

Curriculum Vitae

PERSONAL DETAILS

Samuel Gershman
Psychology Department
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CURRENT POSITION

Graduate student, Department of Psychology and Neuroscience Institute, Princeton University

EDUCATION

BA	Neuroscience and Behavior Columbia University	2003-2007
PhD (ongoing)	Psychology and Neuroscience Princeton University	2008-present

RESEARCH EXPERIENCE

2004-2006	EEG studies of memory (adviser: Ken Paller, Northwestern University)
2004-2006	EEG studies of attention (adviser: Jennifer Mangels, Columbia University)
2005-2007	fMRI studies of reward, meta-analyses of brain imaging studies, and behavioral studies of emotion (advisers: Tor Wager & Kevin Ochsner, Columbia University)
2007-2008	fMRI and computational modeling of decision-making and reinforcement learning (adviser: Nathaniel Daw, New York University)
2007-2008	Non-human primate single-unit electrophysiology of decision-making and motor control (adviser: Bijan Pesaran, New York University)
2008-present	fMRI and computational modeling of learning and memory (advisers: Ken Norman and Yael Niv, Princeton University)

GRANTS and AWARDS

2006	Summer University Research Fellowship, Columbia University
2008	Walker McKinney '50 Life Sciences Fellowship
2009	Swartz COSYNE travel fellowship
2009	NIMH Quantitative and Computational Neuroscience training fellowship
2009	NIPS travel award

2010 NSF graduate research fellowship

INVITED TALKS

- Cognitive lunch seminar, Indiana University (April, 2010)
- Pavlovian Society annual meeting, Baltimore (October, 2010)
- Cognitive science seminar, University of Texas (February 2011)

PUBLICATIONS

1. Gershman, S.J., Hoffman, M.D., & Blei, D.M. (2012). Nonparametric variational inference. Proceedings of the 29th International Conference on Machine Learning.
2. Gershman, S.J., Moore, C.D., Todd, M.T., Norman, K.A., & Sederberg, P.B. (2012). The successor representation and temporal context. *Neural Computation*, 5, 1553-1568.
3. Gershman, S.J. & Blei, D.M. (2012). A tutorial on Bayesian nonparametric models. *Journal of Mathematical Psychology*, 56, 1-12.
4. Gershman, S.J. & Daw, N.D. (2012). Perception, action and utility: the tangled skein. In M. Rabinovich, K. Friston & P. Varona, Eds, *Principles of Brain Dynamics: Global State Interactions*. MIT Press.
5. Gershman, S.J., Vul, E., & Tenenbaum, J.B. (2012). [Multistability and perceptual inference](#). *Neural Computation*, 24, 1-24.
6. Gershman, S.J., Blei, D.M., Pereira, F., & Norman, K.A. (2011). [A topographic latent source model for fMRI data](#). *NeuroImage*, 57, 89-100.
7. Sederberg, P.B., Gershman, S.J., Polyn, S.M., & Norman, K.A. (2011). [Human memory reconsolidation can be explained using the Temporal Context Model](#). *Psychonomic Bulletin and Review*, 18, 455-468.
8. Daw, N.D., Gershman, S.J., Seymour, B., Dayan, P., & Dolan, R.J. (2011). [Model-based influences on humans' choices and striatal prediction errors](#). *Neuron*, 69, 1204-1215.
9. Gershman, S.J. & Wilson, R.C. (2010). [The neural costs of optimal control](#). *Advances in Neural Information Processing Systems* 23.
10. Gershman, S.J., Cohen, J.D., & Niv, Y. (2010). [Learning to selectively attend](#). *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*.

11. Gershman, S.J & Niv, Y. (2010). [Learning latent structure: Carving nature at its joints](#), *Current Opinion in Neurobiology*, 20, 1-6.
12. Gershman, S.J., Blei, D.M., & Niv, Y. (2010). [Context, learning, and extinction](#), *Psychological Review*, 117, 197-209.
13. Gershman, S.J., Pesaran, B., & Daw, N.D. (2009). [Human reinforcement learning subdivides structured action spaces by learning effector-specific values](#), *Journal of Neuroscience*, 29, 13524-13531. ([Supplementary Materials](#))
14. Gershman, S.J., Vul, E., & Tenenbaum, J.B. (2009). [Perceptual multistability as Markov chain Monte Carlo inference](#), *Advances in Neural Information Processing Systems* 22.
15. Socher, R., Gershman, S.J., Perotte, A., Sederberg, P.B., Blei, D.M., & Norman, K.A. (2009). [A Bayesian analysis of dynamics in free recall](#), *Advances in Neural Information Processing Systems* 22

CONFERENCE ABSTRACTS

Human Brain Mapping Conference, Florence, July 2006

Summerfield, C, Gershman, SJ, and Mangels, JA. *Theta-band (4-8Hz) EEG coherence links frontal and parietal cortices during voluntary attentional orienting* (poster).

National Institute of Drug Abuse Mini-Convention at the meeting of the Society for Neuroscience, Atlanta, October 2006.

Kober, H., Gershman, S., Ochsner, K. N., Wager, T. D. *Are all rewards created equal? An fMRI study comparing multiple reward-types* (poster).

Society for Personality and Social Psychology, Memphis, January 2007

Kober, H., Joseph, J., Gershman, S., Hughes, B., Zaki, J., Wager, T.D., Ochsner, K. *Say You, Say Me: A Meta-Analysis of Neuroimaging Studies of Self- and Other- Processing* (poster).

Society for Neuroscience, Washington, D.C., November 2008

Gershman, S.J., Pesaran, B., Daw, N.D. Human. *Human reinforcement learning exploits structure of action space* (poster).

Computational and Systems Neuroscience, Salt Lake City, February 2009

Gershman, S.J., Bleim, D.M., Niv, Y. *An infinite mixture model of context-dependent learning and extinction* (talk).

Neural Information Processing Systems, Vancouver, CA, December 2009

Socher, R., Gershman, S.J., Perotte, A., Sederberg, P., Blei, D.M., & Norman, K.A. *A Bayesian analysis of dynamics in free recall* (poster).

Neural Information Processing Systems, Vancouver, CA, December 2009

Gershman, S.J., Vul, E., & Tenenbaum, J.B. *Perceptual multistability as Markov chain Monte Carlo inference* (poster and spotlight).

Cognitive Science Society, Portland, OR, August 2010

Gershman, S.J., Cohen, J.D., & Niv, Y. *Learning to selectively attend* (talk).

Neural Information Processing Systems, Vancouver, CA, December 2010

Gershman, S.J. & Wilson, R.C. *The neural costs of optimal control* (poster).