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Department of Psychology
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EDUCATION

- 8/2008 **Ph.D. Neuroscience**
University of Texas at Austin, Institute for Neuroscience
Dissertation: Category learning systems (Advisor W. Todd Maddox)
- 2/2003 **M.A. Psychology**
Charles University of Prague, Czech republic
Minor: Logic, Economics

POSITIONS

- 2014 – present **Assistant Professor**
Department of Psychology, University of Oregon
- 2008 – 2014 **Postdoctoral Fellow**
Center for Learning and Memory, UT Austin
Advisor: Alison Preston

FELLOWSHIPS, AWARDS AND HONORS

- 2011 – 2014 Postdoctoral National Research Service Award, NIMH
2011 Postdoctoral Trainee Chapter Travel Award, Society for Neuroscience
2007 – 2008 University Continuing Fellowship, UT Austin
2007 Graduate Students Present award, Cognitive Neuroscience Society
2003 – 2004 Neuroscience Graduate Fellowship, Institute for Neuroscience, UT Austin

RESEARCH INTERESTS

- Formation of knowledge from individual learning instances in support of novel decisions
- Prefrontal and hippocampal mechanisms underlying knowledge formation across cognitive domains (category learning, episodic memory)
- Interactions between memory systems during learning
- Combining computational modeling with multivariate analysis of functional MRI data

PUBLICATIONS

Peer-review Journal Articles

Schlichting, M.L., **Zeithamova, D.**, Preston, A.R. (2014). CA1 subfield contributions to memory integration and inference. *Hippocampus*, 24(10), 1248-60

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

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), 168-79.

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

Maddox, W.T., Glass, B.D., **Zeithamova, D.**, Savarie, Z.R., Bowen, C., Matthews, M.D. & Schnyer, D.M. (2011). The effects of sleep deprivation on dissociable prototype learning systems. *Sleep*, 34(3), 253-60.

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.

Maddox, W.T., Filoteo, J.V. & **Zeithamova, D.** (2010). Computational models inform clinical science and assessment: An application to category learning in striatal-damaged patients. *Journal of Mathematical Psychology*, 54(1), 109-122.

Zeithamova, D. & Maddox, W.T. (2009). Learning mode and exemplar sequencing in unsupervised category learning. *Journal of Experimental Psychology: Learning, Memory & Cognition*, 35(3), 731-741.

Schnyer, D.M., **Zeithamova, D.** & Williams, T. (2009). Decision making under conditions of sleep deprivation: Cognitive and neural consequences. *Military Psychology* 21(Suppl. 1), S36-S45.

Maddox, W.T., **Zeithamova, D.** & Schnyer, D.M. (2009). Dissociable processes in classification: Implications from sleep deprivation. *Military Psychology* 21(Suppl. 1), S55-S61.

Zeithamova, D., Maddox, W.T. & Schnyer, D.M. (2008). Dissociable prototype learning systems: Evidence from brain imaging and behavior. *Journal of Neuroscience*, 28(49), 13194-13201.

Zeithamova, D. & Maddox, W.T. (2007). The role of visuo-spatial and verbal working memory in perceptual category learning. *Memory & Cognition*, 35(6), 1380-1398.

Zeithamova, D. & Maddox, W.T. (2006). Dual task interference in perceptual category learning. *Memory & Cognition*, 34(2), 387-398.

Zeithamova, D. (2003). Theories of categorization and category learning: Why a single approach cannot be sufficient to account for the phenomenon. *Studia Psychologica*, 45(3), 169-185.

Book Chapters

Zeithamova, D. (2012). Prototype learning systems. In N. M. Seel (Ed). *Encyclopedia of the Sciences of Learning*, 2715-2718. New York: Springer

INVITED TALKS

The formation of knowledge from simple learning instances. *Presented at Texas Tech University, March 5, 2014*

Reactivation of existing knowledge affects new learning and inference. *Presented with Margaret Schlichting at Center for Learning and Memory Annual Retreat, University of Texas at Austin, October 30, 2013*

Retrieval mediated learning: The contributions of hippocampus and ventro-medial prefrontal cortex to inference across experience. *Presented at Cognitive Systems Seminar, University of Texas at Austin, February 17, 2012*

I know what you are thinking: Reactivation of prior memories during learning supports flexible use of experience. *Presented at Center for Learning and Memory Annual Retreat, University of Texas at Austin, TX, November 5, 2010*

Reactivation of prior episodic experience during learning supports generalization across events: Multivoxel pattern analysis approach. *Presented at Cognitive Systems Seminar, University of Texas at Austin, October 22, 2010*

High-Resolution fMRI of Medial Temporal Lobe Contributions to Rapid Integrative Encoding and Generalization of Associative Memories. *Presented at Center for Learning and Memory Annual Retreat, University of Texas at Austin, TX, October 9, 2009*

Flexible memory: How hippocampus supports generalization of experience. *Presented at Cognitive Systems Seminar, University of Texas at Austin, TX, October 2, 2009*

Flexible memory. *Presented at Center for Learning and Memory Annual Retreat, University of Texas at Austin, TX, October 10, 2008*

Prototype learning is not a uniform process: What brain and behavior can reveal. *Presented at 2008 Neuroscience Symposium, University of Texas at Austin, TX, January 19, 2008*

Dissociable prototype learning pathways: fMRI of Italian chicken families. *Presented at Cognition & Perception Area Seminar, University of Texas at Austin, TX, October 26, 2007.*

Working memory effects in rule-based category learning. *Presented at Cognition & Perception Area Seminar, University of Texas at Austin, May 2006*

Linking Cognition to Neural Systems: A Computational Cognitive Neuroscience Approach. *Presented at ONDCP review of the University of Texas Imaging Research Center, Austin, TX, November 2005.*

CONFERENCE ABSTRACTS (TALK AND POSTER PRESENTATIONS)

Zeithamova, D., Wattenberger, A.R., Preston, A.R. (2014). The role of hippocampus and entorhinal cortex in memory integration and inference. *Cognitive Neuroscience Society Annual Meeting, April 5-8, 2014, Boston, MA.*

Zeithamova, D., Wattenberger, A.R., Preston, A.R. (2013). Reactivation mediates memory updating through hippocampus and ventromedial prefrontal cortex. *Society for Neuroscience Annual Meeting, November 8-13, 2013, San Diego, CA.*

Zeithamova, D., Wattenberger, A.R., Preston, A.R. (2012). Common temporal context promotes hippocampal and ventromedial prefrontal memory integration processes that link experiences. *Society for Neuroscience Annual Meeting, October 13-17, 2012, New Orleans, LA.*

Wolosin, S.M., **Zeithamova, D.**, & Preston, A.R. (2012). Distributed hippocampal codes representing reward context are associated with enhanced episodic binding. *Society for Neuroscience Annual Meeting, October 13-17, 2012, New Orleans, LA.*

Zeithamova, D., Manthuruthil, C., & Preston, A.R. (2011). Distinct associative novelty and associative mismatch novelty responses in human medial temporal lobe revealed by high-resolution fMRI. *Society for Neuroscience Annual Meeting, November 12-16, 2011, Washington, DC.*

Wolosin, S.M., **Zeithamova, D.** & Preston, A.R. (2011). Individual differences in reward-based modulation of memory are reflected in hippocampal subregional engagement both prior to and during episodic encoding. *Society for Neuroscience Annual Meeting, November 12-16, 2011, Washington, DC.*

Schlichting, M.L. **Zeithamova, D.** & Preston, A.R. (2011). Study-test representational similarity within hippocampus demonstrates reactivation of integrated representations during novel inference. *Society for Neuroscience Annual Meeting, November 12-16, 2011, Washington, DC.*

Manthuruthil, C., **Zeithamova, D.**, & Preston, A.R. (2011) High-resolution fMRI reveals distinct forms of associative novelty activation in hippocampus. *Cognitive neuroscience society meeting, April 2-5, 2011, San Francisco, CA.*

Wolosin, S.M., **Zeithamova, D.**, & Preston, A.R. (2011). Anticipatory hippocampal responses predict individual differences in reward-based modulation of memory. *Cognitive Neuroscience Society Annual Meeting, April 2-5, 2011, San Francisco, CA.*

Zeithamova, D. & Preston, A.R. (2010). Multivoxel pattern analysis of cross-episode binding: Reactivation of prior episodic experience during learning supports flexible memory. *Society for Neuroscience Annual Meeting, San Diego, CA, November 15, 2010; Presented by ARP.*

Wolosin, S.M., **Zeithamova, D.**, & Preston, A.R. (2010). Motivation during associative encoding influences subsequent recall responses in medial temporal subregions. *Society for Neuroscience Annual Meeting, November 13-17, 2010, San Diego, CA.*

Liang, J., **Zeithamova, D.**, & Preston, A.R. (2010). Detection of sequence violations in the medial temporal lobe: Subregional contributions to memory-based prediction through high-resolution fMRI. *Society for Neuroscience Annual Meeting, November 13-17, 2010, San Diego, CA.*

Zeithamova, D. & Preston, A.R. (2010). Reactivation of prior experience during encoding of overlapping events supports generalization. *Cognitive Neuroscience Society Annual Meeting, Montreal, Canada, April 17-20, 2010.*

Zeithamova, D. & Preston, A.R. (2010). Flexible Transfer of Episodic Memories. *Brain Symposium, Dallas, TX, April 8, 2010.*

Zeithamova, D., Schmandt, N. & Preston, A.R. (2009). High-Resolution fMRI of Medial Temporal Lobe Contributions to Rapid Integrative Encoding and Generalization of Associative Memories. *Society for Neuroscience Annual Meeting, Chicago, IL, October 17, 2009.*

Wolosin, S.M., Liang, J., **Zeithamova, D.**, Schmandt, N. & Preston, A.R. (2009). Reward Modulation of Hippocampal Subregions during Motivated Associative Encoding. *Society for Neuroscience Annual Meeting, Chicago, IL, October 17, 2009.*

Zeithamova, D., Schmandt, N. & Preston, A.R. (2009). Medial temporal lobe contributions to rapid acquisition and flexible transfer of episodic memories. *Cognitive Neuroscience Society Annual Meeting, March 21-24, 2009, San Francisco, CA.*

Wolosin, S.M., Liang, J., **Zeithamova, D.**, Schmandt, N. & Preston, A.R. (2009). Reward modulation of medial temporal lobe subregions during associative encoding. *Cognitive Neuroscience Society Annual Meeting, March 21-24, 2009, San Francisco.*

Wolosin, S.M., **Zeithamova, D.**, Schnyer, D.M., & Maddox, W.T. (2008). The Effects of Sleep Deprivation on Category Learning and Retention. *Cognitive Neuroscience Society Annual Meeting, San Francisco, CA, April 2008.*

Zeithamova, D., Schnyer, D.M. & Maddox, W.T. (2007). Prototype learning is not a uniform process: Evidence from behavior and fMRI. *Society for Neuroscience Annual Meeting, November 7, 2007, San Diego, CA.*

Zeithamova, D., Filoteo, J.V., Simmons, A.N., Maddox, W.T. & Paulus, M.P. (2007) Category learning systems: Combining behavior, computational modeling and fMRI. *Cognitive Neuroscience Society Annual Meeting, May 7, 2007, New York.*

Zeithamova, D. & Maddox, W.T. (2006). Visuo-spatial and verbal working memory in unidimensional and conjunctive category learning. *Society for Neuroscience Annual Meeting, October 14-18, 2006, Atlanta, GA.*

Zeithamova, D. & Maddox, W.T. (2006). The role of visuo-spatial and verbal working memory in rule-based category learning. *Cognitive Neuroscience Society Annual Meeting, April 8-11, 2006, New York.*

Filoteo, J.V., Simmons, A.N., **Zeithamova, D.**, Maddox, W.T. & Paulus, M.P. (2006). Change in patterns of brain activity related to early and later learning of information-integration category structures. *Cognitive Neuroscience Society Annual Meeting, April 8-11, 2006, New York.*

Zeithamova, D. & Maddox, W.T. (2005). On the generality of working memory task effects in category learning. *Cognitive Neuroscience Society Annual Meeting, April 9-12, 2005, New York.*

TEACHING EXPERIENCE

2011-2013	Instructor, Matlab short courses 3-hour classes, 2-3 topics per semester
2007-2008	Teaching assistant, Matlab short courses
Spring 2007	Teaching assistant, Do-it-yourself statistics Monte Carlo and Bootstrap methods
2007	Guest lecturer: Functional neuroimaging

TEACHING INTERESTS

- Cognitive neuroscience
- Cognitive psychology
- Research methods/statistics
- Graduate seminars: Cognitive neuroscience of memory systems, fMRI Methods

MENTORSHIP

Mentor/research advisor for undergraduate students and research assistants

2013-	Bernie Gelman
2011-2012	Victoria Kazmierski
2010-2011	Anastasia Rigney (honors student)
2010	Shaney Flores
2009-2012	Christine Manthuruthil (honors student)
2008-2011	April Dominick
2007-2008	Victoria Williams

SERVICE AND OUTREACH

Community Outreach

2013	Neuroquest: A series of hands-on outreach events in local schools and community centers with the goal of spreading enthusiasm for neuroscience among school age children in the community.
2010	First Bytes: Science camp for female high school students
2010, 2009, 2008	Memory matters: Center for Learning and Memory annual interactive informational public program
2009	Research Bazaar
2009	Texas Exes

Professional Memberships

2004-present Member, Cognitive Neuroscience Society
2007-present Member, Society for Neuroscience

Ad-hoc Reviewer

Journal of Neuroscience
Memory and Cognition
Psychonomic Bulletin & Review
Journal of Experimental Psychology: Learning, Memory and Cognition
Neuropsychologia
PLOS One
Attention, Perception & Psychophysics
Consciousness and Cognition