

## Curriculum Vitae

2008

### Elias H. Cohen

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#### **Education**

- 2006                    Ph.D. in Cognitive Psychology  
                              Rutgers University, New Brunswick, NJ.  
                              Dissertation Advisor: Manish Singh.
- 2006                    Certificate of Cognitive Science  
                              Rutgers University, New Brunswick, NJ.
- 2002                    M.S. in Cognitive Psychology  
                              Rutgers University, New Brunswick, NJ.  
                              Thesis Advisor: Zenon Pylyshyn.
- 1998                    B.A. in Psychology and Philosophy, cum laude  
                              Macalester College, St. Paul, MN.

#### **Positions Held**

- 2008 –present        Postdoctoral Fellow in Cognitive Neuroscience  
                              Vanderbilt University.  
                              Sponsor: Frank Tong.
- 2005 –2008            Postdoctoral Fellow in Vision Science  
                              SUNY College of Optometry.  
                              Sponsor: Qasim Zaidi.
- 2004-2005            Graduate Assistant - Eye Movement Lab. Rutgers University.
- 2003-2004.            Graduate Assistant - Perceptual Science Lab. Rutgers University.
- 2002-2003.            Instructor - Cognition Lab (2 sections). Rutgers University.
- 2001-2002.            Pre-doctoral Fellow- Rutgers University Center for Cognitive  
                              Science.
- 2000-2001.            Instructor - Cognition Lab (4 sections). Rutgers University.

1997 Teaching Assistant - Problems of Philosophy. Macalester College.

### **Awards**

2001-2002 National Institute of Health (NIH) National Research Service Award Pre-doctoral Fellowship, 2001-2002.

1996-1998 Macalester College Baird Scholarship.

### **Papers and Publications**

Cohen, E. H., Singh, M., & Maloney, L.T. (2008). Perceptual segmentation and the perceived orientation of dot clusters: The role of robust statistics. *Journal of Vision*. 8(7):6, 1–13.

Cohen, E. H. & Zaidi, Q. (2007). Fundamental failures of shape constancy resulting from cortical anisotropy. *Journal of Neuroscience*. 27(46), 12540–12545.

Cohen, E. H. & Singh, M. (2007). Geometric determinants of shape segmentation: Tests using segment identification. *Vision Research*. 47 (22), 2825–2840.

Cohen, E. H., Schnitzer, B.S., Gersch, T.M., Singh, M., & Kowler, E. (2007). The relationship between spatial pooling and attention in saccadic and perceptual tasks. *Vision Research*, 47, 1907-1923.

Cohen, E. H. & Zaidi, Q. (2007). The oblique effect and three-dimensional shape. *Visual Cognition*. 15(1), 80-83.

Cohen, E. H. & Singh, M. (2006). Perceived orientation of complex shape reflects graded part decomposition. *Journal of Vision*, 6, 805-821.

Cohen, E. H., Barenholtz, E., Singh, M., & Feldman, J. (2005). What change detection tells us about the visual representation of shape. *Journal of Vision*, 5(4), 313-321.

Barenholtz, E., Cohen, E. H., Feldman, J., & Singh, M. (2003). Detection of Change in Shape: An advantage for concavities. *Cognition*. 89, 1-9.

### **Manuscripts in Preparation.**

Cohen, E.H. & Zaidi, Q. (In Preparation). Salience of mirror symmetry in natural patterns.

Cohen, E.H. & Zaidi, Q. (In Preparation). Motion from global shape.

### **Conference Presentations**

Cohen, E.H. & Zaidi, Q. (2008). Motion perception driven by inferred shape properties. Poster presented at Vision Sciences Society annual meeting, Naples, FL.

Zaidi, Q. & Cohen, E.H. (2007) From cortical anisotropy to failures of 3-D shape constancy. Talk given at the European Conference on Visual Perception, Arezzo, Italy.

- Cohen, E.H. & Zaidi, Q. (2007). Salience of mirror symmetry in natural patterns. Poster presented at Vision Sciences Society annual meeting, Sarasota, FL.
- Cohen, E.H. & Zaidi, Q. (2006). The oblique effect and three dimensional shape. Talk given at Object, Perception, Attention, and Memory annual meeting in Houston, TX.
- Singh, M., Cohen, E.H., & Maloney, L.T. (2006). The influence of perceptual segmentation on the perceived orientation of dot clusters. Poster presented at Vision Sciences Society annual meeting, Sarasota, FL.
- Cohen, E.H., Schnitzer, B.S., Gersch, T. M., Sanghvi, Singh, M., & Kowler, E. (2005) Differences in attentional filtering between saccades and perception. Poster presented at European Conference on Visual Perception. Coruña, Spain.
- Cohen, E.H. & Singh, M. (2005). Perceived orientation of complex shapes reflects graded part decomposition. Poster presented at Vision Sciences Society annual meeting, Sarasota, FL.
- Cohen, E.H. & Singh, M. (2004). The graded nature of parts in shape representation: Insights from a segment-identification task. Poster presented at Vision Sciences Society annual meeting, Sarasota, FL.
- Cohen, E.H. & Singh, M. (2003). Curvature extrema and contour representation: Insights from a segment identification task. Poster presented at Object, Perception, Attention, and Memory annual meeting, Vancouver, B.C.
- Cohen, E. H., Barenholtz, E., Singh, M., & Feldman, J. (2003). Superior change detection at shape concavities. Poster presented at Vision Sciences Society annual meeting, Sarasota, FL.
- Barenholtz, E., Cohen, E. H., Feldman, J., & Singh, M. (2003). Non-accidental properties and change detection. Poster presented at Vision Sciences Society annual meeting, Sarasota, FL.
- Feldman, J., Singh, M., Barenholtz, E., & Cohen, E. H., (2003). A psychophysical window onto the mental representation of shape. Poster presented at Vision Sciences Society annual meeting, Sarasota, FL.
- Cohen, E. H. & Pylyshyn, Z. W. (2002). Searching through subsets of moving items. Poster presented at Vision Sciences Society annual meeting, Sarasota, FL.
- Leonard, C., Pylyshyn, Z. W., Cohen, E. H., & Dennis, J.H. (2002). The effect of a secondary monitoring task on multiple object tracking. Poster presented at Vision Sciences Society annual meeting, Sarasota, FL.

### **Invited Talks and Symposia**

- Cohen, E.H. (2008). Rotation and shape (in)constancy. Invited talk given at the Vanderbilt University Psychology Department.
- Cohen, E.H. (2008). As the shape turns: Rotation and shape (in)constancy. Invited colloquium talk given for the Rutgers University Perceptual Science Series.
- Cohen, E.H. (2005). The role of part segmentation in shape representation. Invited colloquium talk given at the State University of New York, Optometry School.
- Cohen, E.H. (2005). The role of part segmentation in shape representation. Invited talk given at the MIT, Department of Brain and Cognitive Sciences.

Cohen, E.H. (2005). Part segmentation and shape representation. Invited talk given at the University of California, Berkeley.

Cohen, E.H. & Singh, M (2003). Curvature extrema and contour representation: Insights from a segment identification task. Talk given at October 2003 Rutgers Psychology Department Symposium.

### **Research Interests**

Shape representation, 3D shape from texture, Symmetry, Change detection, Visual attention. Visual motion. Object Recognition. Neural mechanisms of visual perception.

### **Teaching Interests**

Introduction to Cognitive Science, Cognitive Psychology, Sensation and Perception, Shape Perception, Visual Attention, Computational Vision, Introduction to Psychology, Introduction to Statistics.

### **Professional Participation**

Member of the Vision Science Society.

Member of the Society for Neuroscience.

Ad hoc reviewer for *Cognitive Processing*.

Ad hoc reviewer for *Perception and Psychophysics*.

## **Academic References**

### **Qasim Zaidi**

Distinguished Professor of Vision Science  
State University of New York - State College of Optometry  
Vision Sciences  
33 West 42nd Street  
New York, NY 10036  
Email: qz@sunyopt.edu  
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### **Manish Singh**

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152 Frelinghuysen Road  
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### **Eileen Kowler**

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### **Jacob Feldman**

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