



## EVAN M. PECK

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Human-Computer Interaction  
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## EDUCATION

### M.S./PH.D., COMPUTER SCIENCE, TUFTS UNIVERSITY (2008 - CURRENT)

**Concentration:** Human-Computer Interaction

**Advisor:** Robert Jacob

**Masters Project:** *WTFrustration: Using Electroencephalography (EEG) to Measure Frustration in a Computer Task.*

**Qualifying Exams:**

- Complexity Theory - Ben Hescott
- Human-Computer Interaction - Robert Jacob
- Visualization - Sara Su

### B.S., COMPUTER SCIENCE, GORDON COLLEGE (2004 - 2008)

**Minor:** English - Creative Writing

**Senior Thesis:** *The Pebbling Game - Solving Graph Theory Problems with Casual Online Games*

## RESEARCH EXPERIENCE

### Tufts University, HCI Research Group (September 2008 - Present)

**Research Assistant (Spring 2010 - Present)**

**Advisor:** Robert Jacob

- Researching brain-computer interfaces using fNIRS as passive user input to realtime interfaces.

*Current Interests (very general description):*

- Measuring cognitive states for user interface evaluation.
- Creating interfaces that adapt to our situational cognitive abilities.

### Gordon College, Senior Thesis (September 2007 - May 2008)

**Advisors:** Charles Cusack, Russell Bjork

*Human Computing Games*

- Researched the combination of human computing and casual online gaming to solve graph theory problems.
- Created a game prototype: *The Pebbling Game*, that used gameplay and user intelligence to solve instances of graph pebbling problems.

### Hope College, Undergraduate Researcher (May 2007 - August 2007)

**Advisor:** Charles Cusack

*Volunteer Computer Games*

- Researched the combination of distributed computing with the accessibility and entertainment of casual, online games.
- Created a game prototype, *Wildfire Wally*, that used gameplay and a volunteer computing algorithm to solve complex maximum clique problems.
- Established a game design paradigm for creating volunteer computing games (see *Publications*)

## **AWARDS**

- Best Poster Award, InfoVis, 2011
- Dean's Fellowship, Tufts University, 2008
- Magna Cum Laude, Gordon College, 2008
- Dean's Honor List, Gordon College, 2004-2008

## **PAPERS AND ARTICLES**

1. Peck, E.M., Solovey, E.T., Girouard, A., Hirshfield, L., Chauncey, K., Sassaroli, A., Fantini, Jacob, R.J.K. "Your Brain, Your Computer, and You," *Computer*, vol. 43, no. 12, pp.86-89, Dec. 2010.
2. Sassaroli, A., Zheng, F., Girouard, A., Solovey, E.T., Chauncey, K., Hirshfield, L., Peck, E.M., Jacob, R.J.K., Fantini, S. "Application of Correlation Analysis Tools for the Classification of Mental Workloads in Functional Near-Infrared Spectroscopy." in *Digital Holography and Three-Dimensional Imaging*, OSA Technical Digest. Optical Society of America, 2010.
3. Cusack, C., Peck, E.M., and Riolo, M. "Volunteer Computing Games: Merging Online Casual Gaming with Volunteer Computing." Presented at *Meaningful Play*, October 2008. Published in Conference Proceedings.
4. Peck, E.M. and Giberson, K. "Faith in the Halls of Science: A Conversation with Ian Hutchinson." *Perspectives on Science and Christian Faith: The Journal of the American Scientific Affiliation*, September 2008.
5. Peck, E.M., Riolo, M., and Cusack, C. "Wildfire Wally: A Volunteer Computing Game." Presented at *Future Play: International Conference on the Future of Game Design and Technology*, November 2007. Published in Conference Proceedings.

## **WORKSHOP PAPERS AND POSTERS**

1. Peck, E.M., Solovey, E.T., Su, S., Jacob, R.J.K., and Chang, R. "Near to the Brain: Functional Near-Infrared Spectroscopy as a Lightweight Brain Imaging Technique for Visualization" Poster to be presented at *InfoVis 2011*. 2011. **Best Poster Award**
2. Peck, E.M., Lalooses, F., Chauncey, K. "Framing Meaningful Adaptation in a Social Context" *Proc. ACM CHI 2011, Workshop on Brain and Body Interfaces: Designing for Meaningful Interaction*. 2011.
3. Chauncey, K., Peck, E.M. "Access and Analysis: The Ethics of Brain-Computer Interfaces" *Proc. ACM CHI 2011, Workshop on Brain and Body Interfaces: Designing for Meaningful Interaction*. 2011.
4. Cusack, C., Foster, A., Largent, J., Browder, K., and Peck, E.M. "Pebble It!" Game Presented at *Meaningful Play 2008 Game Exhibition*. October 2008.

## **OTHER**

1. Peck, E.M., Solovey, E.T. Neuroscience and Computing. *XRDS*. Volume 18, No. 1. Fall 2011.
2. Peck, E.M., Solovey, E.T. The Sensorium. *XRDS*. Volume 18, No. 1. Fall 2011.
3. Peck, E.M., Chauncey, K., Girouard, A., Gulotta, R., Lalooses, F., Solovey, E.T., Weaver, D., and Jacob, R. "From Brains to Bytes," *ACM XRDS*. 2010.
4. Girouard, A., Solovey, E., Hirshfield, L., Peck E.M., Chauncey, K., Sassaroli, A., Fantini, S., and Jacob, R.J.K "From Brain Signals to Adaptive Interfaces: Using fNIRS in HCI," in *(B+H)CI: The Hu-*

man in *Brain-Computer Interfaces and the Brain in Human-Computer Interaction*, ed. A. Nijholt, Springer 2010.

### **VOLUNTEER WORK**

- *Editor*: Special Issue Editor, XRDS. Fall 2011.
- *Committee*: TEI 2012: SV Chair
- *Program Committee*: CHI 2011-2012: Works-in-Progress
- *Reviewer*: CHI, TEI, UIST
- *Student Volunteer*: CHI 2010-2011, VisWeek 2011

### **TEACHING EXPERIENCE**

#### **Teaching Assistant, Tufts University (September 2008 - December 2009)**

*COMP 106: Object-Oriented Programming for GUIs* (Sept. 2008 - Dec. 2008, Sept. 2009 - Dec. 2009)

- Designed and graded all homework assignments, including semester long project
- Held regular office hours

*COMP 15: Data Structures* (June 2009 - August 2009)

- Answered questions during lab sessions.
- Graded labs

• Held regular office hours

*COMP 11: Introduction to Computer Science* (June 2009 - August 2009)

- Answered questions during lab sessions.
- Graded labs, projects, and written assignments
- Held regular office hours.

*COMP 10: Exploring Computer Science* (July 2009 - August 2009)

- Answered questions during lab sessions.

*COMP 171: Human-Computer Interaction* (January 2009 - May 2009)

- Designed and graded all homework assignments, including a semester long project.
- Held regular office hours.

#### **Teaching Assistant, Gordon College (September 2005 - May 2007)**

*Introduction to Programming* (January 2007 - May 2007)

- Answered questions during lab sessions.
- Created and ran additional project help sessions.

*Introduction to Computer Science* (Sept. 2005 - Dec. 2005, Sept. 2006 - Dec. 2006)

- Answered questions during lab sessions.
- Created and ran additional project help sessions.
- Graded homework assignments and lab work.

### **GRADUATE LEVEL COURSES**

- *COMP 250: Adaptive User Interfaces* (Fall 2011)
- *COMP 150: Information Visualization*
- *COMP 250: Brain-Computer Interfaces*
- *PSY 129: Cognitive Neuroscience*
- *COMP 145: Technology Tools for Learning*
- *COMP 150: Evolution of Cognitive Processes*
- *COMP 150: Foundations of Scientific Visualization*
- *COMP 135: Introduction to Machine Learning*
- *COMP 160: Algorithms*
- *ENP 149: Interface Design for Complex Systems*

### **PROFESSIONAL MEMBERSHIP**

- Association for Computing Machinery (ACM)