

## Alison R. Preston, Ph.D.

Dr. A. Wilson Nolle and Sir Raghunath P. Mahendroo Professor  
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### Academic Degrees

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- 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

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- Dr. A. Wilson Nolle and Sir Raghunath P. Mahendroo Professor** 2018 – Present  
Departments of Neuroscience and Psychology  
Department of Psychiatry (by courtesy from 2017)  
The University of Texas at Austin
- Director** 2018 – Present  
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 from 2008)  
The University of Texas at Austin
- Institute/Center Memberships at the University of Texas at Austin*  
Center for Learning & Memory  
Institute for Neuroscience  
Biomedical Imaging Center (formerly Imaging Research Center)
- Postdoctoral Fellow** 2004 – 2007  
Department of Psychology  
Stanford University

## Research Interests

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- 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

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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
Predocctoral Individual National Research Service Award, NIMH	2001 – 2004
Honorable Mention National Science Foundation Graduate Fellowship	1998

## Publications

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‡ Senior and/or communicating author

\* Graduate student advisee

† Postdoctoral fellow advisee

\*\* Undergraduate advisee

### *Peer-Reviewed Journal Articles*

Zeithamova, D., Gelman, B.D., Frank, L., & **Preston, A.R.** (In press). Abstract representation of prospective reward in the hippocampus. *Journal of Neuroscience*.

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

Spalding, K.N., Schlichting, M.L.<sup>†</sup>, Zeithamova, D.<sup>†</sup>, **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.

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

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

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

- Zeithamova, D.<sup>†</sup>, & **Preston, A.R.**<sup>‡</sup> (2017). Temporal proximity promotes integration of overlapping events. *Journal of Cognitive Neuroscience*, 29(8), 1311-1323.
- Mack, M.L.<sup>†</sup>, Love, B.C.<sup>‡</sup>, & **Preston, A.R.**<sup>‡</sup> (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.<sup>†</sup>, & **Preston, A.R.**<sup>‡</sup> (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.<sup>\*\*</sup>, Mack, M.L.<sup>†</sup>, & **Preston, A.R.**<sup>‡</sup> (2016). Knowledge of social affiliations biases economic decisions. *PLoS One*, 11(7), e0159918.
- Schlichting, M.L.<sup>†</sup>, & **Preston, A.R.**<sup>‡</sup> (2016). Hippocampal-medial prefrontal circuit supports memory updating during learning and post-encoding rest. *Neurobiology of Learning and Memory*, 134, 91-106.
- Zeithamova, D.<sup>†</sup>, Manthuruthil, C., & **Preston, A.R.**<sup>‡</sup> (2016). Repetition suppression in the medial temporal lobe and midbrain is altered by event overlap. *Hippocampus*, 26, 1464–1477.
- Schlichting, M.L.<sup>\*</sup>, Mumford, J.A., & **Preston, A.R.**<sup>‡</sup> (2015). Learning-related representational changes reveal dissociable integration and separation signatures in hippocampus and prefrontal cortex. *Nature Communications*, 6, 8151.
- Schlichting, M.L.<sup>\*</sup>, & **Preston, A.R.**<sup>‡</sup> (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.<sup>\*</sup>, & **Preston, A.R.**<sup>‡</sup> (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.<sup>\*</sup>, Zeithamova, D.<sup>†</sup>, & **Preston, A.R.**<sup>‡</sup> (2014). CA<sub>1</sub> contributions to memory integration and inference. *Hippocampus*, 24 (10), 1248-1260.
- Liang, J.C.<sup>\*</sup>, Wagner, A.D., & **Preston, A.R.**<sup>‡</sup> (2013). Content representation in the human medial temporal lobe. *Cerebral Cortex*, 23(1), 80-96.

- Mack, M.L.<sup>†</sup>, **Preston, A.R.**<sup>‡</sup>, & Love, B.C.<sup>‡</sup> (2013). Decoding the brain's algorithm for categorization from its neural implementation. *Current Biology*, 23(20), 2023-7.
- Preston, A.R.**<sup>‡</sup>, & Eichenbaum, H.<sup>‡</sup> (2013). Interplay of the hippocampus and prefrontal cortex in memory. *Current Biology*, 23(17), R764-R773.
- Wolosin, S.M.\*<sup>\*</sup>, Zeithamova, D.<sup>†</sup>, & **Preston, A.R.**<sup>‡</sup> (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.\*<sup>\*</sup>, Love, B.C., & **Preston, A.R.**<sup>‡</sup> (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.\*<sup>\*</sup>, Love, B.C., & **Preston, A.R.**<sup>‡</sup> (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.**<sup>‡</sup> (2012). Hippocampal novelty activations in schizophrenia: Disease and medication effects. *Schizophrenia Research*, 138(2-3), 157-63.
- Wolosin, S.M.\*<sup>\*</sup>, Zeithamova, D.<sup>†</sup>, & **Preston, A.R.**<sup>‡</sup> (2012). Reward modulation of hippocampal subfield activation during successful associative encoding and retrieval. *Journal of Cognitive Neuroscience*, 24(7), 1532-47.
- Zeithamova, D.<sup>†</sup>, Dominick, A.L., & **Preston, A.R.**<sup>‡</sup> (2012). Hippocampal and ventral medial prefrontal activation during retrieval-mediated learning supports novel inference. *Neuron*, 75(1), 168-179.
- Zeithamova, D.<sup>†</sup>, Schlichting, M.L.\*<sup>\*</sup>, & **Preston, A.R.**<sup>‡</sup> (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<sub>1</sub> 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.**<sup>‡</sup>, 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.<sup>†</sup>, & **Preston, A.R.**<sup>‡</sup> (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.**<sup>‡</sup> & 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.**<sup>‡</sup>, 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.
- Knuttninen, 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.
- Manuscripts submitted for publication*
- Frank, L., **Preston, A.R.**, & Zeithamova, D. (Under revision). Functional connectivity between memory and reward centers across task and rest track memory sensitivity to reward.
- Mack, M.L.<sup>†</sup>, **Preston, A.R.**<sup>‡</sup>, & Love, B.C.<sup>‡</sup> (Submitted). Medial prefrontal cortex compresses concept representations through learning.
- Molitor, R.J.\*<sup>†</sup>, Schlichting, M.L.<sup>†</sup>, Mack, M.L.<sup>†</sup>, McKenzie, S., Eichenbaum, H., & **Preston, A.R.**<sup>‡</sup> (Submitted). Hippocampus-guided reinstatement of hierarchical schemas in visual cortex during generalization.
- Schlichting, M.L.<sup>†</sup>, Mack, M.L.<sup>†</sup>, Guarino, K.F., & **Preston, A.R.**<sup>‡</sup> (Revision under review). Comparison of semi-automated hippocampal subfield segmentation methods in a pediatric sample.
- Peer-Reviewed Conference Proceedings*
- Mack, M.L.<sup>†</sup>, **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.<sup>†</sup>, Guarino, K.F., Roome, H., & **Preston, A.R.**<sup>‡</sup>. (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.**<sup>‡</sup> (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*

**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*, 5<sup>th</sup> 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., Knuttnen, 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

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### *Extramural awards*

National Institute of Mental Health R01 Research Project Grant Alison R. Preston, PI Hippocampal and prefrontal contributions to memory integration (R01 MH100121)	2013 – 2023
National Institute of Child Health & Human Development R21 Exploratory Developmental Research Grant Alison R. Preston, PI Linking the neurobiological development of memory and reasoning (R21 HD083785)	2016 – 2019
National Institute of Mental Health T32 Institutional Training Grant Alison R. Preston, Co-I; Michael D. Mauk, PI Training in learning and memory (T32 MH106454)	2015 – 2020
National Institute of Mental Health R01 Research Project Grant Alison R. Preston, Consultant; Daniel L. Schacter, PI Event-related neuroimaging of human memory formation (R01 MH060941)	2015 – 2020
National Science Foundation CAREER Award Alison R. Preston, PI Memory based prediction in the medial temporal lobe (BCS 1056019)	2011 – 2017
National Institute of Mental Health 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)	2011 – 2014
National Alliance for Research on Schizophrenia and Depression Young Investigator Award Alison R. Preston, PI Hippocampal subfield contributions to episodic memory: Implications for schizophrenia	2010 – 2013

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

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

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

*Internal Awards*

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

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

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

*Sponsor for Grants to Trainees*

National Institute of Health  
Postdoctoral Individual National Research Service Award  
Nicole Varga (Postdoctoral fellow)  
Influence of brain maturation on memory representation during  
development (F32 HD095586) 2018 – 2021

National Institute of Health  
Predoctoral Individual National Research Service Award  
Robert Molitor (Ph.D. student)  
How experience shapes representations of overlapping visual events  
(F31 NS103458) 2018 – 2020

University Cooperative Society, The University of Texas at Austin  
Undergraduate Research Fellowship  
Awarded to Susannah Cox (Undergraduate student) 2018



University Cooperative Society, The University of Texas at Austin Undergraduate Research Fellowship Awarded to Manasa Atyam (Undergraduate student)	2017
National Institute of Health Postdoctoral Individual National Research Service Award Christine Coughlin (Postdoctoral fellow) Memory development and its influence on reasoning and prospection (F32 MH115585)	2017 – 2019
National Institute of Health 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)	2017 – 2019
National Institute of Health Postdoctoral Individual National Research Service Award Awarded to Neal Morton (Postdoctoral fellow) A neurocognitive framework for understanding how experience shapes object representations (F32 MH114869)	2017 – 2020
National Institute of Health 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)	2017 – 2020
National Institute of Health 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)	2016 – 2019
University Cooperative Society, The University of Texas at Austin Undergraduate Research Fellowship Awarded to Ellen Zippi (Undergraduate student)	2015
The University of Texas at Austin Graduate School Continuing Graduate Fellowship Awarded to Margaret Schlichting (Ph.D. Student)	2014 – 2015
National Institute of Health Postdoctoral Individual National Research Service Award Awarded to Michael Mack (Postdoctoral fellow) The mutual influence of attention and learning during knowledge acquisition (F32 MH100904)	2013 – 2016

National Institute of Mental Health Predoctoral Individual National Research Service Award Awarded to Jackson Liang (Ph.D. Student) Content representation in the human medial temporal lobe (F31 MH097441)	2012 – 2014
The University of Texas at Austin Graduate School Continuing Graduate Fellowship Awarded to Jackson Liang (Ph.D. Student)	2012 – 2013
The College of Liberal Arts, The University of Texas at Austin Rapoport-King Thesis Scholarship Awarded to Tammy Tran (Undergraduate student)	2012 – 2013
University Cooperative Society, The University of Texas at Austin Undergraduate Research Fellowship Awarded to Tammy Tran (Undergraduate student)	2012
National Institute of Mental Health Postdoctoral Individual National Research Service Award Awarded to Dagmar Zeithamova (Postdoctoral Fellow) Medial temporal lobe contributions to flexible use of memory (F32 MH094085)	2011 – 2014
Department of Defense National Defense Science and Engineering Graduate Fellowship Awarded to Margaret Schlichting (Ph.D. student)	2011 – 2014
National Institute of Mental Health 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)	2011 – 2013
American Psychological Association Diversity in Neuroscience Graduate Fellowship Awarded to Sasha Wolosin (Ph.D. student)	2009 – 2011
University Cooperative Society, The University of Texas at Austin Undergraduate Research Fellowship Awarded to Arjun Murkerji (Undergraduate student)	2010
The University of Texas at Austin College of Natural Sciences Excellence in Human Development, Family, and Social Science Research Awarded to April Dominick and Nicholas Franklin (Undergraduates)	2009
University Cooperative Society, The University of Texas at Austin Undergraduate Research Fellowship Awarded to April Dominick (Undergraduate student)	2009

University Cooperative Society, The University of Texas at Austin  
Undergraduate Research Fellowship  
Awarded to Nicholas Franklin (Undergraduate student)

2009

## Scholarly Presentations

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### *Invited Talks*

Brain mechanisms supporting knowledge acquisition and reasoning across development. Workshop on cognitive neuroscience of memory development. UC Davis, CA. April 2018.

Hippocampal-prefrontal contributions to the acquisition of flexible knowledge. Department of Psychology, Boston College. Boston, MA. April 2018.

Hippocampal-prefrontal mechanisms supporting knowledge acquisition across development. Department of Psychology, University of Maryland. College Park, MD. April 2018.

Hippocampal-prefrontal networks underlying learning and generalization. Symposium in celebration of Howard Eichenbaum. Boston, MA. March 2018.

Memory activation during learning and rest promotes reasoning. Presentation, "Innovative, Creative, Daydreaming Minds," Learning & the Brain Conference. San Francisco, CA. February 2018.

Hippocampal contributions to knowledge acquisition and representation during development. Symposium presentation, "The hippocampus and prospective processing." Spring Hippocampal Research Conference. Taormina, Italy. June 2017.

Hippocampal-prefrontal contributions to the acquisition of flexible knowledge. Department of Psychology, University of Massachusetts Amherst. Amherst, MA. March 2017.

Building knowledge by integrating memories across time. Brain Research Institute, UCLA. Los Angeles, CA. February 2017.

Learning to reason. School of Psychology, Cardiff University. Wales, UK. November 2016.

Understanding how children learn through the lens of neuroscience. Texas FreshAIR Grand Challenges in Neuroscience, October 2016.

Hippocampal-medial prefrontal contributions to memory representation and restructuring. Department of Neuroscience, University of Florida, September 2016.

Memory reactivation during rest promotes new learning. Symposium presentation, "Shaping memories via reactivation," 6<sup>th</sup> International Conference on Memory (ICOM6), Budapest, Hungary, July 2016.

Hippocampal contributions to memory integration during childhood and adolescence. Symposium presentation, "Pattern separation and memory binding across the lifespan," 6<sup>th</sup> International Conference on Memory (ICOM6), Budapest, Hungary, July 2016.

- Hippocampal-medial prefrontal contributions to memory representation and restructuring. Symposium presentation, "The multifaceted role of the ventromedial prefrontal cortex (vmPFC) in memory and decision making," 6<sup>th</sup> International Conference on Memory (ICOM6), Budapest, Hungary, July 2016.
- Hippocampal-prefrontal contributions to knowledge acquisition and representation. Center for Cognitive and Brain Sciences, Ohio State University, June 2016.
- Hippocampal contributions to knowledge acquisition and representation. Presentation, "Hippocampus: 25 years of progress," Boston, Massachusetts, May 2016.
- Hippocampal-prefrontal contributions to knowledge acquisition and representation. Psychological Sciences Colloquium, Vanderbilt University, January 2016.
- Hippocampal-neocortical interactions reflect memory restructuring. Symposium presentation, "Understanding memory function through patterns of functional connectivity." Memory Disorders Research Society, Cambridge, UK, September 2015.
- The role of episodic reinstatement in mnemonic decision making. Symposium presentation, "Multivoxel pattern analysis of source memory." Psychonomics Annual Meeting, Long Beach, California, November 2014.
- Building knowledge through memory integration. Keynote presentation, Neuroscience Program Annual Retreat, UC Davis, September 2014.
- Integrating memories across time. Symposium presentation, "Schema and the neurobiology of memory: A (schematic) framework for moving forward." Memory Disorders Research Society, Austin, Texas, September 2014.
- Hippocampal and prefrontal contributions to the formation of integrated memory networks. Mini-symposium presentation, "The relational memory theory: Inspiring novel predictions two decades post-inception." Cognitive Neuroscience Society Annual Meeting, Boston, Massachusetts, April 2014.
- Medial temporal lobe and prefrontal contributions to the formation of memory networks. Ebbinghaus Empire Series, University of Toronto, October 2013.
- Building knowledge through memory integration. Cognitive Science Colloquium, Indiana University, September 2013.
- The medial temporal lobe and memory. Summer Institute in Cognitive Neuroscience, Lake Tahoe, California, July 2013.
- Building knowledge through memory integration. Featured presentation, Context and Episodic Memory Symposium, University of Pennsylvania, May 2013.
- Memory integration: How we derive complex knowledge from individual learning events. Neuroscience Colloquium, University of Illinois Urbana-Champaign, March 2013.

- Memory integration: How we derive complex knowledge from individual learning events. University of Pennsylvania, January 2013.
- Hippocampal and cortical activation patterns reveal integration of overlapping memories. Symposium presentation, "Searching for the engram: Can distributed pattern analyses reveal the nature of episodic memory representations?" Memory Disorders Research Society, Davis, California, September 2012.
- Hippocampal and prefrontal mechanisms for memory integration and inference. Donders Institute, Radboud University, Nijmegen, Netherlands, August 2012.
- Hippocampal and prefrontal mechanisms for memory integration. Keynote presentation, Amsterdam Memory Meeting, University of Amsterdam, Netherlands, August 2012.
- Linking distinct episodic memories: How remembering the past shapes learning. Presented at Neuroscience Seminar Series, UT Austin, May 2012.
- Linking distinct episodic memories: How remembering the past shapes learning. Presented at Center for Memory and Brain, Boston University, March 2012.
- Linking distinct episodic memories: How remembering the past shapes new learning. Presented at the Collaborative Research Seminar Series, Center for Music Learning, UT Austin, February 2012.
- Linking distinct episodic memories: How remembering the past shapes new learning. Symposium presentation, "Memory Reconsolidation and Transformation", 5<sup>th</sup> International Conference on Memory (ICOM5), University of York, UK, August 2011.
- Linking distinct episodic memories: How remembering the past shapes new learning. Presented at Advanced Imaging Research Center, UT Southwestern, June 2011.
- Linking distinct episodic memories: How remembering the past shapes new learning. Presented at the University of Texas at Austin Conference on Learning & Memory, Austin, Texas, April 2011.
- Linking distinct episodic memories: How remembering the past shapes new learning. Presented at the Center for the Neurobiology of Learning and Memory, University of California Irvine, April 2011.
- How remembering the past shapes new learning: Hippocampus-mediated formation of relational memory networks. Presented at Behavioral Neuroscience Seminar, UT Austin, February 2011.
- The neural basis of flexible memory: How remembering the past shapes new learning. Presented at the Cognitive Science Colloquium, University of Arizona, October 2010.
- Multivoxel pattern analysis of cross-episode binding: Reactivation of prior episodic experience during learning supports flexible memory. Presented at the Memory Disorders Research Society, Evanston, IL, October 2010.
- Encoding of event content in the human medial temporal lobe: Evidence from high-resolution fMRI. Symposium presentation, "Content Specific Memory in the Medial Temporal Lobe: Yes or No?" Memory Disorders Research Society, Chapel Hill, North Carolina, September 2009.

- Medial temporal lobe contributions to acquisition and flexible transfer of associative information. Symposium presentation, "Advances in Understanding Neural Contributions to Associative Memory", International Society for Behavioral Neuroscience, Hilton Head, South Carolina, May 2009.
- Episodic memory in the human hippocampus. Presented at Future Directions in Neuroergonomics and Neuromorphics, The University of Maryland, October 2008.
- Episodic memory in the human medial temporal lobes. Presented at the Neurological Institute, Methodist Hospital, Houston, Texas, July 2008.
- The architecture of declarative memory in human medial temporal lobe. Presented at Cognition and Perception Seminar, Department of Psychology, UT Austin, October 2007.
- The architecture of declarative memory in human medial temporal lobe. Presented at Center for Learning and Memory Annual Retreat, UT Austin, October 2007.
- The architecture of declarative memory. Presented at Department of Cognitive Sciences, University of California Irvine, January 2006.
- The architecture of declarative memory. Presented at Department of Psychology, Columbia University, February 2006.
- The architecture of declarative memory. Presented at Department of Psychology, University of Michigan, February 2006.
- The architecture of declarative memory. Presented at Center for Learning & Memory, UT Austin, March 2006.
- High-resolution fMRI of novel stimulus encoding in the human medial temporal lobe. Presented at fMRI Colloquium, Department of Radiology, Stanford University, October 2004.
- Using learned information flexibly: Hippocampal contributions to memory. Presented at Friday Cognitive Seminar, Department of Psychology, Stanford University, April 2003.
- Dissociating memory processes in the medial temporal lobe. Presented at Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, May 2002.
- Medial temporal lobe activation during implicit contextual learning. Presented at Friday Cognitive Seminar, Department of Psychology, Stanford University, March 2002.

*Conference presentations (2013 – present)*

- Mack, M.L., Love, B.C., & **Preston, A.R.** (2018). Memory integration or separation during new learning are mediated by distinct hippocampal and cortical networks. To be presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Molitor, R.J., Sherrill, K.R., Morton, N.W., & **Preston, A.R.** (2018). Pattern separation and integration in hippocampus are the result of memory reactivation during learning. Presented at the Annual Meeting of the Cognitive Neuroscience Society, Boston, MA.

- Molitor, R.J., Sherrill, K.R., Morton, N.W., & **Preston, A.R.** (2018). Hippocampal subfields show dissociable integration and separation signatures for overlapping memories. To be presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Morton, N.W., Schlichting, M.L., & **Preston, A.R.** (2018). Events with common structure become organized within a hierarchical cognitive map in hippocampus and frontoparietal cortex. To be presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Morton, N.W., Zippi, E., & **Preston, A.R.** (2018). Tracking semantic item features during encoding reveals mechanisms for assimilating items into existing schemas. Presented at the Context and Episodic Memory Symposium, Philadelphia, PA.
- Pudhiyidath, A., Schapiro, A.C., & **Preston, A.R.** (2018). Neural representations of temporal statistics can predict subsequent reasoning. Presented at the Annual Meeting of the Cognitive Neuroscience Society, Boston, MA.
- Pudhiyidath, A., Schapiro, A.C., & **Preston, A.R.** (2018). Hippocampal representations of temporal statistics predict subsequent reasoning. To be presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Schlichting, M.L., Mack, M.L., Guarino, K.F., & **Preston, A.R.** (2018). Comparison of semi-automated hippocampal subfield segmentation methods in a pediatric sample. To be presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Sherrill, K., Molitor, R.J., Mack, M.L., & **Preston, A.R.** (2018). Hippocampal cognitive maps formed through spatial navigation generalize to non-spatial context. To be presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Tobin, K.E., Tran, T.T., **Preston, A.R.**, & Bakker, A. (2018). Memory interaction and integration in young and aged adults. To be presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Frank, L.E., **Preston, A.R.**, & Zeithamova, D. (2017). Resting-state medial temporal lobe connectivity with reward centers predicts how motivation impacts learning. Presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.
- Kim, H.-J., Schlichting, M.L., **Preston, A.R.**, & Lewis-Peacock, J.A. (2017). The precision of memory-based prediction biases memory pruning. Presented at the Context and Episodic Memory Symposium, Philadelphia, PA.
- Kim, H.-J., Schlichting, M.L., **Preston, A.R.**, & Lewis-Peacock, J.A. (2017). The precision of memory-based prediction biases memory pruning. Presented at the Austin Conference on Learning and Memory. Austin, TX.
- Kim, H.-J., Schlichting, M.L., **Preston, A.R.**, & Lewis-Peacock, J.A. (2017). The precision of context-based prediction biases memory pruning. Presented at the Annual Meeting of the Society for Neuroscience. Washington, D.C.

- Mack, M.L., **Preston, A.R.**, & Love, B.C. (2017). Medial prefrontal cortex compresses concept representations through learning. Presented at the Annual Meeting of the Society for Neuroscience. Washington, D.C.
- Molitor, R.J., Sherrill, K.R., Morton, N.W., & **Preston, A.R.** (2017). Hippocampal subfield coding of overlapping visual events. Presented at the Austin Conference on Learning and Memory. Austin, TX.
- Molitor, R.J., Sherrill, K.R., Morton, N.W., & **Preston, A.R.** (2017). Hippocampal integration and separation processes are driven by the strength of memory reactivation during learning. Presented at the Annual Meeting of the Society for Neuroscience. Washington, D.C.
- Morton, N.W., & **Preston, A.R.** (2017). Medial prefrontal cortex supports flexible memory retrieval. Presented at the Austin Conference on Learning and Memory. Austin, TX.
- Morton, N.W., & **Preston, A.R.** (2017). Medial prefrontal cortex supports retrieval of integrated memories. Presented at the Context and Episodic Memory Symposium, Philadelphia, PA.
- Morton, N.W., & **Preston, A.R.** (2017). Memory reactivation modulates encoding and retrieval of relational memories. Presented at the Annual Meeting of the Society for Neuroscience. Washington, D.C.
- Noh, S.M., & **Preston, A.R.** (2017). Sequencing effects on the retention of generalized knowledge and source memory. Presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.
- Noh, S.M., & **Preston, A.R.** (2017). Sequencing effects on the retention of generalized knowledge and source memory. Presented at the Austin Conference on Learning and Memory. Austin, TX.
- Pudhivadath, A., Sherrill, K., Schapiro, A.C., & **Preston, A.R.** (2017). Temporal structure learning facilitates inductive generalization. Presented at the Austin Conference on Learning and Memory. Austin, TX.
- Schlichting, M.L., Guarino, K.F., Roome, H.E., & **Preston, A.R.** (2017). Linking and differentiating memories across development: Neural mechanisms and behavioral outcomes. Presented at the Annual Meeting of the Society for Research in Child Development, Austin, TX.
- Schlichting, M.L., Guarino, K.F., Roome, H.E., & **Preston, A.R.** (2017). Opportunity to link related memories during encoding reveals adolescent-specific neural strategy. Presented at the Annual Meeting of the Society for Neuroscience. Washington, D.C.
- Sherrill, K., Mack, M.L., Molitor, R.J., & **Preston, A.R.** (2017). Hippocampal and prefrontal cognitive map formation in naturalistic contexts. Presented at the Annual Meeting of the Society for Neuroscience. Washington, D.C.
- Kim, H.-J., Schlichting, M.L., **Preston, A.R.**, & Lewis-Peacock, J.A. (2016). The precision of memory-based prediction biases memory pruning. Presented at the Annual Meeting of the Psychonomic Society, Boston, MA.



- Mack, M.L., **Preston, A.R.**, & Love, B.C. (2016). Attention shapes category representations in the hippocampus. Talk presented at the International Meeting of the Psychonomic Society, Granada, Spain.
- Mack, M.L., **Preston, A.R.**, & Love, B.C. (2016). Critical moments of learning are mediated by distinct hippocampal and frontoparietal encoding processes. Presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Mack, M.L., Love, B.C., & **Preston, A.R.** (2016). Attention shapes category representations in the hippocampus. Talk presented at the Context and Episodic Memory Symposium. Philadelphia, PA.
- Molitor, R.J., Schlichting, M.L., Mack, M.L., Guarino, K.F., McKenzie, S., Eichenbaum, H., & **Preston, A.R.** (2016). Generalization of schema representation to novel contexts is supported by hippocampus and medial prefrontal cortex. Poster presented at the Context and Episodic Memory Symposium. Philadelphia, PA.
- Molitor, R.J., Schlichting, M.L., Mack, M.L., Guarino, K.F., McKenzie, S., Eichenbaum, H., & **Preston, A.R.** (2016). Reinstatement of schemas in sensory neocortex is guided by medial prefrontal cortex and hippocampus. Presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Morton, N.W., & **Preston, A.R.** (2016). Medial prefrontal cortex supports retrieval of integrated memories. Presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Morton, N.W., Schlichting, M.L., & **Preston, A.R.** (2016). Developing a neurocognitive model of memory integration. Talk presented at the Context and Episodic Memory Symposium. Philadelphia, PA.
- Pudhivadath, A., Sherrill, K., Schapiro, A.C., & **Preston, A.R.** (2016). Temporal structure learning facilitates inductive generalization. Presented at the Object Perception, Attention, & Memory Meeting. Boston, MA.
- Schlichting, M.L., Guarino, K.F., & **Preston, A.R.** (2016). Developmental differences in hippocampal-prefrontal mediated memory updating. Presented at the Flux Congress, St. Louis, MO.
- Schlichting, M.L., Guarino, K.F., & **Preston, A.R.** (2016). Developmental differences in hippocampal-prefrontal mediated memory updating. Presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Schlichting, M.L., Guarino, K.F., Schapiro, A.C., Turk-Browne, N.B., & **Preston, A.R.** (2016). Structural development of hippocampal subfields is related to statistical learning and inference. Poster presented at the Context and Episodic Memory Symposium. Philadelphia, PA.
- Zippi, E.L., Morton, N.W., Mack, M.L., & **Preston, A.R.** (2016). Mapping cortical representations of semantic similarity using Wikipedia and Google News. Presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.

- Zippi, E.L., Morton, N.W., & **Preston, A.R.** (2016). Quantifying neural representations of semantic similarity. Poster presented at the Annual Meeting of the Cognitive Neuroscience Society. New York, NY.
- Gelman, B.D., Zeithamova, D., & **Preston, A.R.** (2015). Individual difference in the motivational modulation of memory are reflected in neural representation of reward context. Poster presented at the Annual Meeting of the Society for Neuroscience. Chicago, IL.
- Guarino, K.F., Schlichting, M.L., Schapiro, A.C., Turk-Browne, N.B., & **Preston, A.R.** (2015). Development of medial prefrontal cortex is related to statistical learning and inference. Poster presented at the Annual Meeting of the Society for Neuroscience. Chicago, IL.
- Kim, H., Schlichting, M.L., **Preston, A.R.**, & Lewis-Peacock, J.A. (2015). Shifting the granularity of context-based predictions modulates memory pruning. Poster presented at the Austin Conference on Learning and Memory. Austin, TX.
- Martinez, J.E., Mack, M.L., & **Preston, A.R.** (2015). The company we keep: Memory drive biases in social-economic decision making. Poster presented at the Annual Meeting of the Society for Personality and Social Psychology. Long Beach, CA.
- Mack, M.L., Love, B.C., & **Preston, A.R.** (2015). The evolution of category knowledge: Linking learning models to the dynamics of neural representations. Poster presented at the Context and Episodic Memory Symposium. Philadelphia, PA.
- Mack, M.L., Love, B.C., & **Preston, A.R.** (2015). The evolution of category knowledge: Linking learning models to the dynamics of neural representations. Poster presented at the Austin Conference on Learning and Memory. Austin, TX.
- Mack, M.L., **Preston, A.R.**, & Love, B.C. (2015). The dynamics of hippocampal and prefrontal neural representations track the evolution of attentional biases during learning. Talk presented at the Annual Meeting of the Society for Neuroscience. Chicago, IL.
- Molitor, R.J., Schlichting, M.L., Mack, M.L., Guarino, K.F., McKenzie, S., Eichenbaum, H., & **Preston, A.R.** (2015). Schema representations in hippocampus and medial prefrontal cortex support generalization in novel contexts. Poster presented at the Annual Meeting of the Society for Neuroscience. Chicago, IL.
- Morton, N.W., & **Preston, A.R.** (2015). Developing a neurocognitive model of memory integration. Poster presented at the Annual Meeting of the Society for Neuroscience. Chicago, IL.
- Schlichting, M.L., Guarino, K.F., Schapiro, A.C., Turk-Browne, N.B., & **Preston, A.R.** (2015). Structural development of hippocampal subfields is related to statistical learning and inference. Talk presented at the Austin Conference on Learning and Memory. Austin, TX.
- Schlichting, M.L., Mumford, J.A., & **Preston, A.R.** (2015). Learned item representations reveal dissociable integration and separation signatures in medial prefrontal cortex and medial temporal lobe. Talk presented at the Context and Episodic Memory Symposium. Philadelphia, PA.

- Schlichting, M.L., Mumford, J.A., & **Preston, A.R.** (2015). Learning-related changes in item representations reveal dissociable integration and separation signatures in hippocampus and prefrontal cortex. Talk presented at the Annual Meeting of the Society for Neuroscience. Chicago, IL.
- Spalding, K.N., Schlichting, M.L., Zeithamova, D., **Preston, A.R.**, Duff, M.C., Tranel, D., & Warren, D.E. (2015). Impairments in associative inference following damage to the ventromedial prefrontal cortex. Poster presented at the Annual Meeting of the Society for Neuroscience. Chicago, IL.
- Zeithamova, D., Gelman, B.D., & **Preston, A.R.** (2015). Reward representation in the midbrain and hippocampus during motivated encoding. Talk presented at the Context and Episodic Memory Symposium. Philadelphia, PA.
- Zeithamova, D., Gelman, B.D., & **Preston, A.R.** (2015). Human hippocampus forms abstract, pattern separated representations of motivational context during encoding. Poster presented at the Annual Meeting of the Society for Neuroscience. Chicago, IL.
- Liang, J.C., Wattenberger, A.M., & **Preston, A.R.** (2014). Distributed medial temporal lobe representations reflect disambiguation of overlapping events. Poster presented at the Context and Episodic Memory Symposium. Philadelphia, PA.
- Mack, M.L., & **Preston, A.R.** (2014). The role of episodic reinstatement in mnemonic decision making. Talk presented at the Context and Episodic Memory Symposium. Philadelphia, PA.
- Mack, M.L., & **Preston, A.R.** (2014). Episodic reinstatement affects hippocampal and fronto-parietal comparator signals during mnemonic decision making. Talk presented at the Annual Meeting of the Society for Neuroscience. Washington, DC.
- Schlichting, M.L., Guarino, K.F., & **Preston, A.R.** (2014). Medial temporal lobe structure relates to individual differences in memory and reasoning ability across development. Poster presented at the Annual Meeting of the Flux Congress. Hollywood, CA.
- Schlichting, M.L., Guarino, K.F., Schapiro, A.C., Turk-Browne, N.B., & **Preston, A.R.** (2014). Structural development of hippocampal subfields is related to statistical learning and inference. Poster presented at the Annual Meeting of the Society for Neuroscience. Washington, DC.
- Schlichting, M.L., & **Preston, A.R.** (2014). Offline reactivation and functional coupling support formation of relational memory networks. Talk presented at the Context and Episodic Memory Symposium. Philadelphia, PA.
- Stein, E.M., McLelland, V.C., Devitt, A., Schacter, D.L., **Preston, A.R.**, & Addis, D.R. (2014). Dissociable roles of hippocampal subfields in episodic simulation. Poster presented at the Annual Meeting of the Society for Neuroscience. Washington, DC.
- Zeithamova, D., & **Preston, A.R.** (2014). Reward representation in the midbrain and medial temporal lobe during motivated encoding. Talk presented at the Annual Meeting of the Society for Neuroscience. Washington, DC.

- Zeithamova, D., & **Preston, A.R.** (2014). The role of hippocampus and entorhinal cortex on memory integration and inference. Poster presented at the Annual Meeting of the Cognitive Neuroscience Society. Boston, MA.
- Liang, J.C., Wattenberger, A.M., & **Preston, A.R.** (2013). Distributed medial temporal lobe representations reflect disambiguation of overlapping events. Poster presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Mack, M.L., **Preston, A.R.**, & Love, B.C. (2013). Model-based multivariate fMRI reveals influence of selective attention on neural representations of categories. Poster presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Preston, A.R.** (2013). Offline replay of prior experience promotes formation of relational memory networks. Talk presented at the Annual Meeting of the Memory Disorders Research Society. Toronto, Canada.
- Schlichting, M.L., & **Preston, A.R.** (2013). Replay during on- and offline periods supports formation of relational memory networks. Poster presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.
- Zeithamova, D., Wattenberger, A.M., & **Preston, A.R.** (2013). Reactivation modulates memory updating through hippocampus and ventromedial prefrontal cortex. Poster presented at the Annual Meeting of the Society for Neuroscience. San Diego, CA.

## Academic Advising

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### *Postdoctoral Fellows*

Christine Coughlin	2016 – present
Michael Mack	2011 – 2016, Assistant Professor, University of Toronto
Neal Morton	2014 – present
Hannah Roome	2016 – present
Margaret Schlichting	2015 – 2016, Assistant Professor, University of Toronto
Katherine Sherrill	2015 – present
Nicole Varga	2018 – present
Dagmar Zeithamova	2008 – 2014, Assistant Professor, University of Oregon

### *Doctoral Students Directly Supervised*

Anthony Dutcher (Neuroscience)	2017 – present
Jackson Liang (Neuroscience)	Ph.D. 2015, Postdoctoral fellow, University of Toronto
Robert Molitor (Psychology)	2014 – present
Sharon Noh (Psychology)	2016 – present
Athula Pudhiyadath (Psychology)	2015 – present
Margaret Schlichting	Ph.D. 2015, Assistant Professor, University of Toronto

Sasha Wolosin (Psychology) Ph.D. 2013, Data Mining Scientist, Apple

*Rotation Advisor for Doctoral Students*

Eric Hart (Neuroscience)	2014
Kathryn Bonnen (Neuroscience)	2012
Jeremy Colonna (Neuroscience)	2010
Anthony Dutcher (Neuroscience)	2017
Chia-Ling (Sariel) Li (Neuroscience)	2011
Jacob Mitchell (Neuroscience)	2016
Leslie Ramsey (Neuroscience)	2008
Vito Ruiz (Neuroscience)	2008

*Membership on Graduate Committees (outside of my lab)*

Kevin Bieri (Neuroscience)	Ph.D. 2015, Dissertation committee
Brian Bondy (Neuroscience)	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
Eric Hart (Neuroscience)	2015, qualifying exam committee
Augustin Hennings (Neuroscience)	2018, qualifying exam committee
Brent Hughes (Psychology)	Ph.D. 2012, dissertation committee
Dean Kirson (Neuroscience)	2008, qualifying exam committee
Nicholas Malecek (Neuroscience)	2011, qualifying exam committee
Kirsten Smayda (Psychology)	Ph.D. 2017, dissertation committee
Sadie (Sarah) Witkowski (Psychology, Northwestern)	Dissertation committee
Dagmar Zeithamova (Neuroscience)	Ph.D. 2008, dissertation committee

*Postgraduate and Undergraduate Researchers (UT Austin)*

Honors students denoted with \*\*. Awards and current endeavors listed for those students continuing in academic research.

Zuha Alam, 2018 – present	
Naqsh Ali, 2017 – present	
Ghalieh Alrousan, 2018 – present	
**Manasa Atyam, 2016 – present	Dean's Scholars Honors Program
Marian Baiden, 2018 – present	
Ally Bailey, 2018 – present	
Lakshyaa Balakrishnan, 2017 – present	
Deepthi Bannai, 2016 – 2017	
Bettina Bustos, 2017 – present	
Karthic Baskaran, 2010 – 2012	
Jonathan Berezin, 2009 – 2010	
Carolyn Cassill, 2015	
Walid Chatila, 2013 – 2015	M.S. student, Georgetown
Christopher Conser, 2011 – 2012	
**Susannah Cox, 2016 – present	
Kevin DeLuca, 2011 – 2013	
Manoj Doss, 2009 – 2010	Ph.D. student, Univ. of Chicago



Vishal Patel, 2017 – 2018  
Vivian Pham, 2017 – 2018  
Shilpa Rajagopal, 2017 – present  
Ramya Ramachanran, 2015  
Abhijit Rao, 2018 – present  
\*\*Anatasia Rigney, 2010 – 2011 Ph.D. student, UT Austin  
Agustin Rodriguez, SURE program, 2013  
Kristin Rollins, 2017 – present  
Irais Romero, 2016 – 2017  
Jill Roscow, 2017 – 2018  
Daphne Sanchez, 2016  
Aparna Sankar, 2013 – 2014  
Nicolaus Schmandt, 2007 – 2009 Ph.D., Case Western  
Syedah Shah, 2017 – present  
Garima Shulka, 2018 – present  
Caitlin Silvus, 2018 – present  
Caroline Taylor, 2009 – 2010  
\*\*Tammy Tran, 2012 – 2013 COLA Junior Fellow, UT Austin  
Dean's Honored Graduate  
Ph.D. student, Johns Hopkins

Jayme Trevino, 2012 – 2014  
Sindy Ventura, 2015 – 2016  
Amelia Wattenberger, 2011 – 2013  
Luke Whitefield, 2017 – present  
Garrett Willis, 2017 – present  
Jeff Wooten, 2010 – 2011  
Neanna Yi, 2018 – present  
\*\*Ellen Zippi, 2014 – 2017 Dean's Scholars Honors Program  
NSF GRFP Award  
Dean's Honored Graduate  
Ph.D. student, UC Berkeley

*Postgraduate and Undergraduate Researchers (Stanford University)*

Research mentor to more than 20 students; subset listed below with latest accomplishments.  
Honors students denoted with \*\*.

Aaron Bornstein, 2005 – 2007 Ph.D., NYU  
Crystal Cook Reeck, 2006 – 2007 Ph.D., Duke  
\*\*Meghan Gaare, 2001 – 2005 M.D., University of Virginia  
Ben Hutchinson, 2005 – 2006 Ph.D., Stanford  
Robert Kwon, 1999 – 2001 M.D., UMDNJ  
Jane Lange, 2002 Ph.D., UW  
Gwen Lawson, 2006 – 2007 Ph.D., Univ. of Pennsylvania  
\*\*Yael Shrager, 2001 – 2003 Ph.D., UCSD  
Katherine Snyder, 2005 M.A., UT Austin  
Jennifer (Davie) Yoon, 2001 – 2004 Ph.D., Stanford

*High School Researchers*

Reem Ghanem 2013, 2014  
Lauren Humphrey 2014

Samantha Mayers	2014 – 2016
Khadeeja Shah	2017
David Tang	2017

## Teaching

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### *UT Austin*

Grant Writing in Behav and Biol Sciences, PSY 394U (graduate), Instructor	2016 – 2017
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

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### *Professional Memberships*

American Psychological Association  
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*

- Chair, Nanosymposium on Cortical-hippocampal Interactions, Annual Meeting of the Society for Neuroscience, 2018
- Annual Meeting Organizing Committee for the Memory Disorders Research Society, 2014
- Chair, Nanosymposium on Human Long-term Memory, Annual Meeting of the Society for Neuroscience, 2014
- Chair, Nanosymposium on Relational Memory, Annual Meeting of the Society for Neuroscience, 2010
- Co-Chair, Slide Session on 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
- National Institute of Health (Regular member) – Neurobiology of Learning and Memory (LAM) Study Section
- National Science Foundation – Cognitive Neuroscience Program, Major Research Instrumentation Program
- Wellcome Trust

*Editorial Positions*

Guest Reviewing Editor, eLife	2017
Associate Editor, Psychonomic Bulletin & Review	2016 – present
Consulting Editor, Journal of Experimental Psychology: General	2013 – present

*Journal and Book Reviewing*

Archives of General Psychiatry  
Biological Psychiatry  
Brain and Cognition  
Cerebral Cortex  
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 Communications  
Nature 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  
Schizophrenia Bulletin  
Science  
Science Advances  
Trends in Cognitive Science

*Department Service*

Chair's Advisory Committee, Neuroscience	2018 – present
Symposium Chair, Temporal Coding in Episodic Memory, UT Austin Conference on Learning & Memory	2018 – present
Faculty Mentor, Alexander Huth (Neuroscience)	2017 – present
Area Head, Cognitive Neuroscience, Psychology	2016 – present
Steering Committee, Psychology	2016 – present
Chair, Psychology (Cognitive Neuroscience) FII Search Committee	2016 – present
Steering Committee, UT Austin Conference on Learning & Memory	2014 – present
Faculty Mentor, Jessica Church-Lang, Psychology	2014 – present
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*

CNS Promotion and Tenure Committee	2018 – present
Selection Committee, T32 NRSA Training in Biomedical Big Data Science	2018 – present
Faculty Mentor, T32 NRSA Training in Biomedical Big Data Science	2016 – present
Co-Director, Center for Learning & Memory T32 NRSA	2015 – present
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*

Director, Biomedical Imaging Center (BIC)	2018 – present
BIC Director Search Committee, Vice President for Research Office	2018 – present
Advisory Board, PUSH Program, Sanger Learning Center	2017 – present
Imaging Research Center Executive Committee	2016 – 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*

Invited Lecture, UT Brainstorms, UT Austin	2018
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*

Keynote Lecture, CoLA/CNS Memory Matters luncheon, Harvard Club, NYC	2017
Invited Lecture, Explore UT	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
Outreach to South/Central Texas Schools and Summer Camp Programs	2010 – present
Presentations at “Memory Matters” Annual CLM Public Lecture Series	2008 – 2010, 2012