyArXiv.

Preregistrations

Schüren, K.A., Varga, N.L., **Preston, A.R.**, & Schwabe, L. (Preregistration). Time-dependent transformation of associative memory: Relevance for inference and emotional modulation.

Schüren, K.A., Varga, N.L., **Preston, A.R.**, & Schwabe, L. (Preregistration). The impact of stress and emotion on the linking of memories.

Peer-Reviewed Conference Proceedings

McArthur, A.W., Guarino, K.F., **Preston, A.R.**, & Schlichting, M.L. (2022). Reasoning about specific relations versus general associations shows protracted development throughout adolescence. Proceedings of the Annual Meeting of the Cognitive Science Society, 44(44). Toronto, CA.

Mack, M.L.†, **Preston, A.R.**‡, & Love, B.C.‡ (2017). Medial prefrontal cortex compresses concept representations through learning. 2017 International Workshop on Pattern Recognition in Neuroimaging (PRNI). Toronto, CA.

Schlichting, M.L.†, Guarino, K.F., Roome, H.†, & **Preston, A.R.**‡ (2017). Pattern classification reveals developmental differences in how memories influence new learning. 2017 International Workshop on Pattern Recognition in Neuroimaging (PRNI). Toronto, CA.

Invited Commentaries

Eichenbaum, H., Amaral, D.G., Buffalo, E.A., Buzsáki, G., Cohen, N., Davachi., L., Frank, L., Heckers, S., Morris, R.G.M., Moser, E.I., Nadel, L., O'Keefe, J., **Preston, A.**, Ranganath, C., Silva, A., & Witter, M. (2016). Hippocampus at 25. Hippocampus, 26, 1238-1249.

Preston, A.R.‡ (2007). Ask the experts: How do short-term memories become long-term memories? Scientific American. 297(6), 114.

Gabrieli, J.D.E., & **Preston, A.R.** (2003). Working smarter not harder. Neuron, 37(2), 191-192.

Gabrieli, J.D.E., & **Preston, A.R.** (2003). Visualizing genetic influences on human brain function. Cell, 112(2), 144-145.

Preston, A.R., & Gabrieli, J.D.E. (2002). Different functions for different medial temporal lobe structures? Learning and Memory, 9, 215-217.

Book Chapters

Varga, N.L., Morton NW, & **Preston, A.R.**‡ Schema, inference, and memory. (2024). In Kahana, M.J., & Wagner, A.D. (eds.), Handbook on Human Memory (pp. 1400-1425). New York: Oxford University Press.

Preston, A.R., Molitor, R.J., Pudhiyidath, A., Schlichting, M.L. (2017) Schemas. In: Eichenbaum, H. (ed.), Memory Systems, Vol. 3 of Learning and Memory: A Comprehensive Reference, 2nd edition, Byrne, J.H. (ed.). pp. 125–132. Oxford: Academic Press.

Schlichting, M.L., & **Preston, A.R.** (2017). The hippocampus and memory integration: Building knowledge to navigate future decisions. In M.C. Duff, & D.E. Hannula (Eds.), The Hippocampus from Cells to System: Structure, Connectivity, and Functional Contributions to Memory and Flexible Cognition (pp. 405-437). New York: Springer.

Liang, J.C., & **Preston, A.R.** (2015). Medial temporal lobe subregional contributions to episodic memory: Insights from high-resolution fMRI. In D.R. Addis, A. Duarte, & M. Barense (Eds.), The Cognitive Neuroscience of Human Memory (pp. 161-184). New York: Wiley-Blackwell.

Davachi, L., & **Preston, A.R.** (2014). The medial temporal lobe and memory. In M.S. Gazzaniga & G.R. Mangun (Eds.), The Cognitive Neurosciences, 5th ed. (pp. 539-46). Cambridge, Massachusetts: MIT Press.

Brewer, J.B., Gabrieli, J.D.E., **Preston, A.R.**, Vaidya, C.J., & Rosen, A.C. (2007). Memory. In C.G. Goetz (Ed.), Textbook of Clinical Neurology, 3rd ed. (pp. 61-76). New York: Elsevier.

Preston, A.R., & Wagner, A.D. (2007). The medial temporal lobe and memory. In R.P. Kesner & J.L. Martinez, Jr., (Eds.), The Neurobiology of Learning & Memory, 2nd Edition (pp. 305-337). Oxford, UK: Elsevier.

Gabrieli, J.D.E., **Preston, A.R.**, Brewer, J.B., & Vaidya, C.J. (2003). Memory. In C.G. Goetz (Ed.), Textbook of Clinical Neurology, 2nd ed (pp. 63-78). New York: Elsevier.

Disterhoft, J.F., Carrillo, M., Fortier, C., Gabrieli, J.D.E., Knuttinen, M.-G., McGlinchey-Berroth, R., **Preston, A.**, & Weiss, C. (2002). Impact of temporal lobe amnesia, aging, and awareness on human eyeblink conditioning. In L.R. Squire & D.L. Schacter (Eds.), The Neuropsychology of Memory, 3rd Edition (pp. 97-113). New York: Guilford.

Grants

Extramural Awards

National Institute of Mental Health 2013 – 2029
R01 Research Project Grant
Alison R. Preston, PI
Hippocampal and prefrontal contributions to memory integration
(R01 MH100121)

National Institute of Mental Health 2015 – 2026
T32 Institutional Training Grant
Alison R. Preston, PI; Laura L. Colgin, Co-I
Training in learning and memory (T32 MH106454)

National Institute of Mental Health 2015 – 2026
R01 Research Project Grant
Alison R. Preston, Consultant; Daniel L. Schacter, PI
Event-related neuroimaging of human memory formation
(R01 MH060941)

National Institute of Mental Health 2021 – 2024
R21 Exploratory Developmental Research Grant
Alison R. Preston, PI; Andrew Watrous, PI
Oscillatory mechanisms of context dependent cognitive maps in human memory (R21 MH127842)

National Institute of Child Health & Human Development 2016 – 2019
R21 Exploratory Developmental Research Grant
Alison R. Preston, PI
Linking the neurobiological development of memory and reasoning
(R21 HD083785)

National Science Foundation 2011 – 2017
CAREER Award
Alison R. Preston, PI
Memory based prediction in the medial temporal lobe
(BCS 1056019)

National Institute of Mental Health 2011 – 2014
R21 Exploratory Developmental Research Grant
Alison R. Preston, contact PI; Brad C. Love, PI
Model-based fMRI of dynamic category learning: The memory attention interface (R21 MH091523)

National Alliance for Research on Schizophrenia and Depression 2010 – 2013
Young Investigator Award
Alison R. Preston, PI
Hippocampal subfield contributions to episodic memory: Implications for schizophrenia

Army Research Office 2009 – 2012
Young Investigator Award
Alison R. Preston, PI
High-resolution fMRI of hippocampal subfield contributions to episodic memory (55830-LS-YIP)

National Institute of Mental Health 2004 – 2007
Postdoctoral Individual National Research Service Award
Alison R. Preston, PI
Mapping medial temporal lobe contributions to declarative memory (F32 MH071092)

National Institute of Mental Health 2001 – 2004
Predoctoral Individual National Research Service Award
Alison R. Preston, PI
The neural correlates of encoding specificity (F31 MH063576)

Internal Awards

College of Natural Sciences 2018 – 2020
University of Texas at Austin
Catalyst Grant
Alison R. Preston, PI
Developing human electrophysiology approaches to determine how brain rhythms support memory

University of Texas at Austin 2012 – 2013
Research Grant
Alison R. Preston, PI
Neurobiological development of memory and reasoning

The University of Texas at Austin Graduate School 2008
Faculty Development Summer Research Assignment
Alison R. Preston, PI
fMRI of human subfield contributions to declarative memory

The University of Texas at Austin College of Liberal Arts 2008
Undergraduate Research Apprenticeship Program
Alison R. Preston, PI

Sponsor for Grants to Trainees

National Science Foundation 2023 – 2026
Graduate Research Fellowship Program
Awarded to Owen Friend (Ph.D. student)

National Institute of Health 2018 – 2022
Postdoctoral Individual National Research Service Award
Nicole Varga (Postdoctoral fellow)
Influence of brain maturation on memory representation during development (F32 HD095586)

National Institute of Health 2018 – 2019
Predoctoral Individual National Research Service Award
Robert Molitor (Ph.D. student)
How experience shapes representations of overlapping visual events (F31 NS103458)

National Institute of Health 2017 – 2019
Postdoctoral Individual National Research Service Award
Christine Coughlin (Postdoctoral fellow)
Memory development and its influence on reasoning and prospection (F32 MH115585)

National Institute of Health 2017 – 2019
Predoctoral Individual National Research Service Award
Sharon Noh (Ph.D. student)
Improving long-term retention of generalized knowledge and detailed memory by shaping neural representations during learning (F31 NS105353)

National Institute of Health 2017 – 2020
Postdoctoral Individual National Research Service Award
Awarded to Neal Morton (Postdoctoral fellow)
A neurocognitive framework for understanding how experience shapes object representations (F32 MH114869)

National Institute of Health 2017 – 2020
Postdoctoral Individual National Research Service Award
Awarded to Katherine Sherrill (Postdoctoral fellow)
Modulation of hippocampal cognitive maps by dopaminergic midbrain and prefrontal cortex (F32 NS098808)

National Institute of Health 2016 – 2019
Postdoctoral Individual National Research Service Award
Awarded to Tracy Wang (Postdoctoral fellow)
Co-Sponsor with Jarrod Lewis-Peacock
Investigating the contributions of neural competition to intentional forgetting and real-time neurofeedback (F32 NS096962)

The University of Texas at Austin Graduate School 2014 – 2015
Continuing Graduate Fellowship
Awarded to Margaret Schlichting (Ph.D. Student)

National Institute of Health 2013 – 2016
Postdoctoral Individual National Research Service Award
Awarded to Michael Mack (Postdoctoral fellow)
The mutual influence of attention and learning during knowledge acquisition (F32 MH100904)

National Institute of Mental Health 2012 – 2014
Predoctoral Individual National Research Service Award
Awarded to Jackson Liang (Ph.D. Student)
Content representation in the human medial temporal lobe (F31 MH097441)

The University of Texas at Austin Graduate School 2012 – 2013
Continuing Graduate Fellowship
Awarded to Jackson Liang (Ph.D. Student)

University Cooperative Society, The University of Texas at Austin 2012
Undergraduate Research Fellowship
Awarded to Tammy Tran (Undergraduate student)

National Institute of Mental Health 2011 – 2014
Postdoctoral Individual National Research Service Award
Awarded to Dagmar Zeithamova (Postdoctoral Fellow)
Medial temporal lobe contributions to flexible use of memory (F32 MH094085)

Department of Defense 2011 – 2014
National Defense Science and Engineering Graduate Fellowship
Awarded to Margaret Schlichting (Ph.D. student)

National Institute of Mental Health 2011 – 2013
Predoctoral Individual National Research Service Award
Awarded to Sasha Wolosin (Ph.D. student)
The effect of anticipation of episodic memory: Motivation and attention (F31 MH092032)

American Psychological Association 2009 – 2011
Diversity in Neuroscience Graduate Fellowship
Awarded to Sasha Wolosin (Ph.D. student)

Scholarly Presentations

Invited Talks (past five years)

Hippocampal and frontoparietal function underlie developmental shifts in knowledge acquisition and decision making. Department of Psychological and Brain Sciences, Dartmouth University. March 2025.

Development shifts in hippocampal representation support the advent of cognitive maps in emerging adulthood. Winter Conference on Neural Plasticity. Nadi, Fiji. February 2025.

Hippocampal and frontoparietal development enhance knowledge of specifics and generalities Symposium presentation, "Insights into flexible cognition: Structure learning, inference, and abstraction based on cognitive maps." Cognitive Neuroscience Society Annual Meeting. San Francisco, April 2024.

Statistical learning and the brain. Invited participant. Kavli Institute for Theoretical Physics, University California Santa Barbara. July 2023.

Hippocampal-prefrontal representations differentiate outcomes that vary by context. Symposium presentation, "Electrophysiological studies of human memory retrieval." (Together with Neal Morton.) Cognitive Neuroscience Society Annual Meeting. San Francisco, March 2023.

Hippocampal-prefrontal hierarchical representations of experience guide generalization and inference. Mind Meeting, Max Planck Institute for Cognitive and Brain Sciences. Leipzig, Germany. October 2021. (Virtual seminar due to COVID-19 pandemic.)

Hippocampal-prefrontal interactions guide knowledge acquisition and generalization. Bristol Neuroscience, University of Bristol. Bristol, UK. June 2021. (Virtual seminar due to COVID-19 pandemic.

Hippocampal-prefrontal cognitive maps support abstract inference and context-dependent decision making. Wellcome Centre for Integrative Neuroimaging, Oxford University. Oxford, UK. May 2021. (Virtual seminar due to COVID-19 pandemic.)

Hippocampal-prefrontal interactions guide knowledge acquisition and generalization. Department of Brandeis University. April 2021. (Virtual seminar due to COVID-19 pandemic.)

Hippocampal-medial prefrontal interactions guide how existing memories bias new learning. Symposium presentation, "Role of schemas in shaping memory encoding." Cognitive Neuroscience Society Annual Meeting. March 2021. (Virtual seminar due to COVID-19 pandemic.)

Hippocampal-prefrontal representations guide generalization and inference. Institute of Psychology, University of Hamburg. Hamburg, Germany. February 2021. (Virtual seminar due to COVID-19 pandemic.)

Hippocampal-prefrontal cognitive maps support abstract inference and context-dependent decision making. Institute of Neuroinformatics, University of Zurich. Zurich, Switzerland. November 2020. (Virtual seminar due to COVID-19 pandemic.)

Hippocampal-prefrontal interactions guide knowledge acquisition and generalization. Department of Psychology, Harvard University. October 2020. (Virtual seminar due to COVID-19 pandemic.)

Neurocomputational mechanisms of knowledge acquisition and generalization. Symposium presentation, "Integrating theory and data: Using computational models to understand neuroimaging data." Cognitive Neuroscience Society Annual Meeting. Boston, Massachusetts. March 2020.

Conference Presentations (past three years)

Mu, J., Huth, A.G., & **Preston, A.R.** (2025). Language models capture efficient information compression in human memory. Annual Meeting of the Cognitive Neuroscience Society. Boston, MA.

Amatuni, A., Varga, N.L., Gordienko, A., Ashmaig, O., Morton, NW, & **Preston, A.R.** (2024). Inference of latent causes from noisy inputs develops through adolescence. Context and Episodic Memory Symposium. Philadelphia, PA.

Amatuni, A., Varga, N.L., Gordienko, A., Ashmaig, O., Morton, NW, & **Preston, A.R.** (2024). The development of contextual learning and inference. Annual Meeting of the Cognitive Development Society. Pasadena, CA.

Friend, O.W., Dutcher, A.M., Varga, N.L., Coughlin, C., & **Preston, A.R.** (2024). Hippocampal maturation supports chaining of temporally related events in memory. Annual Meeting of the Flux Congress. Baltimore, MD.

Varga, N.L., Cohen, L.B., & **Preston, A.R.** (2024). Reactivation of existing memories during new learning mediates hippocampal memory organization in development. Annual Meeting of the Flux Congress. Baltimore, MD.

Amatuni, A., Dutcher, A., Coughlin, C., & **Preston, A.R.** (2023). Linking perceptual and semantic predictability to patterns of event segmentation in development. Annual Meeting of the Cognitive Neuroscience Society. San Francisco, CA.

Coughlin, C., Dutcher, A., Hall, C., Gentot, J., Notti, N., Amatuni, A., & **Preston, A.R.** (2023). Imagined movie "sequels" show changes in the composition of episodic future thought during middle- to late-childhood. Annual Meeting of the Society for Research in Child Development. Salt Lake City, UT.

Friend, O.W., Coughlin, C., & **Preston, A.R.** (2023). Specific temporal memory and general temporal knowledge interact during development. Annual Meeting of the Society for Neuroscience. Washington, DC.

Kail, A., Coughlin, C., Lawton, J., & **Preston, A.R.** (2023). Subclinical negative affect tracks memory biases on a naturalistic task across development. Annual Meeting of the Anxiety & Depression Association of America. Washington, DC.

McArthur, A.W.D., Guarino, K.F., Mack, M.L., **Preston, A.R.**, & Schlichting, M.L. (2023). Reasoning about specific relations versus general associations shows protracted development throughout adolescence. Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science. Guelph, CA.

Nadiadwala, A., **Preston, A.R.**, & Dunsmoor, J.E. (2023). Emotional influence on mnemonic judgements of temporal proximity. Annual Meeting of the Society for Neuroscience. Washington, DC.

Roome, H., Sherrill, K., Morton, N., Nguyen, K., Karagoz, A., Coughlin, C. & **Preston, A.R.** (2023). Computational modeling reveals that spatial memory development arises through separable recall and precision processes. Annual Meeting of the Society for Research in Child Development. Salt Lake City, UT.

Amatuni, A., Dutcher, A., Coughlin, C., & **Preston, A.R.** (2022). Linking visual predictability in naturalistic videos to patterns of event segmentation in development. Annual Meeting of the Society for Neuroscience. San Diego, CA.

Bailey, A., Coughlin, C., Alum, Z., Madore, K.P., Schacter, D.L, & **Preston, A.R.** (2022). Development of divergent thinking and its association with episodic memory. Annual Meeting of the Society for the Neuroscience of Creativity. Virtual meeting.

Coughlin, C., Schlichting, M.L., Morton, NW, Sherrill, K.R., Moreau, M.M., & **Preston, A.R.** (2022). Age-related differences in frontoparietal function support developmental improvements in memory-based inference. Annual Meeting of the Society for Neuroscience. San Diego, CA.

Kail, A., Coughlin, C., Lawton, J., & **Preston, A.R.** (2022). Subclinical psychopathology relates to emotional biases in episodic and non-episodic thinking across development. Wisconsin Symposium on Emotion. Madison, WI.

Nadiadwala, A., Dunsmoor, J.E., & **Preston, A.R.** (2022). Negative emotional overlap in events impedes memory integration and inference. Annual Meeting of the Society for Neuroscience. San Diego, CA.

Noh, S.M., Morton NW, & **Preston, A.R.** (2022). Interleaved learning shapes neural representations in medial prefrontal cortex to enhance categorization of naturalistic stimuli. Annual Meeting of the Society for Neuroscience. San Diego, CA.

Roome, H.E., Sherrill, K.R., Nguyen, K.V., Karagoz, A.B., Coughlin, C., & **Preston, A.R.** (2022). Medial temporal lobe error signals mediate developmental differences in spatial memory precision. Annual Meeting of the Society for Neuroscience. San Diego, CA.

Sherrill, K.R., Roome, H.E., Karagoz, A.B., Long, J.M., & **Preston, A.R.** (2022). Emergence of hippocampal and ventromedial prefrontal cortex context-dependent coding during virtual navigation. Annual Meeting of the Society for Neuroscience. San Diego, CA.

Varga, N.L., Roome, H.E., Molitor, R.J., Martinez, L., Hipskind, E.M., Mack, M.L., **Preston, A.R.** & Schlichting, M.L. (2022). Differentiation of related events in hippocampus supports memory organization and retrieval in development. Annual Meeting of the Society for Neuroscience. San Diego, CA.

Varga, N.L., Roome, H.E., Molitor, R.J., Martinez, L., Hipskind, E.M., Mack, M.L., **Preston, A.R.** & Schlichting, M.L. (2022). Differentiation of related events in hippocampus is associated with successful memory reinstatement in development. Annual Meeting of the Psychonomics Society. Boston, MA

Academic Advising

Research Associates and Postdoctoral Fellows

Christine Coughlin	2016 – 2023, Assistant Professor, University of Illinois Chicago
Mengcun Gao	Beginning July 2025
Michael Mack	2011 – 2016, Associate Professor, University of Toronto
Neal Morton	2014 – 2023, Assistant Professor, University of Wisconsin Milwaukee
Hannah Roome	2016 – 2021, Lecturer (Assistant Professor rank), Newcastle University
Margaret Schlichting	2015 – 2016, Associate Professor, University of Toronto
Katherine Sherrill	2015 – 2023, Data Scientist, Baylor, Scott & White
Nicole Varga	2018 – present
Dagmar (Dasa) Zeithamova	2008 – 2014, Associate Professor, University of Oregon

Doctoral Students Directly Supervised

Andrei Amatuni (Psychology)	2022 – present
Omer Ashmaig (Neuroscience)	2021 – present
Eliya Ben-Asher (Psychology)	2019 – 2021, Data Scientist, Lumen
Anthony Dutcher (Neuroscience)	Ph.D. 2022, Data Scientist, Senseye
Owen Friend (Psychology)	2022 – present
Jackson Liang (Neuroscience)	Ph.D. 2015, UX Researcher, Google
Robert Molitor (Psychology)	Ph.D. 2019, User Research Specialist, Microsoft
Jianing Mu (Neuroscience)	2022 – present
Ayesha Nadiadwala (Neuroscience)	Ph.D. 2024
Sharon Noh (Psychology)	Ph.D. 2021, Postdoctoral Fellow, University of California, Irvine
Athula Pudhiyidath (Psychology)	Ph.D. 2020, Data Scientist, Prime Street
Margaret Schlichting (Psychology)	Ph.D. 2015, Associate Professor, University of Toronto
Amina Shmanova (Psychology)	2024 – present
Sasha Wolosin (Psychology)	Ph.D. 2013, Data Mining Scientist, Apple

Membership on Graduate Committees (outside of my lab)

Kevin Bieri (Neuroscience)	Ph.D. 2015, dissertation committee
Kathryn Bonnen (Neuroscience)	2014, qualifying exam committee
Tyler Davis (Psychology)	Ph.D. 2010, dissertation committee
Laura Engelhardt (Psychology)	Ph.D. 2018, dissertation committee
Marika Inhoff (Psychology, UC Davis)	Ph.D. 2018, dissertation committee
Suna Guo (Neuroscience)	2022, qualifying exam committee
Eric Hart (Neuroscience)	2015, qualifying exam committee
Augustin Hennings (Neuroscience)	2018, qualifying exam committee

Brent Hughes (Psychology)	Ph.D. 2012, dissertation committee
Hyojeong Kim (Psychology)	Ph.D. 2020, dissertation committee
Dean Kirson (Neuroscience)	2008, qualifying exam committee
Seth Koslov (Psychology)	Ph.D. 2020, dissertation committee
Dylan Le (Neuroscience)	2021, qualifying exam committee
Nicholas Malecek (Neuroscience)	2011, qualifying exam committee
Tehila Nugiel (Psychology)	Ph.D. 2021, dissertation committee
Derek Pisner (Psychology)	Ph.D. 2021, dissertation committee
Blaire Porter (Psychology)	2022, dissertation committee
Mary Abbe Roe (Psychology)	Ph.D. 2020, dissertation committee
Celeste Saucedo (Psychology)	Ph.D. 2020, dissertation committee
Kirsten Smayda (Psychology)	Ph.D. 2017, dissertation committee
Sarah (Sadie) Witkowski (Psychology, Northwestern)	Ph.D. 2020, dissertation committee
Dagmar Zeithamova (Neuroscience)	Ph.D. 2008, dissertation committee

Postbaccalaureate and Undergraduate Researchers

More than 150 undergraduates and postbaccalaureate researchers have participated in my lab's research over the course of my career. I list current students and representative trainees who continued on to postgraduate work in the behavioral and biological sciences. Honors students denoted with **.

Current Students and Postbaccalaureate Researchers

Sara Abbas, 2023 – present
Milo Araguz, 2024 – present
Genna Adelizzi, 2023 – present
Mira Bakhta, 2024 – present
Indra Basu, 2024 – present
Trisha Clennan, 2024 – present
David Doan, 2022 – present
Eesha Gowda, 2022 – present
Nicole Hinkle, 2024 – present
Bailey Inglish, 2024 – present
Karina Kapoor, 2024 – present
Hareem Musa, 2024 – present
Molly Pierce, 2024 – present
Naveen Pillai, 2024 – present
Amy Pham, 2024 – present
Andre Pham, 2024 – present
Enrique Olan, 2024 – present
Olivia Simmons, 2024 – present

Representative Past Students Who Continued on in Behavioral and Biological Sciences

Zuha Alam, 2018 – 2021	UT CNS Award for Excellence in Human Ecology M.D., UT Health Science Center
**Manasa Atyam, 2016 – 2019	Dean's Scholars Honors Program Dean's Honored Graduate M.D., UT Health Science Center\

Aaron Bornstein, 2005 – 2007	Ph.D., NYU Assistant Professor, UC Irvine
Crystal Cook Reeck, 2006 – 2007	Ph.D., Duke Associate Professor, Temple University
Adam Czernuszenko, 2019 – 2022	M.D. student, UT Southwestern
Manoj Doss, 2009 – 2010	Ph.D., Univ. of Chicago Research Fellow, UT Austin
Nicholas Franklin, 2008 – 2009	Ph.D., Brown University
**Meghan Gaare, 2001 – 2005	M.D., University of Virginia
Nathan Giles, 2014 – 2015	Ph.D. student, UCLA
Will Glynn, 2022 – 2023	Ph.D. student, UT Austin
Alex Gordienko, 2021 – 2021	Ph.D. student, UPenn
Katherine Guarino, 2013 – 2016	Ph.D., Loyola University
Cameron Hall, 2019 – 2021	Ph.D. student, University of British Columbia
Elizabeth Hipskind, 2018 – 2020	Ph.D. student, Baylor University
**Ashley Humphries, 2021 – 2023	Research Assistant, University of Nebraska
Francis Drew Hussey, 2019 – 2021	M.D. student, Boston University
Ben Hutchinson, 2005 – 2006	Ph.D., Stanford Assistant Professor, University of Oregon
**Aeslyn Kail, 2019 – 2023	M.S. student, UT Austin
Ata Karagoz, 2015 – 2020	Ph.D. student, Washington University
Robert Kwon, 1999 – 2001	M.D., UMDNJ
Jane Lange, 2002	Ph.D., UW
Jaida Long, 2018 – 2022	Ph.D. student, Georgia Tech
Gwen Lawson, 2006 – 2007	Ph.D., Univ. of Pennsylvania
**Lajja Majmundar, 2018 – 2020	M.D., UT Medical Branch
**Christine Manthuruthil, 2009 – 2012	COLA Junior Fellow, Dean's Scholars Honors Program Dean's Honored Graduate M.D., UT Southwestern
**Joel Martinez, 2012 – 2013	Ph.D., Princeton University
**Arjun Mukerji, 2010 – 2011	Ph.D., UC Berkeley
Mohit Nadkarni, 2018 – 2023	Research Assistant, UC Irvine
**Khanh Nguyen, 2021 – 2022	Research Assistant, Stanford University
Kim Nguyen, 2016 – 2020	Ph.D., Temple University
Miriam Ortega, 2018 – 2021	Ph.D. student, UCLA
**Lauren Quesada, 2018 – 2021	Dean's Honored Graduate M.D., UT Health Science Center
**Anatasia Rigney, 2010 – 2011	Ph.D., UT Austin
Nicolaus Schmandt, 2007 – 2009	Ph.D., Case Western
**Yael Shrager, 2001 – 2003	Ph.D., UCSD
Miranda Smith, 2023 – 2024	Research Assistant, UT Austin
**Tammy Tran, 2012 – 2013	COLA Junior Fellow, UT Austin Dean's Honored Graduate Ph.D., Johns Hopkins Postdoctoral Fellow, Stanford University
Jennifer (Davie) Yoon, 2001 – 2004	Ph.D., Stanford
**Ellen Zippi, 2014 – 2017	Dean's Scholars Honors Program NSF GRFP Award Dean's Honored Graduate Ph.D., UC Berkeley

Teaching

UT Austin

Grant Writing in Behav and Biol Sciences, PSY 394U (graduate), Instructor	2016 – 2017, 2019, 2022 – present
Cognitive Neuroscience-W, PSY 355N (undergraduate), Instructor	2009 – 2015, 2017 – 2018
Principles of Neuroscience I, NEU 482T (graduate), Instructor	2014
Cognitive Sciences, PSY 394U (graduate), Guest Lecturer	2007 – 2011
Fundamentals of Cognition, PSY 387R (graduate), Guest Lecturer	2010 – 2012
Principles of Cognitive Neuroscience, PSY 387S (graduate), Guest Lecturer	2015, 2017
Intro to Psychology, PSY 301 (undergraduate), Guest Lecturer	2012
Intro to Cognitive Science, LIN 373 (undergraduate), Guest Lecturer	2010, 2012, 2017
Principles of Neuroscience I, NEU 382T (graduate), Guest Lecturer	2008, 2010 – 2011
Principles of Neuroscience II, NEU 383T (graduate), Guest Lecturer	2009, 2012, 2014, 2017

Stanford University

The Nervous System, NEU 200 (graduate), Guest Lecturer	2005
Introduction to Neuroscience, PSY 128S (undergraduate), Instructor	2002
Cognitive Psychology, PSY 109S (undergraduate), Instructor	2000

Service

Professional Memberships

American Psychological Society
Cognitive Neuroscience Society
Flux Society for Developmental Cognitive Neuroscience
International Society for Behavioural Neuroscience (Elected)
Memory Disorders Research Society (Elected)
Psychonomic Society
Society for Neuroscience
Society for Research in Child Development

Professional Service for Conferences

- Conference Program Committee, Cognitive Neuroscience Society, 2021 – present
- Symposium Chair, "How does the developing brain organize experience to model the world?" Flux Congress, 2021
- Symposium Chair, "Children's representation of time in memory and future-oriented thought," Annual Meeting of the Society for Research in Child Development, 2019
- Nanosymposium Chair, "Cortical-hippocampal interactions," Annual Meeting of the Society for Neuroscience, 2018
- Annual Meeting Organizing Committee for the Memory Disorders Research Society, 2014
- Nanosymposium Chair, "Human long-term memory," Annual Meeting of the Society for Neuroscience, 2014
- Nanosymposium Chair, "Relational Memory", Annual Meeting of the Society for Neuroscience, 2010
- Co-Chair Slide Session, "Human Episodic Memory," Annual Meeting of the Society for Neuroscience, 2002

Grant Reviewing

- Dutch Research Council (NWO)
- Indiana Alzheimer's Disease Center
- Israel Science Foundation
- National Institute of Health (Ad hoc) – Behavioral Neuroscience Fellowship Study Section, Cognition and Perception (CP) Study Section, Neurobiology of Learning and Memory (LAM) Study Section, NIGMS Special Emphasis Panel; NIMH Silvio O. Conte Centers for Basic Neuroscience or Translational Mental Health Research Study Section; NIMH Board of Scientific Counselors (Intramural program review); NIMH Institutional Training Grant (T32) Study Section
- National Institute of Health (Regular member) – Neurobiology of Learning and Memory (LAM) Study Section
- National Science Foundation – Cognitive Neuroscience Program, Major Research Instrumentation Program, STEM Education
- Wellcome Trust

Editorial Positions

Editorial Advisory Board, Oxford Open Neuroscience	2021 – present
Associate Editor, Psychonomic Bulletin & Review	2016 – 2023
Guest Reviewing Editor, eLife	2017 – 2018
Consulting Editor, Journal of Experimental Psychology: General	2013 – 2018

Journal and Book Reviewing

Archives of General Psychiatry
Biological Psychiatry
Brain and Cognition
Cell
Cerebral Cortex
Child Development
Cognition
Cognitive, Affective, and Behavioral Neuroscience
Cognitive Neuroscience
Cortex
Current Biology
Current Opinion in Behavioral Sciences
Developmental Cognitive Neuroscience
eLife
Frontiers in Human Neuroscience
Hippocampus
Human Brain Mapping
Journal of Cognitive Neuroscience
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Learning, Memory, and Cognition
Journal of Neuroscience
Learning & Memory
Nature
Nature Communications
Nature Human Behavior
Nature Neuroscience
Nature Reviews Neuroscience

Neurobiology of Learning and Memory
Neuroimage
Neuron
Neuropsychologia
Neuropsychology
Neuroscience Letters
Palgrave Macmillian
Philosophical Transactions of the Royal Society B
PLOS Biology
PNAS
Psychological Review
Psychological Science
Schizophrenia Bulletin
Science
Science Advances
Trends in Cognitive Science
Trends in Neurosciences

Department Service

Steering Committee, UT Austin Conference on Learning & Memory	2014 – present
Chair, Tenure and Promotion Committee (Psychology)	2023
Opportunity Hiring Committee (Neuroscience)	2022 – 2024
Faculty Mentor, Alexander Huth (Neuroscience)	2017 – 2024
Chair, Tenure and Promotion Committee (Neuroscience)	2022 – 2023
Neuroscience Faculty Workload/Merit Review Committee	2016 – 2018, 2021
Structure and Governance Committee, Psychology	2020 – 2021
Chair's Advisory Committee, Neuroscience	2018 – 2020
Area Head, Cognitive Neuroscience, Psychology	2016 – 2020
Chair, Psychology (Cognitive Neuroscience) FII Search Committee	2016 – 2019
Steering Committee, Psychology	2016 – 2019
Faculty Mentor, Jessica Church-Lang, Psychology	2014 – 2019
Symposium Chair, Temporal Coding in Episodic Memory, UT Austin Conference on Learning & Memory	2019
Chair, Promotion Committee, Jessica Church-Lang (Psychology)	2018
Third Year Review Committee, Ian Nauhaus (Psychology & Neuroscience)	2017 – 2018
Strategic Planning Committee, Neuroscience	2016 – 2018
Neuroscience Faculty Workload/Merit Review Committee	2016 – 2018
Chair, Subject Pool Committee, Psychology	2016 – 2018
Faculty Mentor, Laura Colgin, Neuroscience	2014 – 2017
FII-2 Strategic Planning Committee, Psychology	2017
IRC Director Search Committee, Psychology	2016
Chair, Third Year Review Committee, Jessica Church-Lang, Psychology	2015 – 2016
Promotion & Tenure Committee, Neuroscience	2014, 2016
Graduate Student Awards and Fellowships Committee, Psychology	2014 – 2016
Chair, Faculty Search Committee, Cognitive Neuroscience, Psychology	2014 – 2015
Symposium Chair, Human Memory Research, UT Austin Conference on Learning & Memory	2011 – 2013
Website Redesign Committee, Psychology	2011 – 2012
Faculty Search Committee, Center for Learning and Memory	2007 – 2010

College Service

Co-Director, Center for Learning & Memory T32 NRSA	2015 – present
Faculty Mentor, T32 NRSA Training in Biomedical Big Data Science	2016 – 2020
Selection Committee, T32 NRSA Training in Biomedical Big Data Science	2018 – 2020
CNS Promotion and Tenure Committee	2018, 2019
Scholarship Committee, Institute for Neuroscience	2014 – 2018
Faculty Representative, CNS Dean Candidate Interview Committee	2018
Faculty Search Committee, Neuroscience/Math Department Joint Search	2014 – 2015

University Service

Vice Provost for Faculty Development	2021 – present
Lead, Strategic Planning for Faculty Talent Development	2021 – present
President's Promotion and Tenure Committee for Professional-Track Faculty	2022 – 2024
Explore UT Planning Committee	2022
Faculty Lead, Growing Biomedical Imaging Faculty Cluster Hiring	2019 – 2021
Co-Chair, Biomedical Engineering Faculty Search Committee	2019 – 2021
Interim Vice President of Research	2020 – 2021
Lead, Research Restart Committee for COVID-19 response	2020 – 2021
Member, Executive Committee for COVID-19 response	2020 – 2021
President's Promotion and Tenure Committee	2020 – 2021
Advisory Board, PUSH Program, Sanger Learning Center	2017 – 2020
Director, Biomedical Imaging Center (BIC)	2018 – 2020
Health Translation Opportunities Committee – Imaging	2019 – 2020
BIC Director Search Committee, Vice President for Research Office	2018 – 2019
VPR UT Brain Limited Submission Proposal Review Panel	2018
Faculty Search Committee, Imaging Research Center	2011 – 2013
Institute for Neuroscience Seminar Committee	2008 – 2009
Imaging Research Center Safety Committee	2008
Imaging Research Center Scanner Upgrade Committee	2008

Public Outreach Lectures to UT Austin Community

Moderator, CNS Cross-Cutting Conversations, UT Austin	2019
Invited Lecture, Psychology Advisory Council, UT Austin	2016
Invited Lecture, Physics Education Forum, UT Austin	2015
Invited Lecture, Psychology Reunion, UT Austin	2012
Invited Lecture, Physics Education Forum, UT Austin	2011
Invited Lecture, Beta Beta Beta, Biological Honors Society, UT Austin	2011
Invited Lecture, Science Study Break, UT Life Sciences Library	2010
Invited Lecture, Professional Development Series, UT Austin Learning Center	2010
Lab Presentation at UT Austin Research Week	2009
Presentation to Texas Exes Alumni Class of 1959	2009

Public Outreach Lectures to the General Public

Panel Member, Memory Matters, Texas Science Festival	2025
Panel Member, Science of Play, Texas Science Festival	2023
Brain Inspired Podcast	2023
Women in STEM Lecture Series, Lakeside High School, Seattle, WA	2021
Invited Lecture, Girls' School of Austin	2018, 2019, 2021
Science Friday Goes to the Movies	2019

Invited Lecture, Explore UT	2017, 2019
Invited Lecture, Girls' School of Austin	2018, 2019
Invited Lecture, UT Brainstorms, UT Austin	2018
Keynote Lecture, CoLA/CNS Memory Matters luncheon, Harvard Club, NYC	2017
Invited Lecture, Texas Fresh Air	2016
Invited Lecture, Austin Retired Teachers Association	2014
Invited Lecture, Quest Program, Osher Lifelong Learning Center	2014
Invited Lecture, Longhorn Village Retirement Center	2013
Invited Lecture, Nova Program, Osher Lifelong Learning Center	2013
Invited Lecture, Learning Activities for Mature People (LAMP)	2012
Invited Lecture, Westminster Manor Retirement Community	2012
Invited Lecture, Austin Forum	2012
Invited Lecture, Hot Science – Cool Talks, Environmental Sciences, UT Austin	2011
Invited Lecture, Science in the Pub	2011
Presentations at "Memory Matters" Annual CLM Public Lecture Series	2008 – 2010, 2012

Leadership Accomplishments

Interim Vice President for Research, The University of Texas at Austin

- Served on University Executive Committee for COVID-19 response and chaired the Research Restart subcommittee
- Launched Protect Texas Together app, which supported testing and tracking capabilities for faculty, students, and staff during the pandemic
- Developed High-Throughput Testing Core through the Center for Biomedical Research Support, which provided on-site PCR testing through the global pandemic
- Hosted COVID-19 research conference to highlight UT research and scholarly findings related to the global pandemic
- Supported a successful $20M National Science Foundation proposal to establish the UT Austin Institute for Machine Learning
- Led the foundation of a strategic research partnership between UT Austin and the MD Anderson Cancer Center, which catalyzed interactions between faculty across institutions and provided seed funding for collaborative research projects
- Hired the inaugural Associate Vice President for Innovation and Economic Impact and created a new strategic plan for technology commercialization and entrepreneurship
- Developed a strategic plan for recapitalizing university core facilities and as a first implementation step secured $12M in funding to recapitalize the Biomedical Imaging Center at UT Austin
- Developed a strategic plan for science and security, which involved convening a new cross-unit team to consider risk assessment, risk monitoring, tracking of visiting scholars, and enhanced conflict of interest and conflict of commitment policies and training
- Catalyzed the renaming of the portfolio to the Vice President for Research, Scholarship, and Creative Endeavors and secured new funding to expand the research development team to include officers focused on scholarship in the arts and humanities
- Secured funding to expand the VPR communications team to better highlight the scholarship of UT faculty
- Restructured the VPR financial and research technology teams to provide more effective budgetary and technical support for the portfolio's reporting units

Vice Provost for Faculty Development, The University of Texas at Austin

- Established a new portfolio in the Office of the Executive Vice President and Provost's to support faculty success throughout their lifecycle at UT
- Performed internal and external asset mapping in coordination with outside consultants to develop a comprehensive strategic plan for faculty development programming
- Lead the faculty success initiatives under the President's university-wide strategic plan, which drew upon the faculty development strategic plan that I created
- Secured institutional funds to support new faculty development portfolio and programming
- Recruited Director of Faculty Development and project coordinators to support implementation of the strategic plan
- Launched new mentorship programming for tenure-track, tenured, and professional track faculty at UT
- Created training and toolkit for best practices in faculty mentorship
- Supported mid-career Associate Professor Experimental program for newly tenured faculty, which provides $100K grants to fund collaborative projects among scholars
- Created and launched two new leadership academies for aspiring and research leaders
- Served as UT's liaison to the Southeastern Conference (SEC) for faculty programming, including attending twice-yearly leadership development workshops at SEC campuses
- Worked collaboratively with the National Center for Faculty Development and Diversity to host several on-campus workshops for faculty including on time management, mentorship, and building a productive publishing pipeline
- Developed Faculty Writing Community Program to promote accountability in faculty writing practices by providing space, time, and guidance for faculty to advance their scholarly projects
- Worked collaboratively with the UT Meadows Center to develop quantitative and qualitative evaluation metrics and benchmarks of success for all faculty development programming whether one-time offerings or long-term programs
- Re-envisioned the residential Harrington Faculty Fellows program to increase its national visibility and impact, including working with external marketing and branding consultants
- Developed a new strategic plan for faculty onboarding at UT Austin, resulting in the New Faculty Launch program; Design of this program involved meetings with Deans and Associate Deans in each academic college and focus groups with recently hired faculty to understand faculty onboarding and development needs; The resulting program was a direct result of this input
- Piloted a new approach to new faculty mentorship, which used a constellation mentoring model to provide new faculty mentors both within and external to their home department; Developed a training and mentorship curriculum for leaders of the faculty mentorship committees