

EDWARD VUL

Department of Brain and Cognitive Science
 Massachusetts Institute of Technology
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Education

Ph.D. Cognitive Science	current	MIT	Cambridge, MA
Advisor: Nancy Kanwisher			
IPAM Summer School:	2007	UCLA	Los Angeles, CA
Probabilistic models of cognition			
Dartmouth Summer School	2006	Dartmouth	Hanover, NH
Institute of Cognitive Neuroscience			
B.S. Psychology, with Honors	2005	UCSD	La Jolla, CA
Advisors: Hal Pashler, Don MacLeod			
B.A. Philosophy	2005	UCSD	La Jolla, CA

Fellowships and Awards

APA Early Researcher Award	2008
NDSEG Graduate Fellowship	2007-2010

Research Grants

MIT HST Catalyst fund (40 fMRI pilot hours)	06/2008
Russell Sage Behavioral Economics Research Grant	09/2007
Sigma Xi Grant in aid of research	04/2007
Sigma Xi Ophthalmology Grant in aid of research	12/2005
University of California Regents Undergraduate Research Scholarship	07/2004

Travel Awards

MIT Graduate Student Counsel Travel Award	06/2007
Vision Science Society Travel Award	05/2007
Institute of Humane Studies Travel Grant	12/2006
ECVP Student Research Travel Grant	08/2006

Book Chapters

Vul, E., & Kanwisher, N.K. (in press) "Begging the Question: The Non-Independence Error in fMRI Data Analysis"

Peer-Reviewed Journal Articles

Vul, E., Krizay, E., & MacLeod, D. (in press) "The McCollough effect reflects permanent and transient adaptation in early visual cortex" *Journal of Vision*.

Vul, E., Hanus, D., & Kanwisher, N. (in press) "Delay of Selective Attention During the Attentional Blink" *Vision Research*.

- Vul, E.** & Pashler, H. (2008) "Measuring the crowd within: probabilistic representations within individuals" *Psychological Science*, 19(7), 645-647.
- Cepeda, N.J., **Vul, E.**, Rohrer, D., Wixted, J.T., & Pashler, H. (in press) "Spacing effects in learning: A temporal ridge of optimal retention." *Psychological Science*
- Carpenter, S. K., Pashler, H., Wixted, J. T., & **Vul, E.** (2008) "The effects of tests on learning and forgetting." *Memory and Cognition*, 36, 438-448.
- Vul, E.**, Nieuwenstein, M., & Kanwisher N. (2008) "Temporal Selection is Suppressed, Delayed, and Diffused During the Attentional Blink". *Psychological Science*, 19, 55-61.
- Vul, E.** & Pashler, H. (2007) "Incubation is helpful only when people are misled". *Memory, and Cognition*, 35, 701-710.
- Carpenter, S.K., Pashler, H., & **Vul, E.** (2006) "What type of learning is enhanced by a cued recall test?" *Psychonomic Bulletin and Review*. 13(5) 826-830.
- Vul, E.** & MacLeod, D. I. A. (2006) "Contingent after-effects distinguish conscious and pre-conscious colour processing." *Nature Neuroscience*, 9(7), 873-4.
- Huang, L & **Vul, E.** (2006) "Role of a circle's center to visual interpolation." *Vision Research*, 46(15), 2311-2314.
- Cepeda, N., Pashler, H., **Vul, E.**, Wixted, J., and Rohrer, D. (2006) "Distribution of practice in verbal recall tasks: a review and quantitative synthesis." *Psychological Bulletin*, 132(3):354-80.

Manuscripts in Progress

- Vul, E.**, Hanus, D., & Kanwisher N. (in revision) "Attention as inference: Selection is probabilistic and graded, Conscious access is sampled and discrete"
- Frank, M. C., **Vul, E.**, & Johnson, S. P. (submitted) "Development of infants' face preference during the first year."

Invited Talks

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| Rank Prize – Symposium on Self-Calibrating Systems | 02/2007 |
| “Dynamics of the McCollough Effect” | Windermere, UK |

Conference Presentations

- Vul, E.** & Kanwisher, N. Uncertainty and selective attention. To be presented at the European Conference on Visual Perception, Utrecht, Netherlands, August, 2008.
- Rich, A & **Vul, E.** Can feature binding be explained by certainty in space and time? To be presented at the European Conference on Visual Perception, Utrecht, Netherlands, August, 2008.
- Vul, E.**, Hanus, D., & Kanwisher, N. Selective attention and uncertainty. Presented at the Vision Science Society meeting, Naples, FL, May 2008.
- Hanus, D., **Vul, E.**, & Kanwisher, N. Delay of selective attention during the attentional blink. Presented at the Vision Science Society meeting, Naples, FL, May 2008.
- Frank, D., **Vul, E.**, Mansinghka, V.K., & Alvarez, G. What limits performance in multiple object tracking? To be presented at the Vision Science Society meeting, Naples, FL, May 2008.
- Vul, E.**, Krizay, E. & MacLeod, DIA. Two linearly-summed timescales of learning in early visual cortex. Paper presented at the Society for Neuroscience meeting, San Diego, CA, 2007.

- Pashler, H., **Vul, E.** & Rickard, T. What Does It Take to Link a Cue with a Behavior in Human Skill Acquisition? Paper presented at the Psychonomic Society meeting, Long Beach, CA, 2007.
- Falconbridge, M., **Vul, E.** & MacLeod, D.I.A. Dynamics of adaptation to counterphasing gratings. Paper presented at the OSA Fall Vision Meeting, Berkeley, CA, 2007.
- Vul, E.** & Kanwisher, N. Temporal selection is continuous and deterministic; responses are probabilistic. Paper presented at Mathematical Psychology Society meeting, Irvine, CA, 2007.
- Vul, E.**, Coffey, B., Nieuwenstein, M.R. & Kanwisher, N. The Attentional Blink affects three aspects of selection: Delay, duration, and suppression. Paper presented at the Vision Science Society Meeting, Sarasota, FL, 2007.
- Frank, M.C., **Vul, E.**, & Johnson, S. P. Infants' eye movements during free-viewing as a window into the development of attention. Paper presented at the Vision Science Society meeting, Sarasota, FL, 2007.
- Vul, E.**, & MacLeod, D.I.A. Color without consciousness: Dynamics of the McCollough effect. Paper presented at the Vision Science Society Meeting, Sarasota, FL; May, 2006.
- Carpenter, S.K., Pashler, H., Wixted, J.T., & **Vul, E.** Are tests effective at enhancing learning? Paper presented at the Cognition and Student Learning symposium; Annual Meeting of the American Educational Research Association; San Francisco, CA; April, 2006.
- Vul, E.** & MacLeod, D.I.A. Functional Adaptive Sequential Testing (FAST). Poster presented at the European Conference on Visual Perception, Arezzo, Italy, 2007.
- Vul, E.** & Kanwisher, N. Temporal selection is continuous and deterministic; responses are probabilistic. Poster presented at Cognitive Science Society meeting, Nashville, TN, 2007.
- Carpenter, S.K., Pashler, H., Wixted, J., & **Vul, E.** Item Characteristics and Task Conditions that Predict Forgetting. Poster presented at the Institute of Education Sciences, Washington, DC, 2007.
- Carpenter, S.K., Pashler, H., Wixted, J., & **Vul, E.** Facts, Faces, and Obscure Places: Item Characteristics That Predict Rate of Forgetting. Poster presented at the annual meeting of the American Psychological Society, Washington, DC., 2007.
- Vul, E.** Temporal selection is continuous and deterministic; responses are discrete and probabilistic. Poster presented at the International Conference on Cognitive and Neural Systems, Boston, MA, 2007.
- Krizay, E., **Vul, E.**, Shubel, E., & MacLeod, D.I.A. Two timescales of orientation contingent color adaptation. Poster presented at the Vision Science Society meeting, Sarasota, FL, 2007.
- Carpenter, S. K., Pashler, H., & **Vul, E.** The effects of test timing and feedback timing on the learning of obscure facts. Poster presented at the annual meeting of the Psychonomic Society, Houston, TX; November, 2006.
- Vul, E.**, Konkle, T., Love, A., Williams, A., & Nieuwenstein, M. Quantitative prediction of errors in RSVP: modeling the time course of suppression during the attentional blink. Poster presented at the European Conference on Visual Perception, St Peterburg, Russia, August, 2006.
- Carpenter, S.K., Pashler, H., & **Vul, E.** What types of learning are enhanced by a cued recall test? Poster presented at the Association for Psychological Science Meeting, New York, NY; May, 2006.

- Vul, E.** & MacLeod, D.I.A. Contingent aftereffects distinguish conscious from preconscious color processing. Poster presented at the Cognitive Neuroscience Society Meeting, San Francisco, CA; April, 2006.
- Cepeda, N.J., Pashler, H., & **Vul, E.** Distributed Practice and Long-Term Retention: Joint Effects of Inter-Study Interval and Retention Interval. Poster presented at the Psychonomic Society Meeting, Toronto, Canada: November, 2005.
- Carpenter, S.K., Pashler, H, Wixted, J.T, & **Vul, E.** Testing Effect: Enhanced Retention or Attenuated Forgetting? Poster presented at the Psychonomic Society Meeting, Toronto, Canada: November, 2005.
- Vul, E.** & Pashler, H. Incubation benefits verbal problem solving only when subjects are misguided. Poster presented at the American Psychological Society Meeting, Los Angeles, CA: May, 2005.

Colloquia and Lectures

MIT Cognitive Lunch	02/2008
"Uncertainty in Attention, Memory, and Pub Trivia."	
University of Sydney, Psychology Department Colloquium (Sydney, Australia)	01/2008
"Probability distributions in the head: studying representation with visual selective attention"	
MACCS Attention Seminar, Macquarie University (Sydney, Australia)	01/2008
"Probability distributions in the head: studying representation with visual selective attention"	
UCSD Psychology Cognitive Brown Bag	11/2007
"Probability distributions in the head: studying representation with visual selective attention (among other things)"	
Yale Psychology Cognitive Lunch	09/2007
"Probability distributions in the head: studying representation with visual selective attention"	
MIT Cognitive Lunch	02/2007
"FAST: Functional Adaptive Sequential Testing."	
MIT Cognitive Lunch	12/2006
"Selecting subsets of time: Deficits during the attentional blink."	
Harvard Visual Attention Laboratory Seminar Series	12/2005
"Color without consciousness: aftereffects distinguish conscious from pre-conscious cortical processing."	
MIT Cognitive Lunch	10/2005
"Color without consciousness: aftereffects distinguish conscious from pre-conscious cortical processing."	

Ad hoc Reviewer

Proceedings of the National Academy of Sciences
 European Cognitive Science Conference
 Cognitive Science Society Conference
 Psychological Science
 Journal of Experimental Psychology: Human Perception and Performance

Association Membership

Cognitive Science Society	Student Member	06/2006
Society for Neuroscience	Student Member	05/2006

July, 2008

Cognitive Neuroscience Society	Student Member	08/2005
Vision Sciences Society	Student Member	09/2004
Association for Psychological Science	Student Affiliate	04/2004
American Psychological Association	Student Affiliate	08/2007

Teaching and Service

Graduate teaching-assistant: Spring 2008. *9.35 Sensation and Perception*. MIT, Brain and Cognitive Sciences.

Co-instructor: November, 2007. *A hands-on introduction to the brain* (Neuroanatomy). MIT Educational Studies Program.

Co-instructor: November, 2005. *Marketing, marriage, and electrocution: Why the choices you make are not your own* (Social psychology). MIT Educational Studies Program.

Graduate teaching-assistant: Spring 2007. *9.00 Introduction to Psychology*. MIT, Brain and Cognitive Sciences.

Cognitive Graduate Representative, 2006-2007, MIT Department of Brain and Cognitive Sciences.