

## Orit Shaer

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### Education

- |           |   |                  |
|-----------|---|------------------|
| 2005-2008 | <b>TUFTS UNIVERSITY, DEPARTMENT OF COMPUTER SCIENCE</b><br>PhD in Computer Science<br>Dissertation: <i>A Visual Language for Programming Tangible User Interfaces</i> . Advisor Robert Jacob. | Medford, MA      |
| 2002-2004 | <b>TUFTS UNIVERSITY, DEPARTMENT OF COMPUTER SCIENCE</b><br>Master of Science in Computer Science  | Medford, MA      |
| 1998-2001 | <b>THE ACADEMIC COLLEGE OF TEL-AVIV</b><br>Bachelor of Arts degree in Computer Science  | Tel-Aviv, Israel |

### Experience

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|--------------|---|---------------|
| 2008-Present | <b>WELLESLEY COLLEGE, DEPARTMENT OF COMPUTER SCIENCE</b><br>Claire Booth Luce Assistant Professor | Wellesley, MA |
| 2003-2008    | <b>TUFTS UNIVERSITY, DEPARTMENT OF COMPUTER SCIENCE</b><br>Research Assistant                     | Medford, MA   |
| 2005-2006    | <b>UNIVERSITY COLLEGE LONDON, INTERACTION CENTRE</b><br>Honorary Research Fellow                  | London, UK    |
| 2003-2004    | <b>UNIVERSITY OF WASHINGTON, DESIGN MACHINE GROUP</b><br>Visiting Researcher                      | Seattle, WA   |
| 2000-2001    | <b>ORBOTECH LTD. R&amp;D DIVISION</b><br>System Engineer  | Yavne, Israel |
| 1998-2000    | Software Developer  |               |

### Awards

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| 2009 | Claire Luce Booth Professorship in Computer Science  |
| 2009 | Wellesley College Small Brachman-Hoffman Grant, "Enhancing Scientific Discovery through Reality-Based Interaction" |
| 2009 | Wellesley College ERD grant (with Franklyn Turbak), "Experimenting with Mobile Phones"                             |
| 2009 | Wellesley College Faculty Research Award, "Enhancing Human-Computer Interactions through Whole-body Movement"      |
| 2007 | Outstanding Graduate Contributor to Engineering Education, Tufts University.                                       |

### Professional Activities

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| <b>Guest Editor</b>       | ACM TOCHI, Special Issue on User Interface Description Languages for Next Generation User Interfaces, Spring 2009.   |
| <b>Panelist</b>           | NSF Broadening Participation in Computing, Summer 2009.  |
| <b>Program Committee</b>  | International Conference on Tangible and Embedded Interaction (TEI), <b>Co-Chair</b> , 2010.<br>ACM CHI Workshop on Evaluating Reality-Based Interfaces, 2009.<br>International Conference on Tangible and Embedded Interaction (TEI) 2007-2008.<br>Computer Aided Design of User Interfaces (CADUI) 2008. |
| <b>Workshop Organizer</b> | ACM CHI Workshop on User Interface Description Languages for Next Generation User Interfaces (with Rob Jacob, Mark Green, Kris Luyten)   |

**Reviewer** ACM CHI 2005-2009, ACM TEI 2007-2008  
The Journal of Personal and Ubiquitous Computing, International Journal of Arts and Technology,  
The Journal of Advances in Human-Computer Interaction, IwC Journal (Interacting with Computers)  
IEEE Transactions on Systems, Man, and Cybernetics  
Artificial Intelligence for Engineering Design, Analysis and Manufacturing

### Invited Talks (2008-2009)

**A Specification Paradigm for the Design and Implementation of Tangible User Interfaces**

MIT CSAIL, HCI Seminar Series, May 2009.

**Specifying and Programming Next Generation User Interfaces**

North Eastern University, Computer Science Department, CISTers, November 2008.

**Reality Based Interaction: Understanding Next Generation User Interfaces**

BostonCHI, Sun Microsystems, June 2008.

## Selected Publications

### Dissertation

- [O. Shaer](#), “A Visual Language for Specifying and Programming Tangible User Interfaces”, Doctoral Thesis, Computer Science Department, Tufts University, Medford, MA, 2008.

### Journal and Magazine Articles (Peer Reviewed)

- [O. Shaer](#), R.J.K Jacob, “A Specification Paradigm for the Design and Implementation of Tangible User Interfaces”, ACM Transactions on Computer-Human Interaction (TOCHI), Fall 2009 (in print).
- [O. Shaer](#), E. Hornecker, “Tangible User Interfaces: Past, Present, and Future Directions”, Foundations and Trends in Human-Computer Interaction, Fall 2009 (under review).
- [O. Shaer](#), M.S. Horn, R.J.K. Jacob, “Tangible User Interface Laboratory: Teaching Interaction Design in Practice”, *AIEDAM Special Issue on Tangible Interaction for Design*, Spring 2009, Vol 23, No. 2.
- [O. Shaer](#), N. Leland , E.H Calvillo and R.J.K. Jacob, "The TAC Paradigm: Specifying Tangible User Interfaces", *Personal and Ubiquitous Computing* , vol. 8, no. 5, pp. 359-369, September 2004.
- R.J.K. Jacob, A. Girouard, L.M. Hirshfield, M. Horn, [O. Shaer](#), E.T. Solovey, and J. Zigelbaum, “What Is the Next Generation of Human-Computer Interaction?”, *interactions*, vol. 14, no. 3, pp. 53-58, May 2007.

### Conference Papers (Peer Reviewed)

- R.J.K. Jacob, A. Girouard, L.M. Hirshfield, M.S. Horn, [O. Shaer](#), E.T. Solovey, and J. Zigelbaum, “Reality-Based Interaction: A Framework for Post-WIMP Interfaces”, ACM CHI 2008 Human Factors in Computing Systems Conference, ACM Press, April 2008 (in print). (Acceptance rate 22%)
- [O. Shaer](#), R.J.K Jacob, M. Green, K. Luyten, “User Interface Description Languages for Next Generation User Interfaces”, ACM CHI 2008 Human Factors in Computing Systems Conference, Workshop Abstract, April 2008. (Acceptance rate 40%)
- A. Bean, S. Siddiqi, A. Chowdhury, B. Whited, [O. Shaer](#), R.J.K Jacob “Marble Track Audio Manipulator (MTAM): A Tangible User Interface for Audio Composition”, Proc. TEI 2008 International Conference on Tangible and Embedded Interaction, February 2008.
- R.J.K. Jacob, A. Girouard, L.M. Hirshfield, M.S. Horn, [O. Shaer](#), E.T. Solovey, and J. Zigelbaum, “Reality-Based Interaction: Unifying the New Generation of Interaction Styles,” ACM CHI 2007 Human Factors in Computing Systems Conference, ACM Press, Work in Progress paper, April 2007. (Acceptance rate 40%)
- A. Girouard, E.T. Solovey, L. Hirshfield, S. Ecott, [O. Shaer](#), and R.J.K. Jacob, “Smart Blocks: A Tangible Mathematical Manipulative,” Proc. TEI 2007 International Conference on Tangible and Embedded Interaction, February 2007.
- J. Zigelbaum, M. Horn, [O. Shaer](#), and R.J.K. Jacob, “The Tangible Video Editor: Collaborative Video Editing with Active Tokens,” Proc. TEI 2007 First International Conference on Tangible and Embedded Interaction, February 2007.
- [O. Shaer](#) and R.J.K. Jacob, “A Visual Language for Programming Reality-Based Interaction”, IEEE Symposium on Visual Languages and Human-Centric Computing, Graduate Student Consortium, September 2006.
- [O. Shaer](#) “A Framework for Building Reality-Based Interfaces for Wireless-Grid Applications”, ACM CHI 2005, Doctoral Consortium, April 2005. (Acceptance rate 24%).

## Workshop Papers (Peer Reviewed)

- O. Shaer, “Exploring Reality-Based Interaction through Whole-Body Movement”, ACM CHI 2009 Workshop on Whole Body Interaction, ACM CHI, April 2009.
- E.T. Solovey, O. Shaer, A. Girouard, L.M. Hirshfield, M.S. Horn, J. Zigelbaum, R.J.K. Jacob. “Programming Reality Within the Reality-Based Interaction Framework”, ACM CHI 2009 Workshop on Organic User Interfaces, ACM CHI, April 2009.
- M.S. Horn, O. Shaer, A. Girouard, L.M. Hirshfield, E.T. Solovey, J. Zigelbaum, and R.J.K. Jacob, “Putting Tangible User Interfaces in Context: A Unifying Framework for Next Generation HCI”, Proc. ACM CHI 2007 Workshop on Tangible User Interfaces in Context and Theory, April 2007.
- O. Shaer and R.J.K. Jacob, "Toward a Software Model and a Specification Language for Next-Generation User Interfaces," Proc. ACM CHI 2005 Workshop on The Future of User Interface Software Tools, April 2005.