

## **CURRICULUM VITAE**

Peter W. Battaglia  
Born: October 16, 1980

### **CONTACT INFORMATION:**

Brain and Cognitive Sciences  
Massachusetts Institute of Technology  
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### **EDUCATION:**

#### **Graduate Student**

University of Minnesota (August 2003 – May 2008)  
PhD. Department of Psychology (May 2008)  
Thesis: Probabilistic Sensorimotor Processing: Overcoming Uncertainty and Ambiguity to Improve Behavior  
Thesis co-advisors: Dr. Paul Schrater and Dr. Daniel Kersten

#### **Undergraduate career:**

University of Rochester (August 1998 - May 2002)  
Honors B.A. Brain and Cognitive Sciences (May 2002)  
Thesis: Visual and Auditory Cue Combination for Spatial Localization  
Thesis advisor: Dr. Robert Jacobs

### **RESEARCH INTERESTS:**

Biological and machine perception  
Perceptually-guided motor control  
Applied Bayesian methods

### **WORK EXPERIENCE:**

#### **Postdoctoral Fellow**

Laboratories of Dr. Josh Tenenbaum and Dr. Antonio Torralba, Brain and Cognitive Sciences, Massachusetts Institute of Technology (September 2008 – present)

## **Postdoctoral Student**

Laboratories of Dr. Paul Schrater and Dr. Daniel Kersten, Psychology, University of Minnesota (May 2008 – August 2008)

## **Research Assistant**

Laboratories of Dr. Robert Jacobs and Dr. Richard Aslin, Department of Brain and Cognitive Sciences, University of Rochester (January 2001 - July 2003)

## **FELLOWSHIPS**

Ruth L. Kirschstein National Research Service Awards (NRSA) for Individual Postdoctoral Fellows, NIH (2008-2010), stipend and institutional allowance.

VSS Student Travel Award (2008), travel/accommodations fellowship \$500.

University of Minnesota, Doctoral Dissertation Fellowship (2007-2008), full tuition and stipend

UCLA IPAM, Graduate Summer School (2007), travel/accommodations fellowship \$500.

Gough Travel Award (2005), travel/accommodations fellowship for \$350.

US National Science Foundation & Chinese National Science Foundation, Graduate Summer School and scientific workshop (2005), travel/accommodations fellowship \$1500.

National Science Foundation, Graduate Research Fellowship (2004-2007), full tuition and stipend.

University of Minnesota, Graduate School Fellowship (2003-2004), full tuition and stipend.

## **REFERENCES:**

### **Paul Schrater**

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**Daniel Kersten**

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**Robert Jacobs**

Department of Brain and Cognitive Sciences  
Meliora Hall  
University of Rochester  
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**PROFESSIONAL ACTIVITIES:**

**Organizing symposia**

Organizer, Symposium titled ‘Bayesian models applied to perceptual behavior’, *Annual Meeting of the Vision Sciences Society 2008*, Naples FL, 2008.

**ARTICLES:**

Battaglia PW, Ernst MO, Di Luca M, Machulla T, Schrater PR, Kersten DJ (2008) Perceptual size and distance disambiguation uses sensory generative knowledge, *In preparation*.

Battaglia PW, Schrater PR, Kersten DJ (2008) Size disambiguates distance to improve interception, *In preparation*.

Battaglia PW, Schrater PR (2007) Humans trade off viewing time and movement duration to improve visuomotor accuracy in a fast reaching task, *Journal of Neuroscience*, 27 (26), 6984-6994.

Battaglia PW, Schrater PR, Kersten DJ (2005) Auxiliary object knowledge influences visually-guided interception behavior, *Proceedings of the 2nd symposium on applied perception in graphics and visualization, ACM International Conference Proceeding Series*, 95, 145-152.

- Aslin RN, Battaglia PW, Jacobs RA (2004) Depth-dependent contrast gain control, *Vision Research*, 44 (7), 685-693.
- Battaglia PW, Jacobs RA, Aslin RN (2004) Depth-dependent blur adaptation, *Vision Research*, 44 (2), 113-117.
- Battaglia PW, Jacobs RA, Aslin RN (2003) Bayesian integration of visual and auditory signals for spatial localization. *Journal of the Optical Society of America A*, 20, 1391-1397.

## **TALKS:**

- Battaglia PW (2008) How to: Applying a Bayesian model to a perceptual question, Talk presented by Peter Battaglia at satellite symposium of the *Annual Meeting of the Vision Sciences Society 2008*, Naples, FL, May 2008.
- Battaglia PW, Ernst MO, Di Luca M, Machulla T, Schrater PR, Kersten DJ (2008) Humans use stereo and haptic distance cues to improve physical object size estimates, Talk presented by Peter Battaglia at *Annual Meeting of the Vision Sciences Society 2008*, Naples, FL, May 2008.
- Battaglia PW, Ernst MO, Di Luca M, Machulla T, Schrater PR, Kersten DJ (2008) Humans use distance sensory information to improve visual object size perception, Talk presented by Peter Battaglia at the *University of Minnesota Doctoral Dissertation Fellowship Seminar*, Minneapolis, MN, March 2008.
- Battaglia PW, Schrater PR, Kersten DJ (2007) Humans control reach timing to balance sensory and motor uncertainty and maximize reach accuracy, Talk presented by Peter Battaglia at *Annual Meeting of the Vision Sciences Society 2007*, Sarasota, FL, May 2007.
- Battaglia PW, Schrater PR, Kersten DJ (2005) Auxiliary object knowledge influences visually-guided interception behavior. *Talk presented at the International Workshop on Mathematical, Computational, and Applied Aspects of Computer Vision and Pattern Recognition*. Lotus Hill Institute for Computer Vision and Pattern Recognition, Ezhou, China, August 2005.

## **CONFERENCE ABSTRACTS:**

- Battaglia PW and Schrater PR (2008) Robust Bayesian framework for modeling psychophysical tasks, Poster presented by Peter Battaglia at *Cosyne 2008*, Utah, March 2008.
- Schrater PR and Battaglia PW (2008) Characterizing reach strategies in ambiguous tasks, Poster presented by Paul Schrater at *Cosyne 2008*, Utah, March 2008.
- Battaglia PW, Schrater PR, and Flister E (2005) Reach control strategies in tasks with many viable targets, Poster presented by Peter Battaglia at *ESF-EMBO Symposium on 3D Sensory and Motor Space*, Sant Feliu de Guixols, Spain, October 2005.
- Battaglia PW, Schrater PR, Kersten DJ (2005) A Bayesian theory for intercepting objects moving in 3D, Poster presented by Peter Battaglia at *Annual Meeting of the Vision Sciences Society 2005*, Sarasota, FL, May 2005.
- Aslin RN, Jacobs RA, Battaglia PW (2003) Depth-dependent contrast gain-control. *Annual Meeting of the Vision Sciences Society 2003*, Sarasota, FL.