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Todd M. Gureckis

Professional Experience

- 2014–present **Associate Professor**, *Department of Psychology*,
Affiliate, Center for Data Science & Center for Neural Science,
New York University, New York, NY.
- 2008–2013 **Assistant Professor**, *Department of Psychology*,
New York University, New York, NY.
- 2005–2007 **Post-doctoral Research Associate**, *Department of Psychological and Brain Sciences*,
Indiana University, Bloomington, IN.
- Visiting Affiliations*
- Spring 2015 **Institute of Cognitive and Brain Sciences**, *University of California*, Berkeley, CA.
Fall 2014 **Booth School of Business**, *University of Chicago*, Chicago, IL.

Education

- 2001–2005 **Ph.D.**, *Cognition and Perception*, The University of Texas, Austin, TX.
2001–2005 **M.A.**, *Cognition and Perception*, The University of Texas, Austin, TX.
1997–2001 **B.S.**, *Electrical and Computer Engineering*, The University of Texas, Austin, TX.

Honors and Awards

- 2017 **Visiting Research Fellowship**, University of New South Wales, Sydney, Australia
- 2016 **NYU College of Arts and Sciences Teach/Tech award**, for innovation in the application of instructional technology to undergraduate education
- 2016 **Distinguished Alumni Award**, Northside Independent School District, San Antonio Texas
- 2015 **Presidential Early Career Award for Scientists and Engineers (PECASE)**, Office of Science and Technology Policy, the White House
- 2014 **Clifford T. Morgan Best Article Award**, *Memory & Cognition*, competitive award from the Psychonomic Society (for Markant, Dubrow, Davachi, & Gureckis, 2014)
- 2014 **James S. McDonnell Foundation Scholar Award**, competitively awarded following an anonymous nomination process
- 2014 Mentoree received **David Marr award for best student paper** at conference CogSci 2014, Quebec City, Canada (for Coenen, Rehder & Gureckis, 2014)
- 2013 **National Science Foundation Faculty Early Career Development (CAREER) Award**

- 2012 Conference prize for **best paper on computational modeling of higher-level cognition** CogSci 2012, Sapporo, Japan (for Markant & Gureckis, 2012)
- 1997 **University of Texas National Merit Scholarship**
- 1997 **Friends of Alex Engineering Scholarship**

Research Funding

Pending

- 2019–2022 **National Science Foundation** "Collaborative Research: NCS-FR: Big science psychology: Understanding the mind through collaborative large-scale experiments" (Role: co-PI, PI: Tom Griffiths, Princeton University, \$2 Million, \$316,247K NYU component)

Current

- 2018–2020 **Oculus/Facebook Reality Labs** Research Consortium grant (Role: PI, \$521K total)
- 2017–2018 **Oculus Research Excellence Award** (undisclosed amount at request of funder)
- 2016–2019 **National Science Foundation** "NCS-FO: Using computational cognitive neuroscience to predict and optimize memory" (Role: PI, co-PI: Lila Davachi, \$955K total)
- 2015–2020 **James S. McDonnell Foundation Scholar Award in Understanding Human Cognition** "Self-directed learning: Understanding the interactions between decision making, learning, and memory" (Role: PI, \$600K total)
- 2018–2020 **Netherlands Organisation for Scientific Research (NWO) Board of the Domain Social Sciences and Humanities** Rubicon grant (PI sponsor of post-doc fellowship for Dr. Ili Ma, \$166K)
- 2013–2019 **National Science Foundation** CAREER "The role of self-directed learning in facilitating concept acquisition" BCS-1255538 (Role: PI, \$722K total)

Completed

- 2016–2017 **NYU IHDSC Seed Award** - "Applying computer science models of self-directed learning to new measures of young children's academically-oriented soft skills" (Role: co-PI, PI: Cybele Raver, \$9K)
- 2016–2017 Visiting Research Fellowship, **University of New South Wales, Sydney, Australia** (\$5500)
- 2016–2017 **NYU Global TIES Seed Award to Support Global Research** - "Testing an Adaptive Tablet Game System for Self-guided Literacy and Numeracy Education in Developing Nations" (Role: PI, \$12K)
- 2016–2017 **National Science Foundation** Research Opportunity Award Supplement for CAREER award BCS-1255538 to support collaboration (Role: PI, co-PI: Kelly Goedert, \$44,074)
- 2014–2017 **NYU Internal Research Investment Fund** - "Using computational neuroscience to enhance adaptive instruction technologies" (Role: PI, co-PI: Lila Davachi, \$32,000)

- 2014–2016 **John Templeton Foundation** New Perspectives on the Psychology of Understanding program - "A sensemaking model of informal science education" (Role: PI, co-PI Marjorie Rhodes, \$193K)
- 2013–2015 **Intelligence Advanced Research Projects Activity (IARPA)** - Knowledge Representation in Neural Systems (KRNS) - (Role: PI, \$845K total)
- 2010–2014 **Intelligence Advanced Research Projects Activity (IARPA)** - Integrated Cognitive-Neuroscience Architectures for Understanding Sensemaking (ICARUS) - (Role: PI, \$342K)
- 2005–2007 **National Institute of Health** Cognitive Modeling Training Grant - Indiana University - Competitively awarded for 2 years of post-doctoral study (\$84,000 in direct costs)
- 2001–2002 **University of Texas Graduate Fellowship**

Professional Service

Editorial Positions

- Cognitive Science (**Associate Editor**, 2013–2018, Editorial Board, 2009–2013)
- TopiCS in Cognitive Science (**Associate Editor**, 2008–2012)
- Memory & Cognition (Editorial Board, 2009–2017)
- Behavioral Research Methods (Editorial Board, 2014–)
- Frontiers in Cognitive Science (Review Editorial Board, 2010–2013)

Program Committees

- Annual Meeting of the Cognitive Science Society (2008–2009, 2015–2019)
- Cognitive Science Society Awards Committee (2008, 2011)
- Society for Computers in Psychology Steering Committee (2014–2016)

Intensive Workshops/Summer Schools Organized

Estes Fund, Co-organizer w/ Tom Griffiths, Michael C. Frank, & Alexandra Paxton, Data on the Mind: Collecting, Analyzing, and Sharing Research Using Big Data and Naturally Occurring Datasets (June, 2017)

Grant Reviewing

- National Science Foundation (as an ad-hoc reviewer and as a panel member)
 - Computational Cognition
 - Perception, Action, & Cognition
 - Integrative Strategies for Understanding Neural and Cognitive Systems (NCS)
 - Decision, Risk, and Management Science
 - Research and Evaluation on Education in Science and Engineering (REESE)
 - EHR/DRL - STEM Education REU
 - Research on Education and Learning (REAL)
- Netherlands Organisation for Scientific Research - Complexity Program (NOSR)
- Economic & Social Research Center (UK)
- Air Force Office of Strategic Research (AFOSR)
- National Science and Engineering Research Council of Canada (NSERC)
- US-Israel Binational Science Foundation (BSF)

Scientific Advisory Boards

Databrary.org - platform for sharing video data from psychology experiments (2015–present)

External Evaluations

I have served as an external letter writer for numerous outside tenure and promotion cases.

Ad-hoc Peer Reviewing

Advances in Complex Systems; Attention, Perception & Psychophysics; Brain Research; Cerebral Cortex; Cognition; Cognition & Emotion; Cognitive Computational Neuroscience conference; Cognitive Psychology; Cognitive Science; Cognitive Science Society Conference; Computational Brain & Behavior; Decision; Decision; Developmental Psychology; Frontiers in Cognitive Science; International Conference on Cognitive Science (ICCS); Journal of Behavioral Decision Making; Journal of Experimental Psychology: General; Journal of Experimental Psychology: Learning, Memory, & Cognition; Journal of Memory and Language; Journal of Neuroscience; Journal of Vision; Journal of the Royal Society - Interface; Nature Human Behavior; Nature Reviews Neuroscience; NeurIPS (Neural Information Processing Systems) Conference; Neuropsychologia, Memory & Cognition, Neuroimage; PLOS Computational Biology; PLOSOne; Perception & Psychophysics; Proceedings of the National Academy of Science; Psychological Review; Psychological Science; Psychonomic Bulletin & Review; Quarterly Journal of Experimental Psychology; Science; Topics in Cognitive Science

Journal Publications

Advisees: ★=postdoc, ×=graduate, * =masters, ⊕=undergrad, †=high school

48. Rich, A.S.[×], & **Gureckis, T.M.** (2019). Lessons for artificial intelligence from the study of natural stupidity. *Nature Machine Intelligence*, 1, 174-180.

47. Rich, A.S.[×], & **Gureckis, T.M.** (in press, 2019). Does a present bias influence exploratory choice? *Journal of Articles in Support of the Null Hypothesis*
46. Ruggeri, A., Markant, D.B.[×], **Gureckis, T.M.**, Bretzke, M., & Xu, F. (2019). Active control of study leads to improved recognition memory across the lifespan. *Cognition*, 186, 82-94. [[Data and Code](#)]
45. Coenen, A.[×], Bramley, N.R.^{*}, Ruggeri, A., & **Gureckis, T.M.** (in press, 2019). Testing one or multiple: How beliefs about sparsity affect causal experimentation. *Journal of Experimental Psychology: Learning, Memory, and Cognition*.
44. Rothe, A.[×], Lake, B. M., & **Gureckis, T.M.** (2018). Do people ask good questions? *Computational Brain & Behavior*, 1, 69–89.
43. Bramley, N.R.^{*}, Gerstenberg, T., Tenenbaum, J.B., & **Gureckis, T.M.** (2018). Intuitive Experiments in the Physical World. *Cognitive Psychology*, 105, 9-39. [[Data and Code](#)]
42. Coenen, A.[×], Nelson, J.D., & **Gureckis, T.M.** (2018). Asking the Right Questions About the Psychology of Human Inquiry: Nine Open Challenges. *Psychonomic Bulletin & Review*. 1-41.
41. Rich, A.[×], & **Gureckis, T.M.** (2018). The limits of learning: Exploration, generalization, and the development of learning traps. *Journal of Experimental Psychology: General*, 147(11), 1553-1570. [[Data and Code](#)]
40. Kachergis, G.^{*}, Rhodes, M., & **Gureckis, T.M.** (2017). Desirable difficulties in the development of active inquiry skills. *Cognition*, 166, 407-417.
39. Rich, A. S.[×], & **Gureckis, T.M.** (2018). Exploratory choice reflects the future value of information. *Decision*, 5(3), 177-192. [[Data and Code](#)]
38. Vu, A., Phillips, J. Kay, K., Phillips, M., Johnson, M., Shinkareva, S., Tubridy, S.^{*}, Millin, R., Grossman, M., **Gureckis, T.M.**, Bhattacharyya, R., & Yacoub, E. (2016) Using precise word timing information improves decoding accuracy in a multiband-accelerated multimodal reading experiment. *Cognitive Neuropsychology*, 33(3), 265-275.
37. Markant, D.B.[×], Ruggeri, A., **Gureckis, T.M.**, & Xu, F. (2016). Enhanced memory as a common mechanism underlying active learning. *Mind, Brain, and Education*, 10(3), 142-152.
36. Juni, M.[×], **Gureckis, T.M.**, & Maloney, L.M. (2016). Information sampling behavior with explicit sampling costs. *Decision*, 3(3), 147-168.
35. Markant, D.B.[×], Settles, B., & **Gureckis, T.M.** (2016). Self-directed learning favors local, rather than global, uncertainty. *Cognitive Science*, 40(1), 100-120.
34. **Gureckis, T.M.**, Martin, J.[×], McDonnell, J.[×], Rich, A.S.[×], Markant, D.B.[×], Coenen, A.[×], Halpern, D.[×], Hamrick, J.B., & Chan, P.^{*} (2016). psiTurk: An open-source framework for conducting reproducible behavioral experiments online. *Behavioral Research Methods*, 48 (3), 829-842. [[Data and Code](#)]
33. Coenen, A.[×], Rehder, B. and **Gureckis, T.M.** (2015). Decisions to intervene on causal systems are adaptively selected. *Cognitive Psychology*, 79, 102-133.

32. Markant, D.B.[×], Dubrow, S.[×], Davachi, L. & **Gureckis, T.M.** (2014). Deconstructing the effect of self-directed learning on episodic memory. *Memory & Cognition*, 42(8), 1211-24. [[Awarded Psychonomic Society's Clifford T. Morgan prize for best paper, 2014](#)]
31. Borkovsky, R.N., Ellickson, P.B., Gordon, B.R., Aguirregabiria, V., Gardete, P., Grieco, P., **Gureckis, T.M.**, Ho, T., Mathevet, L., & Sweeting, A. (2014). Multiplicity of equilibria and information structure in empirical games: Challenges and prospects. *Marketing Letters*. 26(2), 115-125. doi: 10.1007/s11002-014-9308-z
30. Markant, D.B.[×], & **Gureckis, T.M.** (2014). Is it better to select or to receive? Learning via active and passive hypothesis testing. *Journal of Experimental Psychology: General*, 143(1), 94-122. [[Data and Code](#)]
29. Crump, M., McDonnell, J.V.[×], & **Gureckis, T.M.** (2013). Evaluating Amazon's Mechanical Turk as a tool for experimental behavioral research. *PLOSOne*, 8(3): e57410. [[Data and Code](#)]
28. Blanco, N. [⊕], & Gureckis, T.M. (2013). Does category labeling lead to forgetting? *Cognitive Processing*, 14, 73-79.
27. **Gureckis, T.M.** & Markant, D.B.[×] (2012). A cognitive and computational perspective on self-directed learning. *Perspectives in Psychological Science*, 7(5), 464-481.
26. Juni, M.[×], **Gureckis, T.M.**, & Maloney, L.M. (2012). Effective integration of serially presented cues. *Journal of Vision*, 12(8):12, 1-16.
25. **Gureckis, T.M.**, James, T.W., & Nosofsky, R.M. (2011). Reevaluating the evidence for multiple systems in category learning: An fMRI Study. *Journal of Cognitive Neuroscience*, 23(7), 1697-1709.
24. **Gureckis, T.M.**, & Love, B.C. (2010). Direct associations or internal transformations? Exploring the mechanisms underlying sequential learning behavior. *Cognitive Science*, 34, 10-50.
23. Otto, A.R., Markman, A.B., **Gureckis, T.M.**, & Love, B.C. (2010). Regulatory fit and systematic exploration in a dynamic decision-making environment. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 36, 797-804.
22. Otto, A.R., **Gureckis, T.M.**, Markman, A.B., & Love, B.C. (2009). Navigating through abstract decision spaces: Evaluating the role of state generalization in a dynamic decision-making task. *Psychonomic Bulletin & Review*, 16, 957-963.
21. **Gureckis, T.M.**, & Love, B.C. (2009). Short term gains, long term pains: Reinforcement learning in dynamic environments. *Cognition*, 113, 293-313.
20. **Gureckis, T.M.**, & Love, B.C. (2009). Learning in noise: Dynamic decision making in a variable environment. *Journal of Mathematical Psychology*, 53, 180-193.
19. **Gureckis, T.M.**, & Goldstone, R.L. (2009). How you named your child: Individual decision-making and the social construction of value. *Topics in Cognitive Science*, 1, 651-674. [[Data and Code](#)]
18. Goldstone, R.L., & **Gureckis, T.M.** (2009). Collective behavior. *Topics in Cognitive Science*, 1, 412-438.

17. Goldstone, R.L., Roberts, M., & **Gureckis, T.M.** (2008). Emergent processes in group behavior. *Current Directions in Psychological Science*, 17, 10-15.
16. Love, B.C., & **Gureckis, T.M.** (2007). Models in search of the brain. *Cognitive, Affective, and Behavioral Neuroscience*, 7, 90-108. [[Code](#)]
15. **Gureckis, T.M.**, & Goldstone, R.L. (2006). Thinking in groups. *Pragmatics and Cognition*, 14, 293-311. Reprinted as **Gureckis, T.M.** and Goldstone, R.L. (2008) Thinking in groups. In *Cognition distributed: How cognitive technology extends our minds*, Edited by Dror, I.E. and Harnad, S., John Benjamins Publishing Company.
14. **Gureckis, T. M.**, & Love, B. C. (2004). Common mechanisms in infant and adult category learning. *Infancy*, 5, 173-198. [[Code](#)]
13. Love, B. C., Medin, D. L., & **Gureckis, T. M.** (2004). SUSTAIN: A network model of human category learning. *Psychological Review*, 11, 309-332. [[Code](#)]
12. **Gureckis, T. M.**, & Love, B. C. (2003). Human unsupervised and supervised learning as a quantitative distinction. *International Journal of Pattern Recognition and Artificial Intelligence*, 17, 885-901.
11. **Gureckis, T.M.**, & Love, B.C. (2003). Towards a unified account of supervised and unsupervised learning. *Journal of Experimental and Theoretical Artificial Intelligence*, 15, 1-24. [[10.1080/09528130210166097](https://doi.org/10.1080/09528130210166097)]

Peer-reviewed Conference Papers

43. Ludwin-Peery, E.[×], Bramley, N.R.^{*}, Davis, E., and **Gureckis, T.M.** (2019). Limits on the use of simulation in physical reasoning. *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.[oral presentation, acceptance rate 25%]
42. Rothe, A.[×], Lake, B.M., and **Gureckis, T.M.** (2019) Asking goal-oriented questions and learning from answers. *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.[oral presentation, acceptance rate 25%]
41. Zi, W.[×], Bramley, N.^{*}, and **Gureckis, T.M.** (2019). Modeling the dynamics of suspense. *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.[poster presentation acceptance rate 65%]
40. Li, S.^{*}, Sun, Y.^{*}, Liu, S.^{*}, Wang, T.^{*}, **Gureckis, T.M.**, and Bramley, N.R.^{*} (2019) Active physical inference via reinforcement learning. *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.[poster presentation acceptance rate 65%]
39. Nussenbaum, K.[×], Cohen, A.O., Davis, Z.J.[×], Halpern, D.[×], **Gureckis, T.M.**, and Hartley, C.A. (2019). Causal intervention strategies change across development. *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.[[preprint](#)] [poster presentation acceptance rate 65%]
38. Kachergis, G.^{*}, **Gureckis, T.M.**, and Rhodes, M. (2019). Exploring informal science interventions to promote children's understanding of natural categories. *Proceedings of the 41st Annual*

- Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [poster presentation acceptance rate 65%]
37. Grimmick, C.[⊕], **Gureckis, T.M.**, and Kachergis, G.* (2019). Evidence of error-driven cross-situational word learning. *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 25%]
 36. Halpern, D.[×], Tubridy, S.*, Wang, V.[⊕], Gasser, C.[⊕], Osborn-Popp, P.[×], Davachi, L. and **Gureckis, T.M.** (2018). Knowledge tracing using the brain. *Educational Data Mining 2018*. [the two first authors contributed equally] [full paper acceptance rate 16%]
 35. Rich, A.S.[×], Osborn Popp, P.[×], Halpern, D.[×], Rothe, A.[×], and **Gureckis, T.M.** (2018). Modeling Second-Language Learning from a Psychological Perspective. *Proceedings of the NAACL-HLT Workshop on Innovative Use of NLP for Building Educational Applications (BEA)*. New Orleans, LA.
 34. Davis, Z.J.[×], Bramley, N.*, Rehder, B., and **Gureckis, T.M.** (2018). A causal model approach to dynamic control. *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]
 33. Bramley, N.*, Rothe, A.[×], Tenenbaum, J.B., Xu, F., and **Gureckis, T.M.** (2018). Grounding compositional hypothesis generation in specific instances. *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [poster presentation, acceptance rate 70%]
 32. Tubridy, S.*, Halpern, D.[×], Davachi, L. and **Gureckis, T.M.** (2018). A neuro-cognitive model for predicting the fate of individual memories. *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [the two first authors contributed equally] [oral presentation, acceptance rate 30%]
 31. Rothe, A.[×], Lake, B.M. and **Gureckis, T.M.** (2017). Question asking as program generation. In *Advances in Neural Information Processing Systems*. [acceptance rate 20%]
 30. Coenen, A.[×], Bramley, N.*, Ruggeri, A. and **Gureckis, T.M.** (2017). Beliefs about sparsity affect casual experimentation. *Proceedings of the 39th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [poster presentation, acceptance rate 70%]
 29. Halpern, D.[×] and **Gureckis, T.M.** (2017). Categorization, Information Selection and Stimulus Uncertainty. *Proceedings of the 39th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]
 28. Coenen, A.[×] and **Gureckis, T.M.** (2016). The distorting effects of deciding to stop sampling. *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]
 27. Kachergis*, G, Rhodes, M., **Gureckis, T.M.** (2016). Desirable difficulties in the development of active inquiry skills. *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]
 26. Rothe, A.[×], Lake, B.M., **Gureckis, T.M.** (2016). Asking and evaluating natural language questions. *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]

25. Ruggeri, A., Markant, D.B.[×], **Gureckis, T.M.**, Xu, F. (2016). Active control of study leads to improved recognition memory in children. *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]
24. Lake, B.M., Zaremba, W., Fergus, R., **Gureckis, T.M.** (2015). Deep Neural Networks Predict Category Typicality Ratings for Images. *Proceedings of the 37th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [poster presentation, acceptance rate 70%]
23. Coenen, A.[×] & **Gureckis, T.M.** (2015). Are Biases When Making Causal Interventions Related to Biases in Belief Updating? *Proceedings of the 37th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]
22. Rich, A.S.[×] & **Gureckis, T.M.** (2015). The Attentional Learning Trap and How to Avoid it. *Proceedings of the 37th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]
21. Rich, A.S.[×] & **Gureckis, T.M.** (2014). The value of approaching bad things. *Proceedings of the 36th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]
20. Coenen, A.[×], Rehder, B. & **Gureckis, T.M.** (2014). Decisions to intervene on causal systems are adaptively selected. *Proceedings of the 36th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%] [Awarded David Marr prize for best student paper]
19. Markant, D.B.[×], & **Gureckis, T.M.** (2014). A preference for the unpredictable over the informative during self-directed learning. *Proceedings of the 36th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]
18. Markant, D.B.[×], & **Gureckis, T.M.** (2012). Two at a time: Humans prefer information sampling at the margins of a category. *Proceedings of the 34th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]
17. Markant, D.B.[×], & **Gureckis, T.M.** (2012). Does the utility of information influence sampling behavior? *Proceedings of the 34th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%] [Awarded prize for computational modeling of high level cognition]
16. McDonnell, J.V.[×], Jew, C.[⊕], and **Gureckis, T.M.** (2012). Sparse category labels obstruct generalization of category membership. *Proceedings of the 34th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]
15. Juni, J.M.[×], **Gureckis, T.M.**, & Maloney, L.M. (2012). One-shot lotteries in the park. *Proceedings of the 34th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [poster presentation, acceptance rate 70%]

14. Juni, J.M.[×], **Gureckis, T.M.**, & Maloney, L.M. (2011). Don't stop 'till you get enough: Adaptive Information sampling in a visuomotor estimation task. *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [oral presentation, acceptance rate 30%]
13. Blanco, N.[⊕], & **Gureckis, T.M.** (2011). Does category labeling lead to forgetting? In *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [poster presentation, acceptance rate 70%]
12. Markant, D.B.[×], & **Gureckis, T.M.** (2010). Learning categories by active sampling. In *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [talk, acceptance rate 30%]
11. Zaval, L.[⊕], & **Gureckis, T.M.** (2010). The impact of perceptual aliasing on exploration and learning in a dynamic decision making task. *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [poster presentation, acceptance rate 70%]
10. Hendrickson, A.D.[⊕], Kachergis, G.[⊕], **Gureckis, T.M.**, & Goldstone, R.L. (2010). Is categorical perception really verbally-mediated perception? In *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [talk, acceptance rate 30%]
9. **Gureckis, T.M.**, & Markant, D.B.[×] (2009). Modeling information search in a spatial concept learning game. In Taatgen, N. and van Rijn, H. (Eds), *Proceedings of the 31st Annual Conference of the Cognitive Science Society* (pp. 3145-3150). Austin, TX: Cognitive Science Society. [poster presentation, acceptance rate 70%]
8. Otto, A.R., Markman, A.B., **Gureckis, T.M.**, & Love, B.C. (2009). When things get worse before they get better: Regulatory fit and average-reward learning in a dynamic decision-making environment. In Taatgen, N. and van Rijn, H. (Eds), *Proceedings of the 31st Annual Conference of the Cognitive Science Society* (pp. 1252-1257). Austin, TX: Cognitive Science Society. [poster presentation, acceptance rate 70%]
7. **Gureckis, T.M.**, & Goldstone, R.L (2008). The effect of the internal structure of categories on perception. in B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science Society* (pp. 843). Austin, TX: Cognitive Science Society. [poster presentation, acceptance rate 70%]
6. Pothos, E.M., Perlman, A., Edwards, D.J, **Gureckis, T.M.**, Hines, P.M., & Chater, N. (2008). Modeling category intuitiveness. in B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. [talk, acceptance rate 30%]
5. **Gureckis, T.M.**, & Love, B.C. (2007). Behaviorism reborn? Statistical learning as simple conditioning. in *Proceedings of the 29th Annual Conference of the Cognitive Science Society*. Cognitive Science Society. [oral presentation, acceptance rate 30%]
4. **Gureckis, T.M.**, & Love, B.C. (2006). Bridging levels: Using a cognitive model to connect brain and behavior in category learning. in *Proceedings of the 28th Annual Conference of the Cognitive Science Society*. Cognitive Science Society. [oral presentation, acceptance rate 30%]

3. **Gureckis, T.M.**, & Love, B.C. (2005). A critical look at the mechanisms underlying implicit sequence learning. in the *Proceedings of the 27th Annual Conference of the Cognitive Science Society*. Cognitive Science Society. [poster presentation, acceptance rate 70%]
2. **Gureckis, T.M.**, & Love, B.C. (2002). Modeling unsupervised learning with SUSTAIN. In the *Proceedings of the 15th Annual FLAIRS Conference*, 163-167.
1. **Gureckis, T.M.**, & Love, B.C. (2002). Who says models can only do what you tell them? Unsupervised category learning data, fits, and predictions. In the *Proceedings of the 24th Annual Conference of the Cognitive Science Society*, 399-404. [poster presentation, acceptance rate 70%]

Book Chapters, Theses, and Other Works

9. **Gureckis, T.M.** & Rich, A.S.[×](2016) Computational reproducible experiments. *IEEE CIS*.
8. **Gureckis, T.M.** and Love, B.C. (2015) Reinforcement learning: A computational perspective. *Oxford Handbook of Computational and Mathematical Psychology*, Edited by Busemeyer, J.R., Townsend, J., Zheng, W., and Eidels, A., Oxford University Press, New York, NY.
7. McDonnell, J.[×], & **Gureckis, T.M.** (2011). Adaptive clustering models of categorization. *Computational Models of Categorization*, Edited by Pothos and Willis, Cambridge University Press, Oxford, UK.
6. **Gureckis, T.M.**, & Goldstone, R.L. (2010). Schema. *The Cambridge Encyclopedia of Language Sciences*. Edited by Hogan, P.C. Cambridge, UK, Cambridge University Press.
5. Love, B.C., Tomlinson, M., & **Gureckis, T.M.** (2008). The concrete substrates of abstract rule use. *Psychology of Learning and Motivation*, 49, 167-206.
4. Goldstone, R.L., Roberts, M., Mason, W., & **Gureckis, T.M.** (2008). Collective search in concrete and abstract spaces. *Decision modeling and behavior in uncertain and complex environments*. Kugler, T., Smith, C., and Connelly, T. (Eds.). Springer Press.
3. **Gureckis, T.M.** (2005). Mechanisms and constraints in sequential learning. Ph.D. Thesis, University of Texas at Austin
2. Love, B.C., & **Gureckis, T.M.** (2005). Modeling learning under the influence of culture. In *Categorization Inside and Outside the Lab: Festschrift in honor of Douglas L. Medin*. Edited by Ahn, W., Goldstone, R., Markman, A., Wolff, P. and Love, B. Washington D.C., APA Publisher.
1. **Gureckis, T.M.** (2004). Mechanisms and constraints in sequential learning. M.A. Thesis, University of Texas at Austin.

Conference Abstracts and Presentations

** I no longer track short conference abstracts and presentations, but my lab and collaborators range between 5 and 15 annually.*

Open-source Software

I am strongly committed to sharing software developed in our research with others.

- psiTurk** originally co-authored with John McDonnell[×], Doug Markant[×], Alex Rich[×], and Anna Coenen[×], and many others (2013-present) (<https://github.com/NYUCCL/psiTurk>, <https://psiturk.org>) provides a framework for running web-based psychology experiments online using Amazon's Mechanical Turk. Used in a number of labs within NYU and internationally.
- PyPsyExp** co-authored with John McDonnell[×] and Yasuaki Sakamoto (2008) (<http://pypsyexp.org/>, <https://github.com/NYUCCL/PyPsyExp>) A lightweight library for developing cognitive experiments in Python. Used in a number of labs at NYU and at other universities.

Invited Presentations & Colloquia

- 2019
- *Invited workshop speaker* (planned), Workshop on integrating neural and behavioral measures of cognition, Midwest Cognitive Science Conference, Ohio State University, Columbus, OH, May.
 - *Invited Panelist*, 11th Invitational Choice Symposium, Cambridge, MD
 - *Invited talk*, Department of Psychological and Brain Sciences, Indiana University, Bloomington, IN, Feb.
 - *Invited talk*, Department of Psychology, University of Pennsylvania, Philadelphia, PA, Jan.
- 2017
- *Invited talk*, Department of Psychology, Stony Brook University, Stony Brook, NY, Nov.
 - *Invited talk*, Department of Psychology, Cognitive Lunch, Yale University, New Haven, CT, Nov.
 - ★ *Invited "Emerging Scholars Talk,"* 20th Annual symposium for Board on Behavioral, Cognitive, and Sensory Science, National Academies of Sciences, Engineering, and Medicine, Washington DC, October.
 - *Invited talk*, School of Psychology, University of New South Wales, Sydney, Australia, Mar.
 - ★ *Invited talk*, Distinguished Lecturer in the National Science Foundation Social, Behavioral, and Economic Sciences (SBE) Directorate, Washington DC, Mar.
 - *Invited talk*, "The science of how we learn: Engaging memory, motivation, mindsets, making and mastery." Learning and the Brain Conference, San Francisco, CA, Feb.
- 2016
- *Invited talk/panelist*, Future of Interactive Learning by Machines, Neural Information Processing Systems (NIPS 16), Barcelona, Spain, Dec.
 - *Invited talk*, NYU College of Arts and Sciences Scholars Lecture Series, Dec.
 - *Invited talk*, Department of Psychology, University of Connecticut, Nov.
 - *Invited Workshop*, 28th APS Annual Convention - Chicago, IL, May (w/ Matthew Crump)
 - *Invited Panelist*, 10th Invitational Choice Symposium, Lake Louise, Canada
 - *Invited talk*, Department of Psychology, Rutgers University - New Brunswick, Feb.

- 2015 ★ *Plenary Speaker*, "Computational Approaches to Cognition Symposium" Mathematical Psychology Society pre-conference, Oct.
- *Invited talk*, Department of Cognitive Science, Rensselaer Polytechnic Institute, Oct
 - *Invited talk*, Psychology Department Colloquia, Rutgers University Newark, May
 - *Invited Workshop*, 27th APS Annual Convention - New York, NY, May (w/ Matthew Crump)
 - *Symposium speaker*, "Sequence effects in learning: How knowledge acquisition happens over time" 27th APS Annual Convention - New York, NY, May
 - *Invited talk*, Salesforce.com, San Francisco, CA, March
 - *Invited talk*, Stanford University, Stanford CA, March
 - *Invited talk*, Workshop on Active Learning, University of California - Berkeley, Berkeley, CA, February
 - *Invited talk*, School of Information, University of California - Berkeley, Berkeley, CA, February
 - *Invited talk*, Department of Psychology, University of California - Berkeley, Berkeley, CA, February
 - *Invited talk*, Institute for Cognitive Science, University of Colorado - Boulder, Boulder, CO, January
- 2014 ○ *Invited talk*, Marketing Department, Booth School of Business, University of Chicago, Chicago, IL, November
- *Invited talk*, Workshop on "Big data approaches in Psychology" for new NSF funded research center, University of California - Berkeley, Berkeley, CA, October
 - *Invited talk*, Applied Cognitive and Brain Sciences, Department of Psychology, Drexel University, Philadelphia, PA, September
 - *Invited talk*, Institute for Cognitive Science, University of Colorado - Boulder, Boulder, CO, September
 - *Invited talk*, Department of Human Development, Teachers College Columbia, New York, NY, April
- 2013 ○ *Invited talk*, Department of Psychology, Cognitive Lunch, Princeton University, Princeton, NJ, November
- *Invited Conference Speaker*, Learning & the Brain Conference, Boston, MA, November
 - *Invited Panelist*, 9th Invitational Choice Symposium, Huis ter Duin, Noordwijk, The Netherlands, June
 - *Invited talk*, Department of Psychology, Brooklyn College, NY, May
 - *Invited discussant*, "Brainwave: A discussion with world memory champion Nelson Dellis" Rubin Museum of Art, New York, NY, March

- 2012
- *Invited talk*, Marketing Division, Columbia Business School, New York, NY, November
 - *Invited talk*, Department of Psychology, Cognitive Lunch, Yale University, New Haven, CT, November
 - *Invited talk*, Society of Quantitative Analysts, New York, NY, May
 - *Invited talk*, Howe School of Technology Management, Stevens Institute of Technology, Hoboken, NJ, February
- 2011
- *Invited talk*, Marketing Department, Booth School of Business, University of Chicago, Chicago, IL, November
 - *Invited talk*, Department of Psychology, Cognitive Lunch, Princeton University, Princeton, NJ, November
 - *Invited talk*, Department of Cognitive, Linguistic & Psychological Sciences Colloquium, Brown University, Providence, RI, November
 - *Invited Symposium Speaker*, Animal Behavior Meeting 2011, Bloomington, IN, July
 - *Invited Symposium Speaker*, 33rd Annual Meeting of the Cognitive Science Society Grow your own representations: Computational constructivism talk titled Boston, MA, July
 - *Invited talk*, University of Texas Cognitive Brown Bag, Austin, TX, February
 - *Invited talk*, NYU Social Program Brown Bag, New York, NY, January
- 2010
- *Invited talk*, Cognitive Lunch, Columbia University, New York, NY, November
 - *Invited talk*, Cognitive and Brain Science Seminar, University of California - Berkeley, Berkeley, CA, September
 - *Symposium Organizer/Speaker*, 32nd Annual Meeting of the Cognitive Science Society Dynamic Decision Making Symposium talk, Portland, OR, August
 - *Invited talk*, Fifth Annual Barbados Workshop on Reinforcement Learning (organized by Richard Sutton, Elliot Ludvig, and Doina Precup), McGill Bellairs Institute, Barbados, April
 - *Invited Symposium Organizer/Speaker*, 2010 Eastern Psychological Association Annual Meeting, Brooklyn, NY, March
 - *Invited Symposium Talk*, 11th Annual Meeting of the Society for Personality and Social Psychology, Las Vegas, Nevada, January
- 2009
- *Invited Symposium Talk*, 31st Annual Meeting of the Cognitive Science Society "The emergence of collective structure through individual interactions" Amsterdam, Netherlands, August
 - *Invited talk*, Intelligence Research Projects Agency (IARPA) ICARUS workshop, Arlington, V.A., July

- 2008
 - *Invited talk*, Neural Information Processing Systems (NIPS '08) Workshop "Machine Learning Meets Human Learning" Vancouver, B.C., Canada, December
 - *Invited talk*, Psychology Department Colloquium, SUNY Binghamton, Binghamton, NY, November
 - *Invited talk*, Yahoo! Research, New York, NY, May
- 2007
 - *Invited talk*, C&P Colloquium, New York University, New York, NY, February
 - *Invited talk*, Psychology Department Seminar, University of Illinois Urbana-Champaign Urbana, IL, February
- 2006
 - *Invited talk*, Cognitive Brown Bag, Northwestern University, Evanston, IL, November
 - *Invited talk*, Perception-Action Brown Bag, University of Cincinnati, Cincinnati, OH, April
- 2005
 - *Invited talk*, Indiana University, Bloomington, IN, June

Teaching

★ = "service" course

- Spring 2019 ★ Computational Cognitive Science (grad, co-taught with Brenden Lake)
- Spring 2018
 - ★ Learning and memory (grad)
 - ★ Computational Cognitive Science (grad, co-taught with Brenden Lake)
- Fall 2016
 - Robots, brains, and minds (undergrad)
 - ★ Lab in Human Cognition (undergrad)
- Spring 2016 ★ Learning and memory (grad, co-taught with Lila Davachi)
- Fall 2015 ★ Lab in Human Cognition (undergrad)
- Spring 2014 ○ Collecting behavioral data online (grad)
- Fall 2013 ★ Learning and memory (grad, co-taught with Lila Davachi)
- Spring 2013
 - The science of learning and memory (undergrad)
 - Robots, brains, and minds (undergrad)
- Fall 2012 ★ Lab in Human Cognition (undergrad)
- Spring 2012
 - ★ Lab in Human Cognition (undergrad)
 - Introduction to Cognitive Modeling (grad)

- Spring 2011 ★ Lab in Human Cognition (undergrad)
- Fall 2010 ★ Lab in Human Cognition (undergrad)
 - ★ Learning and memory
- Spring 2010 ★ Lab in Human Cognition (undergrad)
 - Computation and the Mind (undergrad)
- Fall 2009 ★ Lab in Human Cognition (undergrad)
- Spring 2009 ★ Lab in Human Cognition (undergrad)
 - Introduction to Cognitive Modeling (grad)
- Fall 2008 ★ Lab in Human Cognition (undergrad)
- Spring 2008 ○ Experiments and Models in Cognitive Science (undergrad)
- Pre- 2008 ○ Guest Lecturer, Intro to Cognitive Psychology (Indiana University, Fall 2007)
 - Guest Lecturer, Cognitive Science Senior Year (Indiana University, Spring 2007)
 - Teaching Assistant, DIY Statistics (Univ. of Texas, Fall 2004)
 - Teaching Assistant, Undergraduate Research Methods (Univ. of Texas, Spring 2004)
 - Teaching Assistant, Introductory Psychology (Univ. of Texas, Fall 2003)

Trainees

- Post-doctoral ○ **Ili Ma** (8/2018 - present), sponsor of Netherlands Organization for Scientific Research Rubicon grant
- **Shannon Tubridy** (6/2014-present)
- **Neil Bramley** (2/2017-1/2019), now Lecturer in Cognitive Psychology at University of Edinburgh
- **George Kachergis** (1/2015-8/2016), now research scientist at Stanford University
- **Brenden Lake** (6/2014-6/2017), co-sponsor of Moore-Sloan Data Science Fellowship, now. Asst. Professor of Psychology and Data Science at New York University

- Doctoral
- **Zhiwei Li** (NYU CNS, 2017-present)
 - **Pamela Osborn Popp** (NYU CNS, 2017-present)
 - **David Halpern** (NYU C&P 9/2014-present)
 - **Anselm Rothe** (NYU C&P 9/2014-present)
 - **Alex Rich** (NYU C&P 9/2013-5/2018), now data scientist at Flatiron Health
 - **Anna Coenen** (NYU C&P 9/2012-2017) now data scientist at the New York Times
 - **Jerad Fields** (NYU C&P, 9/2009-12/2010), now working in industry
 - **Mordechai Juni** (NYU C&P, 9/2008-2012, w/ Larry Maloney) now a post-doc at UC Santa Barbara
 - **Douglas Markant** (NYU C&P, 9/2008-12/2013) now Assistant Professor at University of North Carolina, Charlotte
 - **John McDonnell** (NYU C&P, 9/2008-8/2013) now data scientist at Stitchfix
- M.A.
- **Caleb Lewis**, Center for Data Science (Summer 2019)
 - **Samantha Bordoff** (Oct 2012-Dec 2013)
 - **Patricia Chan** (Jan 2011-2014)
 - **Denise Bercovitch** (Sept. 2011-May 2014), Thesis title: "A Complex Description-Based Lottery Decision: High Stakes Increase Risk Aversion"
- Undergraduate
- **Camille Gasser** (NYU Psychology Honors student, 2016-2017, now lab manager at Columbia University)
 - **Steven Mical** (NYU Undergrad, psychology, Spring 2016-present)
 - **Victor Wang** (NYU Undergrad, psychology, Spring 2016-present)
 - **David Halpern** (Columbia psychology student, Fall 2012-Summer 2014, now grad student at New York University)
 - **Sabina Tomkins** (NYU Computer Science/Math student, Fall 2012-Summer 2013, now grad student in Engineering at UC Santa Cruz)
 - **Sachith Cheruvatur** (NYU Abu Dhabi Philosophy student, Summer 2012, now philosophy grad student at Ludwig-Maximilians-Universität München)
 - **Devin Domingo** (NYU Psychology Honors student, 2011-2012, now a grad student at Columbia University)
 - **Carol Jew** (NYU Undergrad, 2011-, now grad student at University of Rochester)
 - **Nathaniel Blanco** (NYU Psychology, 9/2009-, now a post-doc at Ohio State University)
 - **Rebecca Bainbridge** (NYU Psychology Honors student, 2008-2010)
 - **Andrew Cohen** (NYU Undergrad, 2009)
 - **Ben Goldberg** (NYU Psychology, 9/2010-12/2010)
 - **Louis Tur** (Lab Programmer, NYU Psychology, 9/2008-5/2009, now at Apple, Inc.)
 - **Lisa Zaval** (Lab Manager/Trainee, 1/2008-5/2009, Phd, Columbia University, Psychology, now research fellow at Univ. of Massachusetts Climate Science Center)
- High School
- Abigail Lee (Spence School, 2011-2012, with Doug Markant)

Doctoral Thesis Committees

At NYU

- Supervised Dissertations
- **Anselm Rothe** - "Asking questions: A computational perspective", (primary advisor, co-advised with B. Lake, 2019)
 - **Alex Rich** - "Causes and consequences of exploratory choice", (primary advisor, 2018)
 - **Anna Coenen** - "Cognitive determinants of strategy selection during active inquiry", (primary advisor, 2017)
 - **Doug Markant** - "Adaptive sampling: Interactions between self-directed decision making and learning" (primary advisor, 2013)
 - **John McDonnell** - "Computational level accounts of belief formation and revision in humans" (primary advisor, 2013)
 - **Mordechai Juni** - "Human integration of unreliable visual information", (co-advised with L. Maloney, 2012)

Committee Member John Ackermann (reader, advisor: M. Landy, 2012), Robert Colner (advisor: B. Rehder, 2010), Youssef Ezzyat (advisor: L. Davachi, 2014), Joseph Fruchter (reader, advisor: Alec Marantz, 2014), Jacqueline M. Fulvio (reader, advisor: L. Maloney, 2009), Holly E. Gerhard (advisor: L. Maloney, 2010), Nick Gustafson (reader, advisor: N. Daw, 2013), Shaziela Ishak (reader, advisor: K. Adolph, 2008), ShinWoo Kim (reader, advisor: G.L. Murphy/B. Rehder, 2010), Madelaine Krehm (reader, advisor: A. Vouloumanos, 2013), Kari Kretch (advisor: K. Adolph, 2015), Dylan Simon (advisor: N. Daw, 2012), Kasey Soska (reader, advisor: K. Adolph, 2010), Sarit Szpiro (advisor: M. Carrasco, 2015), Evan Russek (advisor: N. Daw, 2018), Jennifer Lenow (advisor: L. Phelps, 2018), Ian Donovan (advisor: M. Carrasco, 2018), Kat Adams (advisor: C. Raver), Avi Chanales (advisor: B. Kuhl, 2019)

Outside NYU

Committee Member A. Ross Otto (University of Texas at Austin, advisors: B.C. Love & A.B. Markman, 2011), Judy Xu (Columbia University, advisor: Janet Metcalfe, 2018)

University Service

- Chair, NYU Abu Dhabi Psychology Search Committee (2018)
- Chair, Joint Psychology-Center Data Science Search Committee, 2016-2017 (hired Brenden Lake)
- Member, Psychology Department Developmental Search Committee, 2016-2017 (hired Molly Dillon)
- Chair, Psychology Department Decision-making Search, 2015 (hired Catherine Hartley)
- Advisory committee, Psychology department, 2015-2019
- Personnel committee, Psychology department, 2018-2020
- NYU Undergraduate Research Science Fair (poster or panel judge, 2009-2013)
- Cognition and Perception Area Seminar Co-organizer (2009-2010, 2018-2019)
- C&P Admissions committee (2009-2010) - continue to provide technical help coordinating admissions each year for the department as a whole
- Education Policy Committee (2010-2012)
- NYU Abu Dhabi Psychology Search Committee, 2010, (hired Diogo Almeida)

- NYU Science and Research Faculty Advisory Group (Fall 2011)
- NYU Psychology Statistics Instructor Search Committee, 2013, (hired Pascall Wallisch)