Douglas B. Markant

Center for Adaptive Rationality
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Education

2008—2014	New York University
	Psychology: Cognition and Perception
	M.A. completed May 16, 2012
	Ph.D. completed January 27, 2014
	Advisor: Dr. Todd Gureckis
2001—2005	Cornell University
	B.A. Psychology
	Minors in Information Science and Cognitive Science

Positions

2014—present	Post-doctoral Fellow
	Center for Adaptive Rationality
	Max Planck Institute for Human Development, Berlin

Journal Articles

Markant, D., Settles, B. and Gureckis, T.M (In press). "Self-directed learning favors local, rather than global, exploration." *Cognitive Science.*

Markant, D., Dubrow, S., Davachi, L., Gureckis, T.M. (2014). "Deconstructing the effect of self-directed study on episodic memory." *Memory & Cognition 42*(8), 1211—1224. doi: 10.3758/s13421-014-0435-9 ** Awarded the 2014 Psychonomic Society's Clifford T. Morgan Best Article Award for Memory & Cognition*

Markant, D. and Gureckis, T.M. (2014). "Is it better to select or receive? Learning via active and passive hypothesis testing." *Journal of Experimental Psychology: General 143*(1), 94--122.

Gureckis, T.M. and **Markant, D.** (2012). "Self-directed learning: A cognitive and computational perspective." *Perspectives on Psychological Science, 7*(5), 464—481.

Refereed Conference Proceedings

Markant, D. and Gureckis, T.M. (2014). "A preference for the unpredictable over the informative during self-directed learning" in P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.) *Proceedings of the 36th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Markant, D. and Gureckis, T.M. (2012). "Does the utility of information influence sampling behavior?" in *Proceedings of the 34th Annual Conference of the Cognitive Science Society* (pp. x-x). Austin, TX: Cognitive Science Society.
* Awarded the CogSci Computational Modeling Prize for higher-level cognition

Markant, D. and Gureckis, T.M. (2012). "One piece at a time: Learning complex rules through self-directed sampling." in *Proceedings of the 34th Annual Conference of the Cognitive Science Society* (pp. x-x). Austin, TX: Cognitive Science Society.

Markant, D. and Gureckis, T.M. (2010) "Category Learning Through Active Sampling" in Ohlsson, S. and Catrambone, R. (Eds), *Proceedings of the 32nd Annual Conference of the Cognitive Science Society* (pp. x-x). Austin, TX: Cognitive Science Society.

Gureckis, T.M. and **Markant, D.** (2009) "Active Learning Strategies in a Spatial Concept Learning Game" in Taatgen, N., van Rijn, H., Schomaker, L. and Nerbonne, J. (Eds), *Proceedings of the 31st Annual Conference of the Cognitive Science Society* (pp. 3145-3150). Austin, TX: Cognitive Science Society.

Professional Presentations

de Leeuw, J.R., Coenen, A., **Markant, D.**, Martin, J.B., McDonnell, J.V., Rich, A.S., Gureckis, T.M. (2014). "Workshop: Online Experiments using jsPsych, psiTurk, and Amazon Mechanical Turk" in P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.) *Proceedings of the 36th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Markant, D., Gureckis, T.M., Meder, Nelson, J.D., Pirolli, P., and Yu, C. (August, 2013) "Symposium: Informavores: Active information foraging and human cognition" in M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.) *Proceedings of the 35th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Coenen, A., **Markant, D.**, Martin, J.B., McDonnell, J.V. (August, 2013) "Workshop: Using Mechanical Turk and PsiTurk for Dynamic Web Experiments" in M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.) *Proceedings of the 35th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Markant, D. and Gureckis, T. M. (August, 2012). "One piece at a time: Learning complex rules through self-directed sampling." Talk presented at 34th Annual Meeting of the Cognitive Science Society, Sapporo, Japan.

Markant, D. and Gureckis, T. M. (August, 2012). "Does the utility of information influence sampling behavior?" Talk presented at 34th Annual Meeting of the Cognitive Science Society, Sapporo, Japan.

Markant, D. and Gureckis, T. M. (August, 2010). "Category Learning Through Active Sampling." Talk presented at 32nd Annual Meeting of the Cognitive Science Society, Portland, OR.

Markant, D. and Gureckis, T.M. (August, 2009) "Modes of information search in active learning." Talk presented at MathPsych 2009, Amsterdam, Netherlands.

Poster Presentations

Markant, D., Chan, P., Coenen, A., Martin, J., McDonnell, J., Rich, A. and Gureckis, T. M. (November 2014). "psiTurk: A framework for running online behavioral experiments." Poster presented at the 2014 meeting of the Society for Computers in Psychology, Long Beach, CA, USA.

Chan, P., **Markant, D.**, Lake, B. and Gureckis, T.M. (July 2014). "Adaptive teaching: Improving the efficiency of learning through hypothesis-dependent selection of training data." Poster presented at the 36th Annual Meeting of the Cognitive Science Society, Quebec City, Canada.

Markant, D. and Gureckis, T.M. (August 2013). "Adapting search based on hypothesis space sparsity." Poster presented at the 35th Annual Meeting of the Cognitive Science Society, Berlin, Germany.

Markant, D., Dubrow, S., Davachi, L., Gureckis, T.M. (August 2012). "The role of exploratory decision-making in enhancing episodic memory." Poster presented at the 34th Annual Meeting of the Cognitive Science Society, Sapporo, Japan.

Gureckis, T. M. and **Markant, D.** (November, 2011). "How search in the mind guides search in the world." Poster presented at the Annual Meeting of the Psychonomic Society, Seattle, WA.

Markant, D. and Gureckis, T. M. (August, 2011). "Sampling at the Margins to Learn Perceptual Categories." Poster presented at the 33rd Annual Meeting of the Cognitive Science Society, Boston, MA.

Markant, D. and Gureckis, T. M. (November, 2010). "An Exploration of Active Sampling in Perceptual Classification Tasks." Poster presented at Annual Meeting of the Psychonomic Society, St. Louis, MO.

Markant, D. and Gureckis, T. M. (August, 2010). "Discovering complex categories through active sampling." Poster presented at IEEE International Conference on Development and Learning, Ann Arbor, MI.

Gureckis, T.M. and **Markant, D.** (2009) "Active Learning Strategies in a Spatial Concept Learning Game." Poster presented at the 31st Annual Conference of the Cognitive Science Society, Amsterdam, Holland.

Invited Talks

December, 2013   "Bayesian models of self-directed information gathering" (with Todd Gureckis). BBN Workshop on Bayesian Cognitive Modeling for the Intelligence Community, BBN Raytheon.

July, 2013   "What you don't know can help you: Uncertainty-driven sampling during learning." Center for Adaptive Rationality, Max Planck Institute for Human Development.

May, 2013   "Into the unknown: How uncertainty guides active learning." University Seminar Series, Stevens Institute of Technology.

April, 2013   "Decomposing the 'active' learner: Effects of self-directed control on learning and memory." Department of Psychological and Brain Sciences, Indiana University.

Honors and Fellowships

2014	Psychonomic Society Clifford T. Morgan Best Article Award (*Memory & Cognition*)
2013	APA Dissertation Research Award
2013	Learning Analytics Summer Institute (LASI), Stanford University
2012	Computational Modeling Prize in Higher-level Cognition for paper presented at the 2012 Meeting of the Cognitive Science Society
2012	Robert J. Glushko and Pamela Samuelson Foundation Student Travel Grant for attendance to the 2012 Meeting of the Cognitive Science Society
2011	Graduate Summer School: "Probabilistic Models of Cognition", Institute of Pure and Applied Mathematics, UCLA
2010	Graduate School of Arts and Sciences Travel Award, NYU
2010	Honorable Mention, NSF Graduate Research Fellowship Program
2008—2013	MacCracken Fellowship, NYU Graduate School of Arts and Sciences

Professional Service

Ad-hoc reviewer for: *Annual Meeting of the Cognitive Science Society, Behavior Research Methods, Cognitive Science, Decision, Journal of Cognitive Psychology, Journal of Mathematical Psychology, Memory and Cognition, Psychonomic Bulletin and Review, Trends in Cognitive Science*

Teaching

Fall 2013	Teaching Assistant, *fMRI Lab* (graduate, NYU)
Summer 2012	Instructor, *Cognition* (undergraduate, NYU)
Fall 2010	Teaching Assistant, *Cognition* (undergraduate, NYU)
Summer 2010	Teaching Assistant, *Abnormal Psychology* (undergraduate, NYU)
Spring 2009	Teaching Assistant, *Lab in Human Cognition* (undergraduate, NYU)