

Margaret L. Schlichting, Ph.D.

April 2020

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Professional Appointments

Assistant Professor 2017-present
University of Toronto, Department of Psychology

Postdoctoral Fellow 2015-2016
The University of Texas at Austin, Center for Learning & Memory
Advisor: Alison Preston

Education

Ph.D., The University of Texas at Austin May 2015
Department of Psychology (Cognitive Neuroscience)
Dissertation: *When memories relate: Medial temporal and prefrontal contributions to memory integration and inference*
Advisor: Alison Preston
Committee: Jessica Church-Lang, Laura Colgin, Jarrod Lewis-Peacock, Russell Poldrack, David Schnyer

B.A., University of Pennsylvania May 2010
Major: Cognitive Science (Cognitive Neuroscience concentration)
Phi Beta Kappa, *summa cum laude* with departmental honors
Thesis: *Investigating overlap of perceptual and conceptual color processing through fMRI adaptation*
Research advisor: Sharon Thompson-Schill

Grants & Research Support

Extramural Awards

Enhanced communication during brain imaging of children and older adults: 2020-2021
Cognitive neuroscience of memory across the lifespan
Natural Sciences and Engineering Research Council of Canada (NSERC) Research Tools and Instruments (RTI)
Applicant: Morgan Barese
Co-Applicants: Amy S. Finn, [Margaret L. Schlichting](#)

Comparing the neural basis of memory integration in humans and mice 2018-2023
Canadian Institutes of Health Research (CIHR) Project Grant
Principal Applicants: Katherine D. Duncan (nominated), [Margaret L. Schlichting](#)
Co-Applicants: Paul W. Frankland, Sheena A. Josselyn

Investigating the neural and behavioural development of episodic memory and control 2018-2023
Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant
Discovery Launch Supplement (2019)
Principal Investigator: [Margaret L. Schlichting](#)

Linking memory and reasoning in the developing human brain 2017
 Canada Foundation for Innovation (CFI), John R. Evans Leaders Fund
 Ontario Research Fund (ORF), ORF Research Infrastructure
 University of Toronto, Institutional match
 Principal Investigator: Margaret L. Schlichting

Intramural Awards

Start-up general research funds, University of Toronto 2017
 Start-up MRI scanning funds, University of Toronto 2017
 Imaging Research Center Pilot Grant Program, UT Austin 2016
Investigating the impact of learning-phase retrieval on knowledge formation
 Imaging Research Center Pilot Grant Program, UT Austin 2013
Neuroanatomical development of medial temporal lobes and prefrontal cortex

Awards and Fellowships

Elected as lifetime member, Memory Disorders Research Society 2018
 Rising Star early career designation, Association for Psychological Science 2018
 Graduate School Continuing Fellowship (US\$36,463), UT Austin 2014-2015
 Trainee Professional Development Award (US\$1,000), Society for Neuroscience (SfN) 2015
 Best Abstract Award (US\$100), Austin Conference on Learning and Memory 2015
 National Defense Science and Engineering Graduate Fellowship (US\$93,000), Department of Defense 2011-2014
 Short Dissertation Research Grant, Department of Psychology (US\$500), UT Austin 2014
 Nominee for SfN Chapter Graduate Student Travel Award 2014
 Graduate Dean's Prestigious Fellowship Supplement (US\$1,000/year), UT Austin 2011-2013
 Graduate Student Professional Development Award (US\$500/year), UT Austin 2011-2013
 Psychology Research Award (US\$2,500), UT Austin 2013
 National Science Foundation Graduate Research Fellowship, *Honorable Mention* 2011

Publications

+ equal contributions

❖ undergraduate or postbaccalaureate mentee author

♦ graduate or postdoctoral mentee author

Refereed Journal Articles

Morton, N.W, Schlichting, M.L., & Preston, A.R. *Events with common structure become organized within a hierarchical cognitive map in hippocampus and frontoparietal cortex*. In revision.

Forest, T.A.♦, Finn, A.S. & Schlichting, M.L. *Tracking the emergence of general and specific representations of statistical structure*. Manuscript in preparation.

Molitor, R.J., Schlichting, M.L., Mack, M.L., Guarino, K.F.❖, McKenzie, S., Eichenbaum, H., & Preston, A.R. *Hippocampus-guided reinstatement of hierarchical schemas in visual cortex during generalization*. Manuscript in preparation.

Nealy, K., Wang, H., Gordienko, A., Howarth, C., Schlichting, M.L., & Duncan, K.D. *OpenMaze: Software for Creating Virtual Environment*. Manuscript in preparation.

Morton, N.W, Schlichting, M.L., & Preston, A.R. *A neurocognitive model of memory integration*. Manuscript in preparation.

Schlichting, M.L., Guarino, K.F.✦, Roome, H.E.✦, & Preston, A.R. *Memory reactivation modulates new encoding in the developing human brain*. Manuscript in preparation.

2020 Yu, W.✦, Schlichting, M.L.+, & Duncan, K.D.+ (Accepted). Measuring memory integration: a metric tapping memory representation rather than inference. *Proceedings of the Annual Meeting of the Cognitive Science Society*. Toronto, Ontario, Canada: Cognitive Science Society.

Forest, T.A.✦, Finn, A.S., & Schlichting, M.L. (Accepted). What is represented in memory after statistical learning? *Proceedings of the Annual Meeting of the Cognitive Science Society*. Toronto, Ontario, Canada: Cognitive Science Society.

Vijayarajah, S.✦, McAlister, E.✦, & Schlichting, M.L. (Accepted). The impact of semantic versus perceptual attention on memory representation. *Proceedings of the Annual Meeting of the Cognitive Science Society*. Toronto, Ontario, Canada: Cognitive Science Society.

Botvinik-Nezer, R.,... Schlichting, M.L.,... Vijayarajah, S.✦,... Nichols, T.E., Poldrack, R.A., & Schonberg, T. (Accepted). Variability in the analysis of a single neuroimaging dataset by many teams. *Nature*.

Kim, H., 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.

2019 Schlichting, M.L.+, Mack, M.L.+ , Guarino, K.F.✦, Preston, A.R. (2019) Performance of semi-automated hippocampus subfield segmentation methods across ages in a pediatric sample. *Neuroimage*. 191, 49-67.

Olsen, R.K., Daugherty, A.M., Carr, V.A., La Joie, R., Amaral, R.S.C., Bakker, A., Berron, D., Burgen, A., Augustinack, J.C., Amunts, K., Bocchetta, M., Chakravarty, M.M., Chételat, G., de Flores, R., DeKraaker, J., Ding, S.-L., Geerlings, M.I., Insausti, R., Johnson, E.G., Kanel, P., Kedo, O., Keresztes, A., Lee, J.K., Mueller, S.G., Mulligan, E.M., Palombo, D.J., Pasquini, L., Pluta, J., Wang, L., Schlichting, M.L., Stark, C.E.L., Steve, T., Yushkevich, P.A., Wisse, L.E.M. (2019) Progress Update from the Hippocampal Subfields Group. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*.

2018 Duncan, K.D.+ & Schlichting, M.L.+ Hippocampal representations as a function of time, subregion, and brain state. *Neurobiology of Learning & Memory*. 153(Part A): 40-56.

Spalding, K.N., Schlichting, M.L., Zeithamova, D., Preston, A.R., Tranel, D., Duff, M.C., Warren, D.E. (2018). Impairments in memory for associative inference following damage to the ventromedial prefrontal cortex. *Journal of Neuroscience*. 38(15): 3767-3777.

Ramsaran, A.I., Schlichting, M.L., Frankland, P.W. (2018). The ontogeny of memory persistence and specificity. *Developmental Cognitive Neuroscience*.

2017 Schlichting, M.L., Frankland, P.W. (2017). Memory allocation and integration in rodents and humans. *Current Opinion in Behavioral Sciences* 17, 90-98.

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, 37-51.

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

2015 Schlichting, M.L., Mumford, J.A., Preston, A.R. (2015). Learning-related changes in item representations reveal dissociable integration and separation signatures in the 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.A. et al. (2015). Quantitative Comparison of 21 Protocols for Labeling Hippocampal Subfields and Parahippocampal Subregions in In Vivo MRI: Towards a Harmonized Segmentation Protocol. *NeuroImage* 111, 526-541.

2014 Hsu, N.S., Schlichting, M.L., Thompson-Schill, S.L. (2014). Feature diagnosticity affects representations of novel and familiar objects. *Journal of Cognitive Neuroscience* 26:12, 2735-2749.

Schlichting, M.L., Preston, A.R. (2014). Memory reactivation during rest supports upcoming learning of related content. *Proceedings of the National Academy of Sciences U.S.A.* 111:44, 15845-15850.

Schlichting, M.L., Zeithamova, D., Preston, A.R. (2014). CA₁ subfield contributions to memory integration and inference. *Hippocampus* 24:10, 1248-1260.

2012 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.

2011 Hsu, N.S., Kraemer, D.J.M., Oliver, R.T., Schlichting, M.L., Thompson-Schill, S.L. (2011). Color, context and cognitive style: Variations in color knowledge retrieval as a function of task and subject variables. *Journal of Cognitive Neuroscience* 23:9, 2544–2557.

Book Chapters

2017 Preston, A.R., Molitor, R.J., Pudhiyadath, A., Schlichting, M.L. (2017). Schemas. In J.H. Byrne (Ed.), *Learning and Memory: A Comprehensive Reference, 2nd ed. Volume III: Memory Systems* (H. Eichenbaum, Volume Ed.). New York: Elsevier.

Schlichting, M.L., Preston, A.R. (2017). The hippocampus and memory integration: Building memories to navigate future decisions. In D.E. Hannula & M.C. Duff (Eds.), *The Hippocampus from Cells to Systems: Structure, Connectivity, and Functional Contributions to Memory and Flexible Cognition*.

Invited Commentaries

2017 Schlichting, M.L. (2017). How the brain links related memories. Web-based article for *Nature Partner Journals (npj) Science of Learning Community*.

Scholarly Presentations

+ equal contributions

❖ undergraduate or postbaccalaureate mentee author

♦ graduate or postdoctoral mentee author

Invited Talks

2020 Schlichting, M.L. (March 2020; cancelled due to COVID-19). Linking memories in the brain: Using neuroimaging to understand memory and its development. Invited Neuroimaging Rounds speaker at the Hospital for Sick Children (SickKids).

Schlichting, M.L. (Feb 2020). Linking memories in the brain: Using neuroimaging to understand memory and its development. Invited Neuroimaging Rounds speaker at Toronto Western Hospital.

2019 Schlichting, M.L. (Apr 2019). Linking memories in the brain: Using neuroimaging to understand memory and its development. Invited Colloquium Speaker at University of Western Ontario in London, ON.

Conference Presentations

2020 Morton, N.W., Schlichting, M.L., Preston, A.R. (anticipated May 2020; postponed due to COVID-19). Representations of common event structure in medial temporal lobe and frontoparietal cortex support efficient inference. Talk to be presented at the Context and Episodic Memory Symposium in Philadelphia, PA.

Yu, W.❖, Schlichting, M.L.+ , & Duncan, K.D.+ (anticipated July 2020). Measuring memory integration: a metric tapping memory representation rather than inference. Poster to be presented at the Annual Meeting of the Cognitive Science Society in Toronto, Ontario, Canada.

Forest, T.A.♦, Finn, A.S., & Schlichting, M.L. (anticipated July 2020). What is represented in memory after statistical learning? Poster to be presented at the Annual Meeting of the Cognitive Science Society in Toronto, Ontario, Canada.

Vijayarajah, S.♦, McAlister, E.❖, & Schlichting, M.L. (anticipated July 2020). The impact of semantic versus perceptual attention on memory representation. Poster to be presented at the Annual Meeting of the Cognitive Science Society in Toronto, Ontario, Canada.

2019 Gumus, M., Zhu, T., Schlichting, M.L.+ , Mack, M.L.+ (Oct 2019). Hippocampal white matter microstructure predicts rapid category learning. Poster presented at the Society for Neuroscience annual meeting in Chicago, IL.

Morton, N.W., Molitor, R.J., Schlichting, M.L., Mack, M.L., McKenzie, S., Preston, A.R. (Oct 2019). Human hippocampus and medial prefrontal cortex represent hierarchical task schemas. Poster presented at the Society for Neuroscience annual meeting in Chicago, IL.

Varga, N.L.♦, Roome, H.E.♦, Molitor, R.J., Martinez, L., Hipskind, E.M., Preston, A.R.+ , Schlichting, M.L.+ (Oct 2019). Evidence for differential neural reinstatement of associative memories in children and adults. Poster presented at the Society for Neuroscience annual meeting in Chicago, IL.

Blumenthal, A.♦, Savel, K.❖, Huynh, T.❖, Dagleish, B.❖, Rivera, R.❖, Gontarz, Z.❖, Vucorovic, M.❖, McRae, K., Mack, M.L.+ , Schlichting, M.L.+ (Oct 2019). Developmental differences in real-world concepts: More

knowledge or different knowledge? Poster presented at the Cognitive Development Society annual meeting in Louisville, KY.

Abolghasem, Z.❖, Finn, A.S.+ , Schlichting, M.L.+ (Oct 2019). A child's view is unique: developmental differences in what is important in naturalistic scene images. Poster to be presented at the Cognitive Development Society annual meeting in Louisville, KY.

Schlichting, M.L. (Oct 2019). Developmental differences in memory representation. Talk presented at the Memory Disorders Research Society (MDRS) Annual Meeting in New York, NY.

Forest, T.A.♦, Finn, A.S. & Schlichting, M.L. (June 2019). What is represented in memory after statistical learning: Evidence from adults and children. Talk presented at the the Interdisciplinary Advances in Statistical Learning Conference in San Sebastián, Spain.

Vijayarajah, S.♦ & Schlichting, M.L. (June 2019). Semantic versus perceptual attention impacts encoding mechanisms in hippocampus and prefrontal cortex. Talk presented at the the Canadian Society for Brain, Behaviour and Cognitive Science Annual Meeting in Waterloo, ON.

Forest, T.A.♦, Finn, A.S. & Schlichting, M.L. (June 2019). What is represented in memory after statistical learning: Evidence from adults and children. Talk presented at the the Canadian Society for Brain, Behaviour and Cognitive Science Annual Meeting in Waterloo, ON.

Varga, N.L.♦, Roome, H.E.♦, Preston, A.R.* , Schlichting, M.L.* (April 2019). Neural evidence for reinstatement of associative memories in children and adults. Poster presented at the Austin Conference on Learning and Memory in Austin, TX.

Varga, N.♦, Roome, H.E.♦, Preston, A.R., Schlichting, M.L. (Mar 2019). Neural evidence for reinstatement of associative memories in children and adults. Poster presented at the Society for Research in Child Development biennial meeting in Baltimore, MD.

Yu, W.❖, Duncan, K.D., Schlichting, M.L. (Mar 2019). How Does the Similarity of Related Experiences Impact Memory Representation Over Development? Poster presented at the Society for Research in Child Development biennial meeting in Baltimore, MD.

Nealy, K., Josselyn, S.A., Frankland, P.W., Schlichting, M.L., Duncan, K.D. (Feb 2019). Does the temporal proximity of related events drive memory integration. Poster presented at the Lake Ontario Visionary Establishment annual LOVE Conference in Niagara Falls, Ontario.

Schlichting, M.L. (Jan 2019). Integrating related memories in support of flexible behaviour. Talk presented at the Park City Winter Conference in Park City, UT.

2018 Schlichting, M.L., Mack, M.L., Guarino, K.F.♦, Preston, A.R. (Nov 2018). Comparison of semi-automated hippocampal subfield segmentation methods in a pediatric sample. Poster presented at the Society for Neuroscience annual meeting in San Diego, CA.

Vijayarajah, S.♦ & Schlichting, M.L. (Nov 2018). Selective attention to perceptual and semantic features impacts neural engagement and memory behaviour. Poster presented at the Society for Neuroscience annual meeting in San Diego, CA.

Schlichting, M.L. (Oct 2018). Development of memory integration. Talk presented at the Memory Disorders Research Society (MDRS) Annual Meeting in Toronto, ON.

Schlichting, M.L., Guarino, K.F.❖, Roome, H.E.♣, Preston, A.R. (July 2018). Pattern classification reveals developmental differences in how memories influence new learning. Poster presented at the Canadian Society for Brain, Behaviour and Cognitive Science Annual Meeting in St. John's, NL.

Vijayarajah, S.♣ & Schlichting, M.L. (July 2018). Selective attention at encoding impacts memory representation. Poster presented at the Canadian Society for Brain, Behaviour and Cognitive Science Annual Meeting in St. John's, NL.

Yu, W.❖, Schlichting, M.L.⁺, Duncan, K.D.⁺ (May 2018). Measuring memory integration. Data blitz talk presented at Toronto Area Memory Group meeting.

2017 Schlichting, M.L., Guarino, K.F.❖, Roome, H.E.♣, Preston, A.R. (Nov 2017). Opportunity to link related memories during encoding reveals adolescent-specific neural strategy. Poster presented at the Society for Neuroscience annual meeting in Washington, DC.

Kim, H., Schlichting, M.L., Preston, A.R., Lewis-Peacock, J.A. (Nov 2017). The precision of memory-based prediction biases memory pruning. Poster presented at the Society for Neuroscience annual meeting in Washington, DC.

Schlichting, M.L., Guarino, K.F.❖, Roome, H.E.♣, Preston, A.R. (June 2017). Pattern classification reveals developmental differences in how memories influence new learning. Talk presented at the International Workshop on Pattern Recognition in Neuroimaging in Toronto, ON.

Kim, H., Schlichting, M.L., Preston, A.R., Lewis-Peacock, J.A. (May 2017). The precision of memory-based prediction biases memory pruning. Poster presented at the Context and Episodic Memory Symposium in Philadelphia, PA.

Schlichting, M.L., Guarino, K.F.❖, Roome, H.E.♣, Preston, A.R. (Apr 2017). Linking and differentiating memories across development: Neural mechanisms and behavioral outcomes. Talk presented at the Society for Research in Child Development biennial meeting in Austin, TX.

2016 Kim, H., Schlichting, M.L., Preston, A.R., Lewis-Peacock, J.A. (Nov 2016). The precision of memory-based prediction biases memory pruning. Poster presented at the Psychonomic Society annual meeting in Boston, MA.

Schlichting, M.L., Guarino, K.F.❖, Preston, A.R. (Nov 2016). Developmental differences in hippocampal-prefrontal mediated memory updating. Poster presented at the Society for Neuroscience annual meeting in San Diego, CA.

Molitor, R.J., Schlichting, M.L., Mack, M.L., Guarino, K.F.♣, McKenzie, S., Eichenbaum, H., Preston, A.R. (Nov 2016). Reinstatement of schemas in sensory neocortex is guided by medial prefrontal cortex and hippocampus. Poster presented at the Society for Neuroscience annual meeting in San Diego, CA.

Schlichting, M.L., Guarino, K.F.❖, Preston, A.R. (Sept 2016). Developmental differences in hippocampal-prefrontal mediated memory updating. Poster presented at the Flux Congress annual meeting in St. Louis, MO.

Schlichting, M.L., Guarino, K.F.❖, Schapiro, A.C., Turk-Browne, N.B., Preston, A.R. (May 2016). Structural development of hippocampus and medial prefrontal cortex is related to statistical learning and inference. Poster presented at the Context and Episodic Memory Symposium in Philadelphia, PA.

Morton, N.W., Schlichting, M.L., Preston, A.R. (May 2016). Developing a neurocognitive model of memory integration. Talk presented at the Context and Episodic Memory Symposium in Philadelphia, PA.

Molitor, R.J., Schlichting, M.L., Mack, M.L., Guarino, K.F.♦, McKenzie, S., Eichenbaum, H., Preston, A.R. (May 2016). Generalization of schema representations to novel contexts is supported by hippocampus and medial prefrontal cortex. Poster presented at the Context and Episodic Memory Symposium in Philadelphia, PA.

2015 Schlichting, M.L., Mumford, J.A., Preston, A.R. (Oct 2015). Learning-related changes in item representations reveal dissociable integration and separation signatures in hippocampus and prefrontal cortex. Talk presented at the Society for Neuroscience annual meeting in Chicago, IL.

Guarino, K.F.♦, Schlichting, M.L., Schapiro, A.C., Turk-Browne, N.B., Preston, A.R. (Oct 2015). Development of medial prefrontal cortex is related to statistical learning and inference. Poster presented at the Society for Neuroscience annual meeting in Chicago, IL.

Morton, N.W., Schlichting, M.L., Preston, A.R. (Oct 2015). Developing a neurocognitive model of memory integration. Poster presented at the Society for Neuroscience annual meeting in Chicago, IL.

Spalding, K.N., Schlichting, M.L., Zeithamova, D., Preston, A.R., Duff, M.C., Tranel, D., Warren, D.E. (Oct 2015). Impairments in associative inference following damage to the ventromedial prefrontal cortex. Poster presented at the Society for Neuroscience annual meeting in Chicago, IL.

Molitor, R.J., Schlichting, M.L., Mack, M.L., Guarino, K.F.♦, McKenzie, S., Eichenbaum, H., Preston, A.R. (Oct 2015). Schema representations in hippocampus and medial prefrontal cortex support generalization in novel contexts. Poster presented at the Society for Neuroscience annual meeting in Chicago, IL.

Schlichting, M.L., Mumford, J.A., Preston, A.R. (May 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 in Philadelphia, PA.

Schlichting, M.L., Guarino, K.F.♦, Schapiro, A.C., Turk-Browne, N.B., Preston, A.R. (Apr 2015). Structural development of hippocampal subfields is related to statistical learning and inference. Talk presented at the Austin Conference on Learning and Memory biannual meeting in Austin, TX.

Kim, H., Schlichting, M.L., Preston, A.R., Lewis-Peacock, J.A. (Apr 2015). Shifting the granularity of context-based predictions modulates memory pruning. Poster presented at the Austin Conference on Learning and Memory biannual meeting in Austin, TX.

2014 Schlichting, M.L., Guarino, K.F.♦, Schapiro, A.C., Turk-Browne, N.B., Preston, A.R. (Nov 2014). Structural development of hippocampal subfields is related to statistical learning and inference. Poster presented at the Society for Neuroscience annual meeting in Washington, DC.

Schlichting, M.L., Guarino, K.F.♦, Preston, A.R. (Sept 2014). Medial temporal lobe structure relates to individual differences in memory and reasoning ability across development. Poster presented at the Flux Congress annual meeting in Los Angeles, CA.

Schlichting, M.L., Preston, A.R. (May 2014). Offline reactivation and functional coupling support formation of relational memory networks. Talk presented at the Context and Episodic Memory Symposium in Philadelphia, PA.

- 2013** Schlichting, M.L., Preston, A.R. (Nov 2013). Replay during on- and offline periods supports formation of relational memory networks. Poster presented at the Society for Neuroscience annual meeting in San Diego, CA.
- Schlichting, M.L., Preston, A.R. (Jan 2013). Hippocampal-neocortical functional connectivity reveals memory integration signature that persists during post-encoding rest. Poster presented at the Institute for Neuroscience symposium, UT Austin.
- 2012** Schlichting, M.L., Preston, A.R. (Oct 2012). Hippocampal-neocortical functional connectivity reveals memory integration signature that persists during post-encoding rest. Poster presented at the Society for Neuroscience annual meeting in New Orleans, LA.
- Hsu, N.S., Schlichting, M.L., Thompson-Schill, S.L. (Apr 2012) Feature diagnosticity affects semantic representations of novel and common object categories. Poster presented at the Cognitive Neuroscience Society annual meeting in Chicago, IL.
- Schlichting, M.L., Zeithamova, D., Preston, A.R. (Feb 2012). Study-test representational similarity within hippocampus demonstrates reactivation of integrated representations during novel inference. Poster presented at the Institute for Neuroscience symposium, UT Austin.
- 2011** Schlichting, M.L., Zeithamova, D., Preston, A.R. (Nov 2011). Study-test representational similarity within hippocampus demonstrates reactivation of integrated representations during novel inference. Poster presented at the Society for Neuroscience annual meeting in Washington, D.C.
- Hsu, N.S., Schlichting, M.L., Thompson-Schill, S.L. (Apr 2011) Feature diagnosticity affects the representation of novel object categories. Poster presented at the Cognitive Neuroscience Society annual meeting in San Francisco, CA.
- 2010** Hsu, N.S., Kraemer, D.J.M., Oliver, R.T., Schlichting, M.L., Thompson-Schill, S.L. (Apr 2010). Functional magnetic resonance imaging (fMRI) evidence for multiple color knowledge representations influenced by context and cognitive style. Talk presented at the Cognitive Neuroscience Society annual meeting in Montreal, Canada.

Intramural Presentations

- 2019** DeMarinis, C.✦, Tarder-Stoll, H.✦, Schlichting, M.L., Duncan, K.D. (March 2019). The retroactive influence of reward on associative memory and memory integration. ROP Poster presented at the University of Toronto Undergraduate Research Forum.
- Zhou, C.M.✦, Vijayarajah, S., Schlichting, M.L. (March 2019). A lack of awareness: no correlation between self-reported confidence levels and task performance. ROP Poster presented at the University of Toronto Undergraduate Research Forum.
- Seeger, R.✦, Vanasse Grosdidier, I.✦, Duan, C.✦, Brol, E.✦, Schlichting, M.L. (March 2019). Examining the effects of delay in spatial layout learning in adults. ROP Poster presented at the University of Toronto Undergraduate Research Forum.
- Tabassum, N.✦, Yu, W.✦, Abolghasem, Z.✦, Duncan, K.D., Schlichting, M.L. (March 2019). Analysis of neuropsychological & neurodevelopmental measures in adults and young adolescents may reveal links to memory performance of related events. ROP Poster presented at the University of Toronto Undergraduate Research Forum.

Martinez, L.❖, Varga, N.L.§, Roome, H.E., Preston, A.R.* , Schlichting, M.L.* (April 2019). Neural evidence for reinstatement of associative memories in children and adults. Poster presented at Longhorn Research Poster Session for undergraduate research at UT Austin in Austin, TX.

2018 Yu, W.❖, Duncan, K.D., Schlichting, M.L. (Dec 2018). How does increased similarity impact memory integration over development? Data blitz talk presented at Developmental Interest Group (DIG) talk series, University of Toronto.

Schlichting, M.L. (Mar 2018). Encoding of interrelated memories across development. Talk presented at the Ebbinghaus Empire Meeting, University of Toronto.

Schlichting, M.L. (Feb 2018). Linking memories in the brain: Using neuroimaging to understand memory integration and its development. Invited talk presented at the Developmental Interest Group (DIG) talk series, University of Toronto.

2017 Schlichting, M.L. (Dec 2017). Linking memories in the brain: Using neuroimaging to understand memory integration and its development. Invited talk presented at the Rotman Rounds talk series, Rotman Research Institute, Toronto.

2016 Schlichting, M.L., Mack, M.L., Preston, A.R. (Apr 2016). Investigating the impact of learning-phase retrieval on knowledge formation. Talk presented at Psychology department cognitive neuroscience area meeting, UT Austin.

2015 Schlichting, M.L., Mumford, J.A., Preston, A.R. (Nov 2015). Learning-related changes in item representations reveal dissociable integration and separation signatures in hippocampus and prefrontal cortex. Talk presented at the Center for Learning and Memory annual retreat, UT Austin.

Schlichting, M.L. (Oct 2015). Linking memories in the brain: Neuroimaging approaches to understanding memory integration and its development. Talk presented at Psychology department cognitive neuroscience area meeting, UT Austin.

Schlichting, M.L., Guarino, K.F.❖, Preston, A.R. (Mar 2015). Development of memory-based inference. Talk presented at Psychology department developmental area meeting, UT Austin.

2013 Schlichting, M.L., Zeithamova, D. (Oct 2013). Reactivation of existing knowledge affects new learning and inference. Talk presented at the Center for Learning and Memory annual retreat, UT Austin.

Schlichting, M.L., Preston, A.R. (Apr 2013). Linking episodes during learning and rest. Talk presented at Psychology department cognitive neuroscience area meeting, UT Austin.

2011 Schlichting, M.L. (Dec 2011) Forming links between memories. Talk presented at Psychology department cognitive neuroscience area meeting, UT Austin.

Schlichting, M.L. (Nov 2011). Study-test representational similarity demonstrates reactivation of integrated representations during inference. Talk presented at the Center for Learning and Memory annual retreat, UT Austin.

2009 Schlichting, M.L., Shukla, M., Gebhart, A., Aslin, R.N. (July 2009). Infants' selective attention to temporal structures. Poster presented at the CVS Undergraduate Fellowship Poster Session, University of Rochester.

2008 Schlichting, M.L., Marsolek, C.J. (July 2008). Modeling monkeys: Exploring antipriming using neurocomputational models. Poster presented at the Summer Undergraduate Research Symposium, University of Minnesota.

Schlichting, M.L. (July 2008). Antipriming in neurocomputational models. Talk presented at the Research Experience for Undergraduates seminar, University of Minnesota.

Other Research Experience

Center for Visual Science's Summer Research Fellowship Program Summer 2009
University of Rochester, Department of Brain & Cognitive Sciences, Rochester Baby Lab
Advisor: Dick Aslin

REU Program in the Cognitive and Behavioral Sciences Summer 2008
University of Minnesota, Department of Psychology, Marsolek Lab
Advisor: Chad Marsolek

Teaching and Advising

Courses

Cognitive Neuroscience, PSY493	Winter 2020
Topics in Developmental Cognitive Neuroscience, PSY5311 (graduate seminar)	Fall 2019
Human Memory, PSY372	Fall 2018, 2019
Tools of Developmental Neuroscience, PSY410 (undergraduate seminar)	Winter 2018, 2019

Guest lectures

"Memory Development," Studying the Growing Brain: The Latest Findings from Developmental Cognitive Neuroscience (graduate seminar) taught by Jessica Church-Lang, UT Austin, February 2015
"Memory I: From Cells to Systems," Cognitive Neuroscience taught by Alison Preston, UT Austin, March 2013
"Methods in Cognitive Neuroscience: Brain Perturbations," Cognitive Neuroscience taught by Alison Preston, UT Austin, Jan 2013

Select Advisees

University of Toronto

Current Primary and Co-Supervisions:

Graduate Students, Postdoctoral Fellows & Lab Managers

Xiaoping Fang, Postdoctoral Fellow, co-supervised with Katherine Duncan (2019-present)
Anna Blumenthal, Postdoctoral Fellow, co-supervised with Michael Mack (2018-2020)
Merron Woodbury, Graduate Student (2020-present)
Sagana Vijayarajah, Graduate Student (2017-present)
Tess Forest, Outside Project Student (2017-present; primary supervisor: Amy Finn)
Sarah Berger, Post-baccalaureate Lab Manager (2019-present)
Zahra Abolghasem, Post-baccalaureate Lab Manager (2020-present)

Undergraduates

Wangjing Yu, Independent Project Student, co-supervised with Katherine Duncan (2016-present)
Current position: Graduate student in Psychology PhD program, Columbia University
Zahra Abolghasem, Independent Project/Honors Thesis Student, co-supervised with Amy Finn (2018-2020)
Tri Quang (David) Huynh, Independent Project Student (2019-present)

Sarah Ripley, Independent Project Student (2020)
Sherry Li, Mini-Thesis Student (2020)
Emma Laker, Research Opportunity Program Student (2019-2020)
Freeman Chan, Research Opportunity Program Student (2019-2020)
Jaden Murray, Research Opportunity Program Student (2019-2020)

Current Committee Memberships:

Emily Heffernan, Graduate Student supervised by Michael Mack
Role: MA Thesis Subsidiary Advisor (2019-2020)
Elizabeth Long, Graduate Student supervised by Wil Cunningham
Role: MA Thesis Subsidiary Advisor (2019-2020)
Tess Forest, Graduate Student supervised by Amy Finn
Role: PhD Committee Member (2018-present)
Julie Sato, Graduate student supervised by Margot Taylor
Role: PhD Committee Member (2018-present)
Samantha Audrain, Graduate student supervised by Mary Pat McAndrews
Role: PhD Committee Member (2018-present)

Former Primary and Co-Supervisions:

Ziyao Chen, Work-Study Lab Programmer (2018)
Sakshaat Choyikandi, Work-Study Research Assistant (2018)
Chuyun Shen, Post-baccalaureate Lab Manager and Research Assistant (2018)
Hailey Benedict, Post-baccalaureate Lab Manager and Research Assistant (2017-2018)
Sam Bray Kingissepp, Post-baccalaureate Lab Manager and Research Assistant (2017-2018)
Eryk Brol, Work-Study Lab Programmer (2017-2018)
Isabelle Vanasse Grosdidier, Post-baccalaureate Lab Manager and Research Assistant (2018-2019)
Julia Pearce, Independent Project Student (2018-2019)
Tina Farokhifar, Honours Thesis Student (2018-2019)
Chunan (Lana) Duan, Research Assistant (2017-2018)
Current position: Graduate student in IMS PhD program, University of Toronto (Supervisor: Paul Frankland)
Hannah Tarder-Stoll, Undergraduate Thesis Student, co-supervised with Katherine Duncan (2017-2018)
Current position: Graduate student in Psychology PhD program, Columbia University
Carissa DeMarinis, Research Opportunity Program Student (2018-2019)
Current position: Law student, University of Toronto

Former Committee Memberships:

Kyle Nealy, Graduate Student supervised by Katherine Duncan
Role: MA Thesis Subsidiary Advisor (2017-2018)
Erika Wharton-Shukster, Graduate Student supervised by Amy Finn
Role: MA Thesis Subsidiary Advisor (2017-2018)
Vincent Man, Graduate student supervised by Wil Cunningham
Role: Non-Supervisory PhD Committee Member (2018)
Melissa Hebscher, Graduate student supervised by Asaf Gilboa
Role: Non-Supervisory PhD Committee Member (2018)

The University of Texas at Austin

Sharon Noh, Graduate Student in Preston Lab (consultant for ongoing projects; 2020-present)
Nicole Varga, Postdoctoral Fellow in Preston Lab, co-supervised with Ali Preston (2018-present)

Christine Coughlin, Postdoctoral Fellow in Preston Lab (secondary mentor for ongoing projects; 2016-present)
 Hannah Roome, Postdoctoral Fellow in Preston Lab (secondary mentor for ongoing projects; 2016-present)
 Katharine Guarino, Post-baccalaureate Research Assistant in Preston Lab (2013-2016)
 Current position: Graduate student in Psychology PhD program, Loyola University Chicago
 Tammy Tran, senior honors thesis in Psychology (2012-2013)
 Thesis: The interactions between past and present memories: The role of memory strength
 Current position: Graduate student in Neuroscience PhD program, Johns Hopkins University
 Kevin DeLuca, independent study in Psychology (2011-2013)
 Current position: Senior Research Specialist in Economics Department, Princeton University

Select Awards and Grants to Core Advisees

Natural Sciences and Engineering Research Council of Canada (NSERC) Canada Postgraduate Scholarships - Doctoral Program (PGS-D) Awarded to Sagana Vijayarajah, Graduate student Total Value: C\$63,000	2019-2022
Natural Sciences and Engineering Research Council of Canada (NSERC) Undergraduate Student Research Award (USRA) Awarded to Zahra Abolghasem, Undergraduate student Total Value: C\$4,500	Summer 2019
University of Toronto School of Graduate Studies (SGS) Conference Grant (C\$490) Awarded to Sagana Vijayarajah, Graduate student Total Value: C\$490	2018, 2019
University of Toronto Faculty of Arts & Science Postdoctoral Fellowship (C\$22,500/year for 2 years) Awarded to Anna Blumenthal, Postdoctoral Fellow Total Value: C\$45,000	2018-2020
Natural Sciences and Engineering Research Council of Canada (NSERC) Canada Graduate Scholarships - Master's Program (CGS-M; C\$17,500) Awarded to Sagana Vijayarajah, Graduate student Total Value: C\$17,500	2018-2019
Ontario Graduate Scholarship (OGS; C\$15,000) Awarded to Sagana Vijayarajah, Graduate student Total Value: C\$15,000	2017-2018

Outreach

Faculty Liaison to Library Outreach, Toronto, ON NeuroQuest, Austin, TX Developed lesson plans and organized neuroscience outreach program for local students	2018-present 2013, 2015
Girls in STEM Conference, Austin, TX	2013
Hot Science – Cool Talks, Austin, TX	2011
School-based outreach through Mind Science Foundation, San Antonio, TX	2011
Big Brothers Big Sisters, Philadelphia, PA	2007-2008
Pennvelopes pen-pal program, Philadelphia, PA	2006-2007

Service

Professional Memberships:

Memory Disorders Research Society (MDRS; elected)
Cognitive Science Society
Flux Society for Integrative Developmental Cognitive Neuroscience
Hippocampal Subfields Segmentation Group
Psychonomic Society
Society for Neuroscience
Society for Research in Child Development
Phi Beta Kappa, Delta Chapter, May 2010

Editorial Positions:

Board of Reviewing Editors, eLife	2019-present
Meta-Reviewer, Cognitive Science Society Annual Meeting	2020
Review Editor, Frontiers in Human Neuroscience	2018-present
Guest Reviewing Editor, eLife	2019

Journal and Conference Reviewing:

* denotes co-reviewing

BioEssays
Cerebral Cortex
Child Development
Cognitive, Affective, & Behavioral Neuroscience*
Current Biology
eLife
Developmental Cognitive Neuroscience
Developmental Science
Frontiers Human Neuroscience
Hippocampus
Journal of Applied Research in Memory and Cognition
Journal of Cognitive Neuroscience
Journal of Experimental Psychology: General
Journal of Neuroscience*
Nature Communications
Nature Neuroscience*
NeuroImage
Neuron*
npj Science of Learning
PLOS ONE
Proceedings of the National Academy of Sciences
Royal Society Open Science
Scientific Reports
Society for Research in Child Development Biennial Meeting Abstracts