

A. Emin Orhan

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Research Interests

Computational models of cognitive and perceptual phenomena: perceptual learning, ideal observer models, category learning, categorization, diffusion models, Gaussian processes, active learning, Bayesian inference, graphical models, MCMC, statistical learning, population coding, computational neuroscience, visual short-term memory, visual search, visual attention, multiple object tracking.

Education

Ph.D. Brain & Cognitive Sciences, University of Rochester, September 2008 - current.

M.A. obtained in October 2011

Advisor: Prof. Robert A. Jacobs

M.A. Cognitive Science, Bogazici University, September 2005 - June 2008.

Thesis: Unsupervised Learning of Invariant High-Level Visual Representations through Temporal Coherence

Advisor: Prof. Ethem Alpaydın

B.A. Philosophy, Bogazici University, September 2002 - September 2005.

Papers

Orhan, A. E., & Jacobs, R. A. (to appear) Probabilistic modeling of dependencies among visual short-term memory representations. *Proceedings of the 25th Conference on Neural Information Processing Systems (NIPS 2011)*.

Orhan, A. E., & Jacobs, R. A. (under review). Dependencies among representations in visual short-term memory: A nonparametric Bayesian account of encoding at multiple levels of abstraction.

Orhan, A. E. & Jacobs, R. A. (2011). A nonparametric Bayesian model of visual short-term memory. In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 2451–6). Austin, TX: Cognitive Science Society.

Orhan, A. E., Michel, M. M., & Jacobs, R. A. (2010). Visual learning with reliable and unreliable features. *Journal of Vision*, 10(2):2, 1-15, <http://journalofvision.org/10/2/2/>, doi:10.1167/10.2.2.

Academic/Teaching Experience

Teaching Assistant for BCS 111: Foundations of Cognitive Science
University of Rochester, Fall 2009, Spring 2011.

Participated in Machine Learning Summer School
Cambridge, UK, September 2009.

Research Assistant in Cognitive Science, Bogazici University
Istanbul, Turkey, September 2005 - August 2008.

Participated in FIAS Summer School in Theoretical Neuroscience & Complex Systems
Frankfurt, Germany, August 2007.

Awards/Grants

Travel Grant for NIPS 2011
Neural Information Processing Systems Foundation, December 2011.

Robert J. Glushko and Pamela Samuelson Foundation Student Travel Grant
Cognitive Science Society, July 2011.

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