
Todd M. Gureckis

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EDUCATION

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| 2005 | Ph.D., Cognition and Perception
University of Texas, Austin, TX |
| 2001 | B.S., Electrical/Computer Engineering
University of Texas, Austin, TX |
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PROFESSIONAL EXPERIENCE

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| 2014-present | Associate Professor
Department of Psychology, New York University
Affiliate, Center for Data Science |
| 2008-2013 | Assistant Professor
Department of Psychology, New York University |
| 2005-2007 | Post-doc, Dept. of Psychological and Brain Sciences
Indiana University, Bloomington, IN |
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HONORS AND AWARDS

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| 2014 | Clifford T. Morgan Best Article Award, Memory & Cognition, 2014 - 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, 2012b) |
| 1997 | University of Texas National Merit Scholarship - Scholarship award for National Merit Finalists |
| 1997 | Friends of Alex Engineering Scholarship - Competitively awarded scholarship for engineering study |

EXTERNAL FUNDING

Currently funded:

2015-2020 James S. McDonnell Foundation Scholar Award in Understanding Human Cognition - "A sensemaking model of informal science education" (Role: PI, \$600K total)

2013-2018 National Science Foundation CAREER "The role of self-directed learning in facilitating concept acquisition" (Role: PI, \$722K total)

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)

2013-2016 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 - (Role: PI, \$342K)

Completed:

2005-2007 NIH 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 - Competitively awarded for 1 year of graduate study

PROFESSIONAL SERVICE

Editorial Positions

Cognitive Science (**Associate Editor, 2013-**, Editorial Board, 2009-present)

TopiCS in Cognitive Science (**Associate Editor, 2008-2012**)

Memory & Cognition (Editorial Board, 2009-)

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)

Cognitive Science Society Awards Committee (2008, 2011)

Grant Reviewing

National Science Foundation (as an ad-hoc reviewer and as a panel member)

Computational Cognition

Perception, Action, & Cognition

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)

Ad-hoc journal reviewing

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

JOURNAL PUBLICATIONS

1041 citations, h-index: 16 according to Google Scholar

Co-author status: ★ = post-doc, † = graduate, * = masters, ⊕ = undergrad, ⊗ = high school

28. † **Gureckis, T.M.**, Markant, D.B., & Coenen, A. (invited). Active hypothesis testing. *Current Directions in Psychological Science*.
27. † Markant, D.B., Rich, A.S., Martin, J.B., McDonnell, J.V., Coenen, A., Chan, P., Hamrick, J. and **Gureckis, T.M.**, et al. (invited). psiTurk: An open-source framework for running replicable behavioral experiments online. *Behavioral Research Methods*.
26. † Coenen, A., Rehder, B. and **Gureckis, T.M.** (in review). Decisions to intervene on causal systems are adaptively selected. *Cognitive Psychology*.
25. † McDonnell, J.V. and **Gureckis, T.M.** (in revision). From a few to the many: Generalizing category labels via semi-supervised learning. *Psychonomic Bulletin & Review*
24. † Juni, M., **Gureckis, T.M.**, & Maloney, L.M. (in review). Information sampling behavior with explicit sampling costs. *Cognition*.
23. † Markant, D.B., Settles, B., & **Gureckis, T.M.** (accepted pending minor revisions, 2014). Self-directed learning favors local, rather than global, uncertainty. *Cognitive Science*.
22. † Markant, D.B., † Dubrow, S., Davachi, L. & **Gureckis, T.M.** (2014). Deconstructing the effect of self-directed learning on episodic memory. *Memory & Cognition*.
[**Awarded Psychonomic Society's Clifford T. Morgan prize for best paper, 2014**]
21. 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, in press). Multiplicity of equilibria and information structure in empirical games: Challenges and prospects. *Marketing Letters*.
20. † 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.
19. Crump, M., † McDonnell, J.V., and **Gureckis, T.M.** (2013). Evaluating Amazon's Mechanical Turk as a tool for experimental behavioral research. *PLOSOne*, 8(3): e57410.
18. ⊕ Blanco, N., & **Gureckis, T.M.** (2013). Does category labeling lead to forgetting? *Cognitive Processing*, 14, 73-79.
17. **Gureckis, T.M.** & † Markant, D.B. (2012). A cognitive and computational perspective on self-directed learning. *Perspectives in Psychological Science*, 7(5), 464-481.
16. † Juni, M., **Gureckis, T.M.**, & Maloney, L.M. (2012). Effective integration of serially presented cues.

15. **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.*
14. **Gureckis, T.M.**, & Love, B.C. (2010). Direct associations or internal transformations? Exploring the mechanisms underlying sequential learning behavior. *Cognitive Science, 34, 10-50.*
13. † 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.*
12. † 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 and Review, 16, 957-963.*
11. **Gureckis, T.M.**, & Love, B.C. (2009b). Short term gains, long term pains: Reinforcement learning in dynamic environments. *Cognition, 113, 293-313.*
10. **Gureckis, T.M.**, & Love, B.C. (2009a). Learning in noise: Dynamic decision making in a variable environment. *Journal of Mathematical Psychology, 53, 180-193.*
9. **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.*
8. Goldstone, R.L., & **Gureckis, T.M.** (2009). Collective behavior. *Topics in Cognitive Science, 1, 412-438.*
7. Goldstone, R.L., Roberts, M., & **Gureckis, T.M.** (2008). Emergent processes in group behavior. *Current Directions in Psychological Science, 17, 10-15.*
6. Love, B.C., & **Gureckis, T.M.** (2007). Models in search of the brain. *Cognitive, Affective, and Behavioral Neuroscience, 7, 90-108.*
5. **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.
4. **Gureckis, T. M.**, & Love, B. C. (2004). Common mechanisms in infant and adult category learning. *Infancy, 5, 173-198.*
3. Love, B. C., Medin, D. L., & **Gureckis, T. M.** (2004). SUSTAIN: A network model of human category learning. *Psychological Review, 11, 309-332.*
2. **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.*
1. **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.*

CONFERENCE PAPERS

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.S., 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.** (2012a). 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.** (2012b). 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 top 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? *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. *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? *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* (pp. X). 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* (pp. X). 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 UNPUBLISHED WORK

My lab collectively edits and publishes a blog devoted to cognitive science at <http://gureckislab.org/blog> with accessible summaries of our work, technical articles, reviews of recent research findings, and ongoing research/"file drawer" experiment reports.

Gureckis, T.M. and Love, B.C. (in press, 2014) 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.

† Fields, J. and Gureckis, T.M. (unpublished) A rational framework for grammatical category induction in sequences.

† 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.

Gureckis, T.M., & Goldstone, R.L. (2010). Schema. *The Cambridge Encyclopedia of Language Sciences*. Edited by Hogan, P.C. Cambridge, UK, Cambridge University Press.

Love, B.C., Tomlinson, M., & **Gureckis, T.M.** (2008). The concrete substrates of abstract rule use. *Psychology of Learning and Motivation*, 49, 167-206.

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.

Gureckis, T.M. (2005). Mechanisms and constraints in sequential learning. Ph.D. Thesis, University of Texas at Austin

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.

Gureckis, T.M. (2004). Mechanisms and constraints in sequential learning. M.A. Thesis, University of Texas at Austin.

PUBLISHED ABSTRACTS

* Chan, P., † Markant, D.B., Lake, B., and **Gureckis, T.M.** (in review). Adaptive teaching: Improving the efficiency of learning through hypothesis-dependent selection of training data. in *Proceedings of the 36th Annual Conference of the Cognitive Science Society*. Cognitive Science Society.

† Coenen, A., Rehder, B. and **Gureckis, T.M.** (2013). Modeling active learning decisions during causal learning. in *Proceedings of the 1st Multidisciplinary Conference on Reinforcement Learning and Decision Making*. Princeton, New Jersey.

† Coenen, A., Rehder, B. and **Gureckis, T.M.** (2013). How does this thing work? Evaluating computational models of intervention-based causal learning. *Proceedings of the 35th Annual Conference of the Cognitive Science Society*. Berlin, Germany. Cognitive Science Society.

† Markant, D.B., **Gureckis, T.M.**, Meder, B., Nelson, J.D., Pirolli, P. and Yu, C. (2013). Symposium: Informavores: Active information foraging and the human mind. *Proceedings of the 35th Annual Conference of the Cognitive Science Society*. Berlin, Germany: Cognitive Science Society.

† Markant, D.B., † Dubrow, S., Davachi, L. & **Gureckis, T.M.** (2012). Volitional control and the acquisition of spatial memories. *Proceedings of the 34th Annual Conference of the Cognitive Science Society*. Saporro, Japan. Cognitive Science Society.

† McDonnell, J.V., ⊕ Domingo, D., and **Gureckis, T.M.** (2012). Self-directed information selection and the learning of logical rules. *Proceedings of the 34th Annual Conference of the Cognitive Science Society*. Saporro, Japan. Cognitive Science Society.

† Markant, D.B. & **Gureckis, T.M.** (2011). Understanding how people gather information when learning. *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

† McDonnell, J.V. and **Gureckis, T.M.** (2011) Learning from an intermittent teacher. *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Austerweil, J.L., Griffiths, T.L., Canini, K., Goldstone, R.L., **Gureckis, T.M.**, Jones, M. (2011) Symposium: Grow your own representations: Computational constructivism. *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

† Juni, M.Z., **Gureckis, T.M.**, & Maloney, L.T. (2011). Adaptive cue combination in a visual estimation task, presented at the *Vision Sciences Society (VSS) Meeting*

Gureckis, T.M., Hotaling, J., Lee, M.D., Love, B.C., & Simon, D. (2010) Symposium: Dynamic decision making. *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Juni, M.Z., **Gureckis, T.M.**, & Maloney, L.T. (2010). Integration of visual information across time, presented at the *Vision Sciences Society (VSS) Meeting*

† McDonnell, J., & **Gureckis, T.M.** (2009). How perceptual categories influence trial and error learning in humans, presented at the *Multidisciplinary Symposium on Reinforcement Learning*, Montreal, Quebec

⊕ Zaval, L., ⊕ Tur, L., & **Gureckis, T.M.** (2009). The impact of perceptual aliasing on human learning in a dynamic decision making task, presented at the *Multidisciplinary Symposium on Reinforcement Learning*.

† Markant, D.B., & **Gureckis, T.M.** (2009). Modes of information search in active learning, abstract presented at the *Annual Meeting of the Society for Mathematical Psychology*.

Goldstone, R.L., Griffiths, T.L., **Gureckis, T.M.**, Helbing, D., & Steels, L., (2009) The emergence of collective structure through individual interactions symposium In Taatgen, N. abd van Rijn, H.(Eds), *Proceedings of the*

31st Annual Conference of the Cognitive Science Society (pp. 1004-1005). Austin, TX: Cognitive Science Society

Gureckis, T.M., & Love, B.C. (2008). Reinforcement learning in dynamic environments. Abstract published in the *Proceedings of the 30th Annual Conference of the Cognitive Science Society*. Washington, D.C.

Otto, A.R., Markman, A.B., Love, B.C., & **Gureckis, T.M.** (2008) Regulatory fit effects in a dynamic decision-making task. Abstract In the *Proceeding of the 29th Annual Meeting of the Cognitive Science Society*. Washington, D.C.

Love, B.C., & **Gureckis, T.M.** (2004). The hippocampus: Where a cognitive model meets cognitive neuroscience. In the *Proceedings of the 26th Annual Conference of the Cognitive Science Society*.

OPEN - SOURCE SOFTWARE

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

PyPsyExp (2008) - co-authored with † John McDonnell and Yasuaki Sakamoto
(<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.

psiTurk (2013) - co-authored with † John McDonnell, † Doug Markant, and † Anna Coenen
(<https://github.com/NYUCCL/psiTurk>)

Provides a framework for running web-based psychology experiments online using Amazon's Mechanical Turk. Used in a number of labs within NYU and outside.

iConsent (2013) -

(<https://github.com/gureckis/iConsent>)

A iPad app which collects and manages informed consent forms and signatures. Developed in collaboration with Marjorie Rhodes for testing participants at remote locations

INVITED PRESENTATIONS & COLLOQUIA

2014 **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, "Engaged Minds and Student Centered Learning," *Learning & the Brain Conference*, Boston, MA, November

Invited Panelist, "Firms, Learning, and (non-Nash) Equilibrium Behavior: Alternative Models of Strategic Interaction," 9th Invitational Choice Symposium, Huis ter Duin, Noordwijk, The Netherlands, June

- Invited Talk**, “Follow your own path: Exploring the impact of self-directed information sampling on learning” 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**, “Learning and Deciding in Dynamic Environments” Marketing Division, Columbia Business School, New York, NY, November
- Invited Talk**, “The cognitive consequences of self-directed learning” Department of Psychology, Cognitive Lunch, Yale University, New Haven, CT, November
- Invited Talk**, “Learning and deciding in dynamic environments” - Conference on “Learning and adaptation in financial markets”, Society of Quantitative Analysts, New York, NY, May
- Invited Talk**, “Follow your own path: Exploring the impact of self-directed information sampling on learning” Howe School of Technology Management, Stevens Institute of Technology, Hoboken, NJ, February
- 2011** **Invited Talk**, “Learning and deciding in dynamic environments” Marketing Department, Booth School of Business, University of Chicago, Chicago, IL, November
- Invited Talk**, “Follow your own path: Exploring the impact of self-directed information sampling on learning” Department of Psychology, Cognitive Lunch, Princeton University, Princeton, NJ, November
- Invited Talk**, “Follow your own path: Exploring the impact of self-directed information sampling on learning” Department of Cognitive, Linguistic & Psychological Sciences Colloquium, Brown University, Providence, RI, November
- 2011** **Invited Symposium Speaker**, Animal Behavior Meeting 2011 “Cognition as foraging: search in internal and external environments” Bloomington, IN, July
- Invited Symposium Speaker**, 33rd Annual Meeting of the Cognitive Science Society *Grow your own representations: Computational constructivism* talk titled “Breaking Sticks or Building Clusters? Representation Building, Learning, and the Brain” Boston, MA, July
- Invited Talk**, University of Texas Cognitive Brown Bag “Follow your own path: Exploring the impact of self-directed information sampling on learning” Austin, TX, February
- Invited Talk**, NYU Social Program Brown Bag “Follow your own path: Exploring the impact of self-directed information sampling on learning” New York, NY, January
- 2010** **Invited Talk**, Cognitive Lunch, Columbia University, “What would you like to learn about? Exploring the impact of active information sampling on learning” New York, NY, November
- Invited Talk**, “What would you like to learn about? Exploring the impact of active information sampling on learning” 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 titled “Exploring to exploit: Modeling the process of information search” Portland, OR, August
- Invited Talk**, “Four simple principles concerning human learning relevant to RL researchers” 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, Symposium title: “Agentic learning: Integrating development, educational, and computational perspectives”, talk “Learning categories by asking questions” Brooklyn, NY, March

- Invited Symposium Talk**, 11th Annual Meeting of the Society for Personality and Social Psychology “How psychological processes shape culture” (work with Rob Goldstone), Las Vegas, Nevada, January
- 2009** **Invited Symposium Talk**, “What's in a Name? Individual Decision-making and the Social Construction of Value” 31st Annual Meeting of the Cognitive Science Society “The emergence of collective structure through individual interactions” Amsterdam, Netherlands, August
- Invited Talk**, “Sensemaking in ambiguous or uncertain cognitive decision tasks” Intelligence Research Projects Agency (IARPA) ICARUS workshop, Arlington, V.A., July
- 2008** **Invited Talk**, “Where am I and what should I do next? Overcoming perceptual aliasing in sequential tasks” Neural Information Processing Systems (NIPS '08) Workshop “Machine Learning Meets Human Learning” Vancouver, B.C., Canada, December
- Invited Talk**, “Structure and flexibility in human category learning” Psychology Department Colloquium, SUNY Binghamton, Binghamton, NY, November
- Invited Talk**, “What's in a Name? Individual Decision-making and the Social Construction of Value” Yahoo! Research, New York, NY, May
- 2007** **Invited Talk**, “Uncovering the internal structure of categories through surprise-driven encoding” C&P Colloquium, New York University, New York, NY, February
- Invited Talk**, “Uncovering the internal structure of categories through surprise-driven encoding” Psychology Department Seminar, University of Illinois Urbana-Champaign, Urbana, IL, February
- 2006** **Invited Talk**, “Starting Simpler: Studying the time course of statistical learning” Cognitive Brown Bag, Northwestern University, Evanston, IL, November
- Invited Talk**, “What's in a Name? Individual Decision-making and the Social Construction of Value” Perception-Action Brown Bag, University of Cincinnati, Cincinnati, OH, April
- 2005** **Invited Talk**, “From Sequence to Syllables: Ubiquitous Mechanisms and Constraints in Implicit Sequence Learning” Indiana University, Bloomington, IN, June

OTHER PROFESSIONAL PRESENTATIONS

- Nov, 2013** Talk “Dueling accounts of causal intervention decisions” *53rd Annual Meeting of the Psychonomic Society*, Toronto, Ontario, Canada (with Anna Coenen † and Bob Rehder, presented by Anna Coenen)
- Aug, 2013** Talk “The influence of priors on sequential search decisions” in symposium *Informavores: Active information foraging and the human mind* 35th Annual Meeting of the Cognitive Science Society, Berlin, Germany, July (presented by Doug Markant †)
- Poster “Adaptive search based on hypothesis space sparsity” 35th Annual Meeting of the Cognitive Science Society, Berlin, Germany, July (presented by Doug Markant †)
- Poster “Dueling accounts of causal intervention decisions” 35th Annual Meeting of the Cognitive Science Society, Berlin, Germany, July (presented by Anna Coenen † with Bob Rehder)
- Nov, 2012** Talk “Learning categories with and without labels” at the 53rd Annual Meeting of the Psychonomic Society, Minneapolis, MN (presented by John McDonnell †)

Poster “Can Internet data be trusted? Validating Mechanical Turk for cognitive research”.
53rd Annual Meeting of the Psychonomic Society, Minneapolis, MN (presented by
Matthew Crump and John McDonnell †)

Aug, 2012

Poster “Volitional control and the acquisition of spatial memories” at the 34th
Annual Meeting of the Cognitive Science Society, Sapporo, Japan (presented by Doug
Markant †)

Poster “Self-directed information selection and the learning of logical rules” at the 34th
Annual Meeting of the Cognitive Science Society, Sapporo, Japan (presented by John
McDonnell †)

Poster “One-shot lotteries in the park” at the 34th Annual Meeting of the Cognitive Science
Society, Sapporo, Japan (presented by Mordechai Juni †)

Talk “Sparse category labels obstruct generalization of category membership” at the 34th
Annual Meeting of the Cognitive Science Society, Sapporo, Japan (presented by John
McDonnell †)

Talk “Does the utility of information influence sampling behavior?” at the 34th Annual
Meeting of the Cognitive Science Society, Sapporo, Japan (presented by Doug Markant †)

Talk “Two at a time: Humans prefer information sampling at the margins of a category” at
the 34th Annual Meeting of the Cognitive Science Society, Sapporo, Japan (presented by
Doug Markant †)

Nov, 2011

Poster “Search in the mind and search in the world” at the 52nd Annual Meeting
of the Psychonomic Society, Seattle, WA (presented by Doug Markant †)

Poster “Learning from an intermittent teacher” at the 52nd Annual Meeting
of the Psychonomic Society, Seattle, WA (presented by John McDonnell †)

Aug, 2011

Talk “Don’t stop ‘till you get enough: Adaptive Information sampling in a visuomotor
estimation task” at the 33rd Annual Meeting of the Cognitive Science Society,
Boston, MA (I gave this talk on behalf of Mordechai Juni †)

Poster “Does category labeling lead to forgetting?” at the 33rd Annual Meeting of the
Cognitive Science Society, Boston, MA (presented by Nathaniel Blanco ☺)

Poster “Learning from an Intermittent Teacher” at the 33rd Annual Meeting of the Cognitive
Science Society, Boston, MA (presented by John McDonnell †)

Poster “Modeling information sampling over the course of learning” at the 33rd Annual
Meeting of the Cognitive Science Society, Boston, MA (presented by Doug Markant †)

Mar, 2011

Talk “Is categorical perception really verbally mediated perception?” at the Midwest
Cognitive Science Meeting, East Lansing, MI (presented by Drew Hendrickson)

Nov, 2010

Poster “Active Sampling in Perceptual Category Learning” poster at the 51st Annual
Meeting of the Psychonomic Society, St. Louis, MO (presented by Doug Markant †)

Aug, 2010

Poster “Discovering complex categories through active sampling” at the IEEE International
Conference on Learning and Development (ICDL ’10), Ann Arbor, MI (presented by Doug
Markant †)

Talk “Structure from sequence: A nonparametric analysis of human sequence learning”
at the Annual Meeting of the Society for Mathematical Psychology, Portland, OR
(presented by Jerad Fields †)

Talk “Learning categories by asking questions” at the 32nd Annual Meeting of the
Cognitive Science Society Portland, OR (presented by Douglas Markant †)

Talk “The impact of perceptual aliasing on exploration and learning in a dynamic decision making task” at the 32nd Annual Meeting of the Cognitive Science Society Portland, OR (presented by Lisa Zaval †)

Talk “Is categorical perception really verbally-mediated perception?” at the 32nd Annual Meeting of the Cognitive Science Society Portland, OR (presented by A. Hendrickson †)

Aug, 2009

Talk “Modes of information search in active learning” at the Annual Meeting of the Society for Mathematical Psychology, Amsterdam (presented by Doug Markant †)

Poster “Modeling information search in a spatial concept learning game” at the 31st Annual Meeting of the Cognitive Science Society, Amsterdam. (presented by Doug Markant †)

Talk “Regulatory fit effects in a dynamic decision-making task “ at the 31st Annual Meeting of the Cognitive Science Society, Amsterdam (presented by A. Ross Otto †)

Talk “Clustering accounts of categorical perception” at the Annual Meeting of the Cognitive Science Society, Amsterdam (my work was presented by Rob Goldstone in the Symposium on the “Interface Between Language and Thought”)

Jun, 2009

Poster “The impact of perceptual aliasing on human learning in a dynamic decision making task “ at the *Multidisciplinary Symposium on Reinforcement Learning*, Montreal, Canada

Poster “How perceptual categories influence trial and error learning in humans “ at the *Multidisciplinary Symposium on Reinforcement Learning*, Montreal, Canada (presented by John McDonnell †)

Dec, 2008

“Reevaluating evidence for multiple system in human category learning” Memory in Brain Talk Series @ NYU

Nov, 2008

“Errors, attention, or structure? Changes in perception as a result of unsupervised category learning” Talk presented at the 2008 Annual Meeting of the Psychonomic Society, Chicago, IL

“Structure and flexibility in human category learning” Cognition and Perception Student Brown Bag @ NYU

Sept, 2008

Poster “Evaluating a two system account of action valuation in a dynamic decision making task“ at the Annual Meeting of the Society for Neuroeconomics, Park City, UT (presented by A. Ross Otto)

Aug, 2008

“Inferring sequential decision processes with the trial-by-trial maximum likelihood method: Comparing generative versus predictive sufficiency” Paper presented at the 41st Annual Meeting for the Society for Mathematical Psychology

Talk “ The effect of the internal structure of categories on perception “ at the 30th Annual Meeting of the Cognitive Science Society, Washington, DC.

Poster “Reinforcement learning in dynamic environments“ at the 30th Annual Meeting of the Cognitive Science Society, Washington, DC.

Poster “Modeling the effects of regulatory fit in a dynamic decision-making task“ at the 30th Annual Meeting of the Cognitive Science Society, Washington, DC. (presented by A. Ross Otto)

Talk “Modeling category intuitiveness“ at the 30th Annual Meeting of the Cognitive Science Society, Washington, DC. (presented by Emmanuel Pothos)

Aug, 2007	Talk “Behaviorism Reborn? Statistical Learning as Simple Conditioning “ at the 29th Annual Meeting of the Cognitive Science Society, Nashville, TN
Apr, 2007	Talk, “Short-term Gains, Long-Term Pains: Reinforcement Learning in Dynamic Environments” Cognitive Lunch Series, Indiana University, Bloomington, IN
Mar, 2007	Talk “The neural basis of implicit category learning” Indiana University Neuroimaging Group, Bloomington, IN
Nov, 2006	Poster at the 2006 Annual Meeting of the Psychonomic Society, Houston, TX
Jul, 2006	Talk at the 28th Annual Meeting of the Cognitive Science Society, Vancouver, BC
Dec, 2005	Cognitive Lunch Series, Indiana University, Bloomington, IN
Jul, 2005	Poster at the 27th Annual Meeting of the Cognitive Science Society Stresa, Italy (presented by Brad Love)
Oct., 2005	University of Texas at Austin Cognition and Perception Forum, Austin, TX
Sep, 2002	James S. McDonnell Foundation, Cognitive Neuroscience of Category Learning Consortium (organized by Mark Gluck), New York, NY
Aug, 2002	Poster at the 24th Annual Meeting of the Cognitive Science Society, Fairfax, VA
May, 2002	Florida Artificial Intelligence Research Society (FLAIRS), Pensacola Beach, FL
Dec, 2001	University of Texas at Austin Cognition and Perception Forum, Austin, TX

TEACHING

★ = “Core” content/lecture course in grad or undergrad curriculum

† = topical/advanced seminar

Fall 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)

★ Fundamentals of Learning (grad)

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)

POST-DOCTORAL TRAINEES

George Kachergis (1/2015-present)

Shannon Tubridy (6/2014-present)

DOCTORAL TRAINEES

Anna Coenen (NYU C&P 9/2012-present)

Jerad Fields (NYU Cognition & Perception, 9/2009-12/2010)

David Halpern (NYU C&P 9/2014-present)

Douglas Markant (NYU C&P, 9/2008-12/2013) now post-doc at Center for Adaptive Rationality at the Max Planck Institute for Human Development

John McDonnell (NYU C&P, 9/2008-8/2013) now data scientist at Square.com

Alex Rich (NYU C&P 9/2013-present)

Anselm Rothe (NYU C&P 9/2014-present)

Mordechai Juni (NYU C&P, 9/2008-2012, w/ Larry Maloney) now a post-doc at UC Santa Barbara

MASTERS TRAINEES

Samantha Bordoff (Oct 2012-Dec 2013)

Patricia Chan (Jan 2011-)

Denise Bercovitch (Sept. 2011-May 2014)

Thesis title: "A Complex Description-Based Lottery Decision: High Stakes Increase Risk Aversion"

UNDERGRADUATE RESEARCH TRAINEES

David Halpern (Columbia psychology student, Fall 2012-)

Sabina Tomkins (NYU Computer Science/Math student, Fall 2012-Summer 2013)

Sachith Cheruvatur (NYU Abu Dhabi Philosophy student, Summer 2012)

Devin Domingo (NYU Psychology Honors student, 2011-2012, now a grad student at Columbia University)

Carol Jew (NYU Undergrad, 2011-, now lab manager at Carnegie Mellon University for Michael Tarr)

Nathaniel Blanco (NYU Psychology, 9/2009-, now a grad student at University of Texas)

Rebecca Bainbridge (NYU Psychology Honors student, 2008-2010, now programmer at NYU)

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 Zavala (Lab Manager/Trainee, 1/2008-5/2009, now a grad student at Columbia University, Psychology)

HIGH SCHOOL RESEARCH TRAINEES

Abigail Lee (Spence School, 2011-2012, with Doug Markant)

DOCTORAL THESIS COMMITTEES

At NYU

Supervised Dissertations:

- Mordechai Juni** - "Human integration of unreliable visual information", (co-advised with L. Maloney, 2012)
- 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)

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, 2014)
- Dylan Simon** (advisor: N. Daw, 2012)
- Kasey Soska** (reader, advisor: K. Adolph, 2010)
- Sarit Szpiro** (advisor: M. Carrasco, 2014)

Outside NYU

Committee Member:

- A. Ross Otto** (University of Texas at Austin, advisors: B.C. Love & A.B. Markman, 2011)
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UNIVERSITY SERVICE

- NYU Undergraduate Research Science Fair (poster or panel judge, 2009-2013)
 - Cognition and Perception Area Seminar Co-organizer (2009-2010).
 - C&P Admissions committee (2009-2010) - continue to help coordinate admissions each year
 - Education Policy Committee (2010-2012)
 - NYU Abu Dhabi Psychology Search Committee (2010)
 - NYU Science and Research Faculty Advisory Group (Fall 2011, stand-in for Mike Landy)
 - NYU Psychology Statistics Instructor Search Committee (2013)
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PROFESSIONAL MEMBERSHIPS

- Cognitive Science Society
- Society for Mathematical Psychology
- Psychonomic Society (full member since 2011)
- Association for Psychological Science

SELECTED POPULAR PRESS COVERAGE

Numerous blogs and websites including USA Today, MSN News, and Yahoo.com also picked up on the the Gureckis & Goldstone (2009) naming paper. These are the more substantive looks at the research:

4/14/2013 - Boston Globe "What baby names say about everything else."

<http://www.bostonglobe.com/ideas/2013/04/13/what-baby-names-say-about-everything-else/Ln9kVOI9haGhFoHwQv9h7I/story.html>

3/24/10 - Scienceline - "Playing the name game" by Ariel Bleicher, <http://www.scienceline.org/2010/03/24/playing-the-name-game/>

3/1/10 - Associated Content - "Naming your baby" by Janey Falk, http://www.associatedcontent.com/article/2746149/naming_your_baby.html?cat=25

12/29/09 - Globe and Mail Report - Report On Business Magazine (Canada) - "The Xerox Effect" by Tim Taylor, <http://www.theglobeandmail.com/report-on-business/rob-magazine/the-xerox-effect/article1400073/>

8/31/09 - Complexity Digest - Lead Article on Special Issue on "Collective Behavior" I organized

6/3/2011 - BoingBoing - "Coburn anti-NSF report misleading, factually incorrect" by Maggie Koerth-Baker, <http://www.boingboing.net/2011/06/03/coburn-anti-nsf-repo.html#comments> (a story about an attack on NSF funding for social/behavioral sciences which I responded to on my lab blog)