

# Lisa Anthony

# Curriculum Vitae

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## CURRENT POSITION

**Assistant Professor** 2013-present  
Department of Computer & Information Science & Engineering, University of Florida, Gainesville FL

## RESEARCH INTERESTS

Human-computer interaction, human-centered computing; child-computer interaction; pen, touch, and gesture interaction and recognition; natural user interaction; multimodal interaction; mobile computing; surface computing; educational games; context-sensitive computing.

## TEACHING INTERESTS

Human-computer interaction history, methods and research; linking human-computer interaction and computer science; interface and interaction design, tools and methods; mobile development; interaction on small screens; pen, touch, and gesture interaction and recognition.

## EDUCATION

**Ph.D.**, Human-Computer Interaction, Carnegie Mellon University 2002-2008  
Thesis Title: Developing Handwriting-based Intelligent Tutors to Enhance Mathematics Learning  
Committee: Kenneth R. Koedinger (co-chair), Jie Yang (co-chair), Jennifer A. Mankoff, Tom M. Mitchell, Mark D. Gross

**M.S.**, Computer Science, Drexel University 1997-2002  
Thesis Title: Evolving Board Evaluation Functions for a Complex Strategy Game  
Advisor: William C. Regli

**B.S.**, Computer Science, Drexel University 1997-2002  
Official concentrations in Human-Computer Interaction, Software Engineering, and Artificial Intelligence

## ACADEMIC POSITIONS

**Research Assistant Professor**, Information Systems Department, University of Maryland Baltimore County, Baltimore MD 2013

**Post-Doctoral Research Associate**, Information Systems Department, University of Maryland Baltimore County, Baltimore MD 2011-2012

## PUBLICATIONS

### -- Journal Articles

- [J.5] **Anthony, L.**, Brown, Q., Nias, J. and Tate, B. To appear. Children (and Adults) Benefit From Visual Feedback during Gesture Interaction on Mobile Touchscreen Devices. *International Journal of Child-Computer Interaction*, to appear.
- [J.4] **Anthony, L.**, Brown, Q., Tate, B., Nias, J., Brewer, R., and Irwin, G. 2014. Designing Smarter

- Touch-Based Interfaces for Educational Contexts. *Journal of Personal and Ubiquitous Computing: Special Issue on Educational Interfaces, Software, and Technology*, Volume 18, Issue 6, p.1471-1483.
- [J.3] **Anthony, L.**, Yang, J., and Koedinger, K.R. 2012. A Paradigm for a Handwriting-Based Intelligent Tutor. *International Journal of Human-Computer Studies*, Volume 70, Issue 11, November 2012, p.866-887.
- [J.2] **Anthony, L.**, Yang, J., and Koedinger, K.R. 2008. Toward Next-Generation Intelligent Tutors: Adding Natural Handwriting Input. *IEEE Multimedia* Volume 15, Issue 3, July 2008, p.64-68.
- [J.1] **Anthony, L.**, Regli, W.C., John, J.E., and Lombeyda, S.V. 2001. An Approach to Capturing Structure, Behavior and Function of Artifacts in CAD. *Transactions of the ASME, the Journal of Computing and Information Science in Engineering*, Volume 1, Issue 2, June 2001, p.186-192.

### -- Refereed Conference Papers and Notes

- [C.14] Vatavu, R.-D., **Anthony, L.**, and Wobbrock, J.O. 2014. Gesture Heatmaps: Understanding Gesture Performance with Colorful Visualizations. *Proceedings of the ACM International Conference on Multimodal Interaction (ICMI'2014)*, Istanbul, Turkey, 13 Nov 2014, p.172-179. Acceptance rate 39%.
- [C.13] Vatavu, R.-D., **Anthony, L.**, and Wobbrock, J.O. 2013. Relative Accuracy Measures for Stroke Gestures. *Proceedings of the ACM International Conference on Multimodal Interaction (ICMI'2013)*, Sydney, Australia, 11 Dec 2013, p.279-286. Acceptance rate 37%.
- [C.12] **Anthony, L.**, Brown, Q., Nias, J., and Tate, B. 2013. Examining the Need for Visual Feedback during Gesture Interaction on Mobile Touchscreen Devices for Kids. *Proceedings of the International Conference on Interaction Design and Children (IDC'2013)*, New York, NY, 26 June 2013, p.157-164. Acceptance rate 33%.
- [C.11] **Anthony, L.**, Vatavu, R.-D., and Wobbrock, J.O. 2013. Understanding the Consistency of Users' Pen and Finger Stroke Gesture Articulation. *Proceedings of Graphics Interface (GI'2013)*, Regina, Canada, 29 May 2013, p.87-94. Acceptance rate 38%.
- [C.10] **Anthony, L.**, Kim, Y., and Findlater, L. 2013. Analyzing User-Generated YouTube Videos to Understand Touchscreen Use by People with Motor Impairments. *Proceedings of ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'2013)*, Paris, France, 30 Apr 2013, p.1223-1232. Acceptance rate 20%.  
Best Paper Award
- [C.9] **Anthony, L.**, Brown, Q., Nias, J., Tate, B., and Mohan, S. 2012. Interaction and Recognition Challenges in Interpreting Children's Touch and Gesture Input on Mobile Devices. *Proceedings of the ACM International Conference on Interactive Tabletops and Surfaces (ITS'2012)*, Cambridge, MA, 14 Nov 2012, p.225-234. Acceptance rate 29%.
- [C.8] Vatavu, R.-D., **Anthony, L.**, and Wobbrock, J.O. 2012. Gestures as Point Clouds: A \$P Recognizer for User Interface Prototypes. *Proceedings of ACM International Conference on Multimodal Interaction (ICMI'2012)*, Santa Monica, CA, 24 Oct 2012, p.273-278. Acceptance rate non-student full papers 21%.  
Best Paper Award
- [C.7] **Anthony, L.** and Wobbrock, J.O. 2012. \$N and Protractor: a Fast and Accurate Multistroke Recognizer. *Proceedings of Graphics Interface (GI'2012)*, Toronto, Canada, 29 May 2012, p.117-120. Acceptance rate 38%.
- [C.6] **Anthony, L.** and Wobbrock, J.O. 2010. A Lightweight Multistroke Recognizer for User Interface Prototypes. *Proceedings of Graphics Interface (GI'2010)*, Ottawa, Canada, 02 Jun 2010, p.245-

252. Acceptance rate 39%.
- [C.5] **Anthony, L.**, Yang, J., and Koedinger, K.R. 2007. Benefits of Handwritten Input for Students Learning Algebra Equation Solving. *Proceedings of the International Conference on Artificial Intelligence and Education (AIED'2007)*, Los Angeles, CA, 12 Jul 2007, p.521-523. Acceptance rate 29%.
- [C.4] **Anthony, L.**, Yang, J., and Koedinger, K.R. 2006. Towards the Application of a Handwriting Interface for Mathematics Learning. *IEEE Conference on Multimedia and Expo (ICME'2006)*, Toronto, Canada, 12 Jul 2006, p.2077-2080. Acceptance rate 51%.
- [C.3] **Anthony, L.**, Yang, J., and Koedinger, K.R. 2005. Evaluation of Multimodal Input for Entering Mathematical Equations on the Computer. *ACM Conference on Human Factors in Computing Systems (CHI'2005)*, Portland, OR, 6 Apr 2005, p.1184-1187. Acceptance rate 25%.
- [C.2] **Anthony, L.**, Corbett, A., Wagner, A.Z., Stevens, S.M., and Koedinger, K.R. 2004. Student Question-Asking Patterns in an Intelligent Algebra Tutor. *Intelligent Tutoring Systems Conference (ITS'2004)*, Maceio, Brazil, 30 Aug 2004, p.455-467. Acceptance rate 39%.
- [C.1] Shapirshteyn, Y., Foster, C.V., John, J.E., **Anthony, L.**, Regli, W.C. 2000. Building Internet-Based Virtual Environments for Collaborative Design. *Co-Designing Conference*, Coventry, UK, 11 Sep 2000, p.117-122.

#### -- Refereed Conference Posters

- [P.5] Rust, K., Malu, M., **Anthony, L.**, and Findlater, L. 2014. Understanding Child-Defined Gestures and Children's Mental Models for Touchscreen Tabletop Interaction. *Proceedings of the International Conference on Interaction Design and Children (IDC'2014)*, Aarhus, Denmark, 18 Jun 2014, p.201-204. Acceptance rate 43%.
- [P.4] Brewer, R., **Anthony, L.**, Brown, Q., Irwin, G., Nias, J., and Tate, B. 2013. Using Gamification to Motivate Children to Complete Empirical Studies in Lab Environments. *Proceedings of the International Conference on Interaction Design and Children (IDC'2013)*, New York, NY, 25 Jun 2013, p.388-391. Acceptance rate 49%.
- [P.3] **Anthony, L.**, Prasad, S., Hurst, A., and Kuber, R. 2012. A Participatory Design Workshop on Accessible Apps and Games with Students with Learning Disabilities. *Proceedings of the 13<sup>th</sup> International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2012)*, Boulder, CO, 22 Oct 2012, p.253-254. Acceptance rate not available.
- [P.2] Carrington, P., Kuber, R., **Anthony, L.**, Hurst, A., and Prasad, S. 2012. Developing an Interface to Support Procedural Memory Training using a Participatory-Based Approach. *Proceedings of British Computer Society Conference on Human-Computer Interaction (BCS HCI 2012)*, Birmingham, UK, 13 Sep 2012, p. 333-338. Acceptance rate 40%.
- [P.1] Ganesan, S. and **Anthony, L.** 2012. Using the Kinect to Encourage Older Adults to Exercise: A Prototype. *Extended Abstracts of the ACM Conference on Human Factors in Computing Systems (CHI 2012)*, Austin, TX, 5 May 2012, p.2297-2302. Acceptance rate 48%.

#### -- Refereed Workshop Papers

- [W.11] **Anthony, L.** and Brown, Q. 2013. Learning from HCI: Understanding Children's Input Behaviors on Mobile Touchscreen Devices. Paper for "Human-Computer Interaction and the Learning Sciences" workshop, *International Conference on Computer Supported Collaborative Learning (CSCL'2013)*, Madison, WI, 15 June 2013.
- [W.10] Brown, Q., **Anthony, L.**, Nias, J., Tate, B., Brewer, R., and Irwin, G. 2013. Towards Designing

- Adaptive Touch-Based Interfaces. *Proceedings of the ACM SIGCHI 2013 Third Mobile Accessibility Workshop (MOBACC'2013)*, Paris, France, 28 Apr 2013.
- [W.9] Brown, Q., **Anthony, L.**, Brewer, R., Irwin, G., Nias, J., and Tate, B. 2013. Challenges of Replicating Empirical Studies with Children in HCI. *Proceedings of the ACM SIGCHI 2013 RepliCHI Workshop (RepliCHI'2013)*, Paris, France, 27-28 Apr 2013, p.54-58.
- [W.8] Luo, L., Taib, R., **Anthony, L.**, and Lai, J. 2013. Further Investigating Pen Gesture Features Sensitive to Cognitive Load. *Proceedings of the ACM IUI 2013 Workshop on Interacting with Smart Objects (ISO'2013)*, Santa Monica, CA, 19 Mar 2013.
- [W.7] Brown, Q. and **Anthony, L.** 2012. Toward Comparing the Touchscreen Interaction Patterns of Kids and Adults. *Proceedings of the ACM SIGCHI Workshop on Educational Software, Interfaces and Technology (EIST'2012)*, Austin, TX, 05-06 May 2012.
- [W.6] **Anthony, L.**, Carrington, P., Chu, P., Kidd, C., Lai, J., and Sears, A. 2011. Gesture Dynamics: Features Sensitive to Task Difficulty and Correlated with Physiological Sensors. *Proceedings of the ACM ICMI 2011 Workshop on Inferring Cognitive and Emotional States from Multimodal Measures (MMCogEmS'2011)*, Alicante, Spain, 17 Nov 2011.
- [W.5] **Anthony, L.** 2011. Technical and Privacy Challenges of Multimodal Dynamic Adaptive Systems. *Proceedings of the ACM SIGCHI Workshop on Dynamic Accessibility (WODA'2011)*, Vancouver, Canada, 08 May 2011.
- [W.4] **Anthony, L.**, Yang, J., and Koedinger, K.R. 2011. Handwriting Interaction for Math Tutors: Lessons for HCI in Education. *Proceedings of the ACM SIGCHI Workshop on Child-Computer Interaction (UI Technologies and their Impact on Educational Pedagogy'2011)*, Vancouver, Canada, 07 May 2011.
- [W.3] Regli, S.H., Tremoulet, P.D., Samoylov, A., Sharma, K., Stibler, K., and **Anthony, L.** 2010. Medical Intelligence Informatics. *Proceedings of the ACM SIGCHI First International Workshop of Interactive Systems in Healthcare (WISH'2010)*, Atlanta, GA, 10 Apr 2010, p.145-148.
- [W.2] **Anthony, L.**, Yang, J., and Koedinger, K.R. 2007. Adapting Handwriting Recognition for Applications in Algebra Learning. *Proceedings of the ACM Workshop on Educational Multimedia and Multimedia Education (EMME'2007)*, Augsburg, Germany, 28 Sep 2007, p.47-56.
- [W.1] Foster, C.V., Hayes, E., McWherter, D., Peabody, M., Shapirsteyn, Y., **Anthony, L.**, and Regli, W.C. 2001. Discovering Knowledge in Design and Manufacturing Repositories. *International Joint Conferences on Artificial Intelligence (IJCAI) Workshop on Knowledge Discovery from Distributed, Heterogeneous, Dynamic, Autonomous Data Sources*, Seattle, WA, ed. V. Honavar, 06 Aug 2001, p.40-42.

#### -- Theses

- [T.2] **Anthony, L.** 2008. *Developing Handwriting-based Intelligent Tutors to Enhance Mathematics Learning*. Ph.D. thesis, Human-Computer Interaction Institute, School of Computer Science, Carnegie Mellon University. December 2008. (Technical Report CMU-HCII-08-105.)
- [T.1] **Anthony, L.** 2002. *Evolving Board Evaluation Functions for a Complex Strategy Game*. Master's thesis, Department of Computer Science, Drexel University. December 2002.

#### -- Book Chapters

- [B.1] **Anthony, L.**, Sharma, K., Stibler, K., Regli, S.H., Tremoulet, P. D., Gilbertson, D.G., and Gerhardt, R.T. 2010. Enabling Pre-Hospital Documentation via Spoken Language

Understanding on the Modern Battlefield. In *Advances in Human Factors and Ergonomics in Healthcare (Proceedings of the International Conference on Applied Human Factors & Ergonomics - AHFE'2010)*, ed. V.G. Duffy, CRC Press, p.642-651.

### -- Refereed Panels, Workshops, Events Organized

- [Z.1] **Anthony, L.**, Kane, S., and Hurst, A. 2012. Accessibility in the iSchools: Not Just for People with Disabilities? Alternative event organized at *iConference 2012*, Toronto, Canada.

### -- Other Articles, Tech Reports, Letters, etc.

- [O.7] **Anthony, L.**, Carrington, P., Chu, P., Kidd, C., Lai, J., and Sears, A. 2011. Detecting Events of Interest with Physiological Sensors in a Real-World Email Search Task. *Technical Report UMBC-IS-TR-007*, 10 Oct 2011.
- [O.6] **Anthony, L.**, Yang, J., and Koedinger, K.R. 2009. Interspersing Annotated Worked Examples in Algebra Problem Solving. Presented as part of the *Annual Conference of the European Association for Research on Learning and Instruction (EARLI'2009)*, Symposium entitled, "In Vivo Experimentation on Worked Examples Across Domains," Salden, R.J.C.M. and Koedinger, K.R., eds., Amsterdam, the Netherlands, 26 Aug 2009.
- [O.5] **Anthony, L.**, Yang, J., and Koedinger, K.R. 2008. How Handwriting Input Helps Students Learning Algebra Equation Solving. *Technical Report CMU-HCII-08-100*, 1 Mar 2008.
- [O.4] Adcock, J., Pickens, J., Cooper, M., **Anthony, L.**, Chen, F., and Qvarfordt, P. 2008. FXPAL Interactive Search Experiments for TRECVID 2007. *Proceedings of the NIST TRECVID 2007 Workshop*, 1 Mar 2008.
- [O.3] **Anthony, L.**, Yang, J., and Koedinger, K.R. 2006. Entering Mathematical Equations Multimodally: Results on Usability and Interaction Patterns. *Technical Report CMU-HCII-06-101*, 15 Mar 2006.
- [O.2] **Anthony, L.**, Regli, W.C., John, J.E., and Lombeyda, S.V. 2001. CUP: A Computer-Aided Conceptual Design Environment for Assembly Modeling. *Technical Report DU-MCS-01-05*, 01 Sep 2001.
- [O.1] **Anthony, L.**, Cicirello, V.A., John, J.E., Qin, X., Shapirshteyn, Y., Zaychik, V., and Regli, W.C. 2000. The Engineering Design Repositories Project. *National Science Foundation Design and Manufacturing Grantees Conference*, Vancouver, BC, Canada, 03 Jan 2000.

### GRANTS AND GIFTS

[G.5]	<b>HCC: SMALL: COLLABORATIVE: Mobile Gesture Interaction for Kids: Sensing, Recognition, and Error Recovery - Participant Support</b> Sub-award from Bowie State University (National Science Foundation (NSF), CISE IIS award #1218664)	\$1,500	2015
[G.4]	<b>Gift, Wacom Inc.</b>	\$2,796	2014
[G.3]	<b>Gift, Intel Corporation</b>	\$2,990	2014
[G.2]	<b>HCC: SMALL: COLLABORATIVE: Mobile Gesture Interaction for Kids: Sensing, Recognition, and Error Recovery</b> [Collaborative Proposal, PI with Quincy Brown (Bowie State University)] National Science Foundation (NSF), CISE IIS awards #IIS-1218395 / 1433228 and IIS-1218664 UMBC / UF portion: \$234,258	\$498,046	2012-2015

- [G.1] **Participatory Design Workshop on Accessible Apps & Games** \$5,100 2011  
 [Co-PI with Sapna Prasad (Landmark College), Ravi Kuber (UMBC), Amy Hurst (UMBC)]  
 Alliance for Access to Computing Careers (AccessComputing@UW, National Science Foundation (NSF), CISE BPC awards #CNS-0540615, CNS-0837508, CNS-1042260)

## PAPER AWARDS

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- Best of 2013**, ACM Computing Reviews 2013  
[http://computingreviews.com/recommend/bestof/notableitems\\_2013.cfm](http://computingreviews.com/recommend/bestof/notableitems_2013.cfm)
- Best Paper Award**, ACM SIGCHI Conference on Human Factors in Computing Systems (CHI) [top 1%] 2013
- Best Paper Award**, ACM International Conference on Multimodal Interaction (ICMI) 2012

## FELLOWSHIPS, PRIZES, AND AWARDS

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- Special Recognition for Exceptional Reviewing**, ACM Conference on Designing Interactive Systems (DIS) 2014
- NSF Scholarship**, Anita Borg Institute Grace Hopper Celebration of Women in Computing 2012
- NSF Travel Grant**, ACM International Conference on Multimodal Interaction (ICMI) 2005
- NSF Graduate Research Fellowship**, National Science Foundation (NSF) 2002-2005
- Honors Program**, Drexel University 1998-2002
- Dean's List**, Drexel University College of Arts & Science 1997-2002
- Delaware Valley Technical Recruiters Network Annual Award for Computer Science**, Drexel University 2001
- National Outstanding Undergraduate**, Computing Research Association 2000
- Summer Undergraduate Research Fellowship, Grant 70-NAN-B0H0057, "Knowledge-Based Design,"** National Institute of Standards and Technology (NIST) 2000
- James W. Lindemer Endowed Scholarship**, Drexel University 2000
- Senior First Honors Award**, Drexel University 2000
- Research Fellowship**, AT&T Labs Internet Platforms Technology Organization (IPTO) 2000
- Research Experience for Undergraduates Supplement under DMI-9713718, Design Classification for Hybrid Generative / Variant Process Planning**, National Science Foundation (NSF), Directorate for Engineering (ENG), Division of Design, Manufacturing and Industrial Innovation (DMI) 1999
- Award for Outstanding Industry, Leadership, and Academics in Computer Science**, Drexel University 1999
- Harry E. Muchnic Scholarship**, Drexel University 1999

## INVITED TALKS AND PRESENTATIONS

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### -- External

- [E.39] "Understanding, Designing, and Developing Natural User Interactions for Children" Nov. 7-8, 2014  
**Invited Keynote Speaker**, "Designing the Digital Future: A Human-centered Approach to Informatics," Obermann Center for Advanced Studies, University of Iowa, Iowa City, Iowa

- [E.38] "Understanding, Designing, and Developing Natural User Interactions for Children" Dec. 16, 2013  
**Invited Talk**, National Information Communications Technology of Australia (NICTA), Sydney, Australia
- [E.37] "Relative Accuracy Measures for Stroke Gestures" Dec. 11, 2013  
**Paper Presentation**, ACM International Conference on Multimodal Interaction, Sydney, Australia (*Acceptance rate 20%.*)
- [E.36] "Examining the Need for Visual Feedback during Gesture Interaction on Mobile Touchscreen Devices for Kids" Jun. 26, 2013  
**Paper Presentation**, Interaction Design & Children 2013 Conference, New York NY
- [E.35] "Analyzing User-Generated YouTube Videos to Understand Touchscreen Use by People with Motor Impairments" Apr. 30, 2012  
**Paper Presentation**, ACM SIGCHI Conference, Paris, France
- [E.34] "Understanding, Designing, and Developing Natural User Interactions for Children" Mar. 29, 2013  
**Invited Talk**, Department of Computer & Information Science & Engineering, University of Florida, Gainesville FL
- [E.33] "Understanding, Designing, and Developing Natural User Interactions for Children" Mar. 8, 2013  
**Invited Talk**, Department of Computer Science and Engineering, University of Nevada, Reno, Reno NV
- [E.32] "Understanding, Designing, and Developing Natural User Interactions for Children" Feb. 28, 2013  
**Invited Talk**, HCIL Brown Bag Seminar, College of Information Studies, University of Maryland College Park, College Park MD
- [E.31] "Understanding, Designing, and Developing Natural User Interactions for Children" Jan. 24, 2013  
**Invited Talk**, Department of Information Systems, New Jersey Institute of Technology, Newark NJ
- [E.30] "Understanding, Designing, and Developing Natural User Interactions for Children" Dec. 10, 2012  
**Invited Talk**, Computer Science Department, Princeton University, Princeton NJ
- [E.29] "Understanding, Designing, and Developing Natural User Interactions for Children" Nov. 27, 2012  
**Invited Talk**, Department of Library and Information Science, School of Communication and Information, Rutgers University, New Brunswick NJ
- [E.28] "Interaction and Recognition Challenges in Interpreting Children's Touch and Gesture Input on Mobile Devices" Nov. 14, 2012  
**Invited Speaker**, User Interface Tea, Computer Science and Artificial Intelligence Laboratory (CSAIL), Massachusetts Institute of Technology, Cambridge MA
- [E.27] "Interaction and Recognition Challenges in Interpreting Children's Touch and Gesture Input on Mobile Devices" Nov. 14, 2012  
**Paper Presentation**, ACM International Conference on Interactive Tabletops and Surfaces, Cambridge MA
- [E.26] "Understanding, Designing, and Developing Natural User Interactions for Children" Nov. 2, 2012  
**Invited Talk**, Human-Centered Computing Division, School of Computing, Clemson University, Clemson SC
- [E.25] "Gestures as Point Clouds: A  $\mathcal{S}P$  Recognizer for User Interface Prototypes" Oct. 24, 2012  
**Paper Presentation**, ACM International Conference on Multimodal Interaction, Santa Monica CA
- [E.24] "Understanding, Designing, and Developing Natural User Interactions for Children" Oct. 22,

- Invited Talk**, Donald Bren School of Information and Computer Sciences, University of California, Irvine, Irvine CA 2012
- [E.23] “Understanding, Designing, and Developing Natural User Interactions for Children” **Invited Talk**, Department of Computer Science and Engineering, Texas A&M University, College Station TX Oct. 15, 2012
- [E.22] “Understanding How Children Use Touchscreens” **Presentation**, Grace Hopper Celebration of Women in Computing, Baltimore MD (Acceptance rate 13%.) Oct. 3, 2012
- [E.21] “Understanding, Designing, and Developing Natural User Interactions for Children” **Invited Talk**, Department of Computer Science Seminar, University of Manitoba, Winnipeg, Canada July 5, 2012
- [E.20] “\$N-Protractor: A Fast and Accurate Multistroke Recognizer” **Paper Presentation**, Graphics Interface 2012 Conference, Toronto, Canada May 29, 2012
- [E.19] “Towards Comparing Touchscreen Interaction Patterns of Kids and Adults” **Paper Presentation**, ACM SIGCHI Workshop on Educational Interfaces, Software, and Technology, Austin TX May 5, 2012
- [E.18] “Engaging Users via Alternative Input Modalities for Learning and Gaming” **Invited Talk**, Division of Science, Information Arts and Technology, University of Baltimore, Baltimore MD Feb. 2, 2012
- [E.17] “Gesture Dynamics: Features Sensitive to Task Difficulty and Correlated with Physiological Sensors” **Paper Presentation**, ACM ICMI Workshop on Inferring Cognitive and Emotional States from Multimodal Measures, Alicante, Spain Nov. 17, 2011
- [E.16] “Technical and Privacy Challenges of Multimodal Dynamic Adaptive Systems” **Paper Presentation**, ACM SIGCHI Workshop on Dynamic Accessibility, Vancouver, Canada May 8, 2011
- [E.15] “Handwriting Interaction for Math Tutors: Lessons for HCI in Education” **Paper Presentation**, ACM SIGCHI Workshop on Child-Computer Interaction, Vancouver, Canada May 7, 2011
- [E.14] “Enabling Pre-Hospital Documentation via Spoken Language Understanding on the Modern Battlefield” **Paper Presentation**, AHFE 2010 Conference on Applied Human Factors & Ergonomics in Healthcare, Miami FL Jul. 19, 2010
- [E.13] “A Lightweight Multistroke Recognizer for User Interface Prototypes” **Paper Presentation**, Graphics Interface 2010 Conference, Ottawa, Canada Jun. 2, 2010
- [E.12] “Interspersing Annotated Worked Examples in Algebra Problem Solving” **Symposium Presentation**, EARLI 2009 Biennial Conference for Research on Learning and Instruction, Amsterdam, the Netherlands Aug. 26, 2009
- [E.11] “Adapting Handwriting Recognition for Applications in Algebra Learning” **Demonstration**, ACM Multimedia Workshop on Educational Multimedia and Multimedia Education, Augsburg, Germany Sep. 28, 2007
- [E.10] “Adapting Handwriting Recognition for Applications in Algebra Learning” **Paper Presentation**, ACM Multimedia Workshop on Educational Multimedia and Sep. 28, 2007



- Multimedia Education, Augsburg, Germany
- [E.9] “Developing Handwriting-based Intelligent Tutors to Enhance Mathematics Learning” Aug. 22, 2007  
**Invited Talk**, User Sciences and Experiences Research Group, IBM Almaden, San Jose CA
- [E.8] “Benefits of Handwritten Input for Students Learning Algebra Equation Solving” Jul. 12, 2007  
**Poster Presentation**, Artificial Intelligence in Education Conference, Los Angeles CA
- [E.7] “How Handwriting Helps Learning: Evidence from a User Study in Algebra Equation Solving” Oct. 13, 2006  
**Poster Presentation**, NSF Science of Learning Centers Satellite Symposium at the Society for Neuroscience Annual Meeting, Atlanta GA
- [E.6] “Toward the Application of a Handwriting Interface for Mathematics Learning” Jul. 12, 2006  
**Paper Presentation**, IEEE International Conference on Multimedia and Expo, Toronto, Canada
- [E.5] “Evaluation of Multimodal Input for Entering Mathematical Equations on the Computer” Apr. 6, 2005  
**Paper Presentation**, ACM SIGCHI Conference, Portland OR
- [E.4] “Student Questions in Problem Solving: Evidence of Student Orientation” Sep. 2, 2004  
**Panelist**, Intelligent Tutoring Systems Conference, Maceio, Brazil
- [E.3] “Student Question-Asking Patterns in an Intelligent Algebra Tutor” Aug. 30, 2004  
**Paper Presentation**, Intelligent Tutoring Systems Conference, Maceio, Brazil
- [E.2] “Building Internet-Based Virtual Environments for Collaborative Design” Sep. 11, 2000  
**Paper Presentation**, Co-Designing Conference, Coventry, UK
- [E.1] “Conceptual Design of Assemblies” Sep. 10, 1999  
**Paper Presentation**, ASME Design & Technical Conference, Las Vegas NV
- Internal**
- [I.19] “Introduction and Research Opportunities” Aug. 28, 2014  
**Research Presentation**, Digital Arts and Sciences (DAS) Program 2014-2015 Student Welcome Meeting, University of Florida, Gainesville FL
- [I.18] “Introduction and Research Opportunities” Aug. 27, 2014  
**Research Presentation**, CISE Faculty Showcase, University of Florida, Gainesville FL
- [I.17] “Introduction and Research Opportunities” Nov. 12, 2013  
**Research Presentation**, CISE Graduate Programs Information Session, University of Florida, Gainesville FL
- [I.16] “Introduction and Research Interests” Oct. 1, 2013  
**Research Presentation**, CISE Industrial Advisory Board Meeting, University of Florida, Gainesville FL
- [I.15] “Introduction and Research Opportunities” Aug. 30, 2013  
**Research Presentation**, Digital Arts and Sciences (DAS) Program 2013-2014 Student Welcome Meeting, University of Florida, Gainesville FL
- [I.14] “Introduction and Research Opportunities” Aug. 23, 2013  
**Research Presentation**, CISE Faculty Showcase, University of Florida, Gainesville FL

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- [I.13] “Cultivating Collaborations for Research Success: Colleagues and Publications” Dec. 5,  
**Post-Doctoral Peer Seminar**, University of Maryland Baltimore County, Baltimore 2012  
MD
- [I.12] “Developing Handwriting-based Intelligent Tutors to Enhance Mathematics Oct. 9,  
Learning” 2008  
**Thesis Defense**, Carnegie Mellon University, Pittsburgh PA
- [I.11] “Developing Handwriting-based Intelligent Tutors to Enhance Mathematics May 22,  
Learning” 2006  
**Thesis Proposal**, Carnegie Mellon University, Pittsburgh PA
- [I.10] “Adding Handwriting Input to Intelligent Tutoring Systems for Algebra” Mar. 6,  
**Research Presentation**, HCII PhD Lunch Seminars, Carnegie Mellon University, 2006  
Pittsburgh PA
- [I.9] “Exploration of the Effects of Handwriting on Learning in Algebra Equation Solving” June 8,  
**Poster Presentation**, Pittsburgh Science of Learning Center NSF Site Visit, Carnegie 2006  
Mellon University, Pittsburgh PA
- [I.8] “Improving Mathematics Learning Online Through the Use of Handwriting Input” Apr. 20,  
**Poster Presentation**, Human-Computer Interaction Institute 12<sup>th</sup> Anniversary, 2006  
Carnegie Mellon University, Pittsburgh PA
- [I.7] “Evaluation of Multimodal Input for Entering Mathematical Equations on the Dec. 13,  
Computer” 2005  
**Poster Presentation**, Pittsburgh Science of Learning Center Advisory Board Visit,  
Carnegie Mellon University, Pittsburgh PA
- [I.6] “Evaluation of Multimodal Input for Entering Mathematical Equations on the May 16,  
Computer” 2005  
**Poster Presentation**, Pittsburgh Science of Learning Center NSF Site Visit, Carnegie  
Mellon University, Pittsburgh PA
- [I.5] “Phase I: Evaluation of Multimodal Input for Entering Mathematical Equations on Feb. 25,  
the Computer” 2005  
**Poster Presentation**, Pittsburgh Science of Learning Center Advisory Board Visit,  
Carnegie Mellon University, Pittsburgh PA
- [I.4] “Multimodal Interfaces for Solving Equations: Handwriting + Speech + Learning” Aug. 26,  
**Research Presentation**, Communication Requirement, Carnegie Mellon University, 2004  
Pittsburgh PA
- [I.3] “ALPS: Active Learning in Problem Solving, and the Questions Students Ask” Aug. 21,  
**Research Presentation**, Communication Requirement, Carnegie Mellon University, 2003  
Pittsburgh PA
- [I.2] “Undergraduate Research Experiences” Sep. 20,  
**Invited Talk**, DragonWeek, Drexel University, Philadelphia PA 2000
- [I.1] “The Conceptual Design Project” Sep. 8,  
**Poster Presentation**, Research Day, Drexel University, Philadelphia PA 2000

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**TEACHING**


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**-- Instructor / Co-Instructor**

- 5. CAP 4053 Artificial Intelligence for Games** Spring 2015  
Department of CISE, University of Florida
- 4. CIS 4930 IND/CIS 6930 IND Interaction Design** Fall 2014  
Department of CISE, University of Florida
- 3. CAP 4053 Artificial Intelligence for Games** Spring 2014  
Co-Instructor with Douglas E. Dankel II, Department of CISE, University of Florida
- 2. CIS 4930 NUI / CIS 6930 NUI Natural User Interface** Fall 2013  
Department of CISE, University of Florida
- 1. 05-291 / 15-291 Human-Computer Interaction for Computer Scientists** Spring 2007  
Co-Instructor with Carolyn Penstein Rosé, Amy Hurst, and Karen Tang, Human-Computer Interaction Institute, Carnegie Mellon University

**-- Teaching Assistant**

- 1. 05-410 / 05-610 Introduction to Human-Computer Interaction Methods** Fall 2005  
Instructors: Chris Neuwirth and John Zimmerman, Human-Computer Interaction Institute, Carnegie Mellon University

**-- Guest Lecturer**

- 10. Lecture on Gestural Technologies and Gesture Interaction** Spring 2015  
CEN 4721C / CAP 5100 Human-Computer Interaction  
Instructor: Benjamin Lok, Department of CISE, University of Florida
- 9. Lecture on Understanding, Designing, and Developing NUIs for Children** Spring 2015  
CS 220 Human-Computer Interaction  
Instructor: Orit Shaer, Computer Science Department, Wellesley College (external, invited)
- 8. Lecture on Considering Usability during Game Design** Spring 2015  
DIG 3713C Game Design Practices I  
Instructor: Marko Suvajdzic, Digital Worlds Institute, University of Florida
- 7. Lecture on UI Design for Small Screens and Mobile Interactions** Fall 2014  
CNT 5517 / CIS 4930 Mobile and Pervasive Computing  
Instructor: Sumi Helal, Department of CISE, University of Florida
- 6. Lecture on Gestural Technologies and Gesture Interaction** Spring 2013  
IS 698 Rehabilitation Games  
Instructor: Ravi Kuber, Information Systems Department, UMBC
- 5. Lecture on Alternative Interaction (Multimodal) Technologies** Spring 2012  
IS 303 Human Factors in Computer System Design  
Instructor: Anita Komlodi, Information Systems Department, UMBC
- 4. Lecture on Considering Usability during Game Design** Spring 2012  
COSC 470 Game Development Project II  
Instructor: Anastasia Salter, Division of Science, Information Arts & Technology, University of Baltimore
- 3. Lecture on Alternative Interaction (Multimodal) Technologies** Fall 2011  
IS 303 Human Factors in Computer System Design,  
Instructor: Anita Komlodi, Information Systems Department, UMBC

- 2. Lecture on Gestural Technologies and Gesture Interaction** Fall 2011  
IS 760 Human Computer Interaction  
Instructor: Shaun Kane, Information Systems Department, UMBC
- 1. Lecture on Gestural Technologies and Gesture Interaction** Fall 2011  
IS 698 Rehabilitation Games  
Instructor: Ravi Kuber, Information Systems Department, UMBC

## MENTORSHIP AND ADVISING

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### -- PhD and MS Student Thesis Advisors (\*indicates I funded this student)

3. **Jeremiah Blanchard (PhD program in Computer Engineering, pre-candidacy),** ongoing  
University of Florida (Co-Chair: Joseph Wilson) (Jan. 2015)
2. **\*Phillip J. Hall (PhD program in Human-Centered Computing, pre-candidacy),** ongoing  
University of Florida (Jan. 2015)
1. **\*Alex Shaw (PhD program in Computer Engineering, pre-candidacy),** University of ongoing  
Florida (Jan. 2015)

### -- PhD and MS Student Committees (non-advising roles)

3. **Andrew Robb (PhD Candidate in Computer Engineering),** University of Florida Proposal:  
"Mixed-Agency Teams and their Effect on Social Presence and Behavior during In-Situ Fall 2014  
Team Training" (Chair: Benjamin Lok)
2. **Liangke Zhao (MS Candidate in Computer Science),** University of Florida Defense:  
"Inverse Mapping Models: Real-time 3D reconstruction of deformable objects with Spring 2015  
known skeletal geometry" (Chair: Anand Rangarajan)
1. **Ruijin Wu (PhD in Computer Engineering),** University of Florida Defense:  
"Sampling Geometry Entity: Root finding, precise surface rendering and configuration July 2014  
space analysis" (Chair: Jorg Peters)

### -- Graduate Research Assistants Supervised (\*indicates I funded this student)

12. **\*Nikita Dagar (MS in Computer Science, 2016),** University of Florida ongoing  
Touch and Gesture Interaction Differences for Children & Adults (Jan. 2015)
11. **\*Juthika Das (MS in Computer Science, 2016),** University of Florida ongoing  
Touch and Gesture Interaction Differences for Children & Adults (Nov. 2014)
10. **\*Qingchuan (Bruce) Zhao (MS in Computer Engineering, 2015),** University of 2014-2015  
Florida (12 mos.)  
Extensions of the  $\mathcal{S}$ -family of Stroke Gesture Recognizers
9. **\*Sagar Parmar (MS in Computer Science, 2015),** University of Florida 2014  
Touch and Gesture Interaction Differences for Children & Adults (5 mos.)
8. **\*Akshay Ramesh Holla (MS in Computer Engineering, 2014),** University of Florida 2014-2015  
Touch and Gesture Interaction Differences for Children & Adults (14 mos.)
7. **\*Germaine Irwin (PhD candidate in Human-Centered Computing),** University of 2012-2013  
Maryland Baltimore County (12 mos.)  
Touch and Gesture Interaction Differences for Children & Adults
6. **Patrick Carrington (PhD candidate in Human-Centered Computing),** University of 2011-2012  
Maryland Baltimore County (12 mos.)

- Posture-Sensing Chair: Classification from Labeled Data
5. **Samyukta Ganesan (MS in Human-Centered Computing, 2012)**, University of Maryland Baltimore County  
Kinect Exercise Games for Older Adults 2012  
(6 mos.)
  4. **Peng Chu (PhD candidate in Information Systems)**, University of Maryland Baltimore County  
Multimodal Stress Detection Data Collection 2011  
(6 mos.)
  3. **Jianwei (Vivian) Lai (PhD candidate in Information Systems)**, University of Maryland Baltimore County  
Multimodal Stress Detection Data Collection 2011  
(4 mos.)
  2. **Thomas Bolster (BA in Psychology, 2005; Master's of Human-Computer Interaction, 2009)**, Carnegie Mellon University  
Lab Learning Study Data Collection 2005  
(4 mos.)
  1. **Andrea Knight (Master's of Human-Computer Interaction, 2005)**, Carnegie Mellon University  
Math Input Study Data Collection 2004  
(3 mos.)
- Undergraduate Research Assistants Supervised (\*indicates I funded this student)**
12. **Nathan deKrey (BS in Mechanical Engineering, Computer Science Minor, 2016)**, University of Florida  
EGN4912: Whole-Body Interaction Differences for Children & Adults ongoing  
(Jan. 2015)
  11. **\*Callum Jago (BS in Computer Engineering, 2018)**, University of Florida  
EGN4912: Touch and Gesture Interaction Differences for Children & Adults ongoing  
(Jan. 2015)
  10. **\*Annie Luc (BS in Computer Science, 2018)**, University of Florida  
EGN4912: Touchscreen Exhibits for Science Museum Learning ongoing  
(Nov. 2014)
  9. **\*Brittany Craig (BS in Mathematics and Computer Science, 2016)**, St. Catherine University, Minneapolis-St. Paul, MN 2014  
(3 mos.)  
CRA DREU Program, Full Time Intern, Summer 2014  
Touch and Gesture Interaction Differences for Children & Adults, Kinect Exercise Games for Older Adults
  8. **\*Danielle Sikich (BS in Computer Science, 2015)**, Western Oregon University, Monmouth, OR 2014  
(3 mos.)  
CRA DREU Program, Full-Time Intern, Summer 2014  
Touch and Gesture Interaction Differences for Children & Adults, Kinect Exercise Games for Older Adults
  7. **\*Sydney Richardson (BS in Digital Arts and Sciences, 2015)**, University of Florida  
EGN4912: Touch and Gesture Interaction Differences for Children & Adults, Kinect Exercise Games for Older Adults 2014  
(7 mos.)
  6. **\*Julia Woodward (BS in Digital Arts and Sciences, 2017)**, University of Florida  
EGN4912: INIT Lab Manager, Touch and Gesture Interaction Differences for Children & Adults ongoing  
(Jan. 2014)
  5. **\*Femi Williams (BS in Information Systems, 2014)**, University of Maryland Baltimore Country 2013  
(4 mos.)  
Touch and Gesture Interaction Differences for Children & Adults
  4. **\*Felix Bui (BS in Information Systems, 2013)**, University of Maryland Baltimore 2013

- |  |   |                       |
|--|---|-----------------------|
|  | Country   | (4 mos.)              |
|  | Touch and Gesture Interaction Differences for Children & Adults   |                       |
| 3.   | <b>*Luis Queral (BS in Interdisciplinary Studies, 2013)</b> , University of Maryland<br>Baltimore County  | 2012-2013<br>(4 mos.) |
|  | Touch and Gesture Interaction Differences for Children & Adults   |                       |
| 2.   | <b>Patrick Carrington (BS in Information Systems, 2011)</b> , University of Maryland<br>Baltimore County  | 2011<br>(3 mos.)      |
|  | Multimodal Stress Detection Data Collection   |                       |
| 1.   | <b>Keisha How (BS in Computer Science, 2008)</b> , Carnegie Mellon University   | 2006<br>(3 mos.)      |
|  | Microsoft Tablet PC Recognizer Implementation and Evaluation  |                       |
| <b>-- UF CISE Senior Projects (CIS4914) Supervised</b> |   |                       |
| 5.   | <b>Ben Clark (BS in Computer Science, 2015)</b> , <b>Jacob Cukjati (BS in Computer Science, 2015)</b> , <b>Sze-Lok Pun (BS in Computer Science, 2015)</b> , University of Florida | Spring 2015           |
|  | CIS4914 Senior Project: TBD   |                       |
| 4.   | <b>David Bai (BS in Computer Science, 2015)</b> , University of Florida   | Spring 2015           |
|  | CIS4914 Senior Project: TBD   |                       |
| 3.   | <b>Richard Leon (BS in Computer Science, 2015)</b> , University of Florida  | Spring 2015           |
|  | CIS4914 Senior Project: TBD   |                       |
| 2.   | <b>Melissa Chelsea Pinka (BS in Computer Science, 2014)</b> , University of Florida   | Spring 2014           |
|  | CIS4914 Senior Project: A Virtual, User-Created Scavenger Hunt on the University of Florida Campus for Mobile Devices   |                       |
| 1.   | <b>Zelisha Siclait (BS in Computer Science, 2014)</b> , University of Florida   | Spring 2014           |
|  | CIS4914 Senior Project: An Asynchronous Drawing and Messaging Application for Mobile Devices  |                       |
| <b>-- Independent / Individual Studies Supervised</b>  |   |                       |
| 6.   | <b>Joanna Wong (BS in Information Systems, 2013)</b> , University of Maryland Baltimore County  | Spring 2013           |
|  | IS 400 Individual Study in Information Systems (Research): Touch and Gesture Interaction Differences for Children & Adults  |                       |
| 5.   | <b>Germaine Irwin (PhD candidate in Human-Centered Computing)</b> , University of Maryland Baltimore County   | Spring 2013           |
|  | HCC 801 Independent Study for Doctoral Students: Touch and Gesture Interaction Differences for Children & Adults  |                       |
| 4.   | <b>Robin Brewer (PhD candidate in Human-Centered Computing)</b> , University of Maryland Baltimore County   | Fall 2012             |
|  | HCC 801 Independent Study for Doctoral Students: Touch and Gesture Interaction Differences for Children & Adults  |                       |
| 3.   | <b>Shreya Mohan (BS in Information Systems, 2013)</b> , University of Maryland Baltimore County   | Spring 2012           |
|  | IS 400 Individual Study in Information Systems (Research): Touch and Gesture Interaction Differences for Children & Adults  |                       |
| 2.   | <b>Patrick Carrington (PhD candidate in Human-Centered Computing)</b> , University of Maryland Baltimore County   | Spring 2012           |

HCC 801 Independent Study for Doctoral Students: Posture-Sensing Chair:  
Classification from Labeled Data

1. **Samyukta Ganesan (MS in Human-Centered Computing, 2012)**, University of Maryland Baltimore County Fall 2011  
IS 700 Independent Study in Information Systems: Kinect Exercise Games for Older Adults

## INDUSTRY EXPERIENCE AND INTERNSHIPS

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- Senior Member, Engineering Staff**, User-Centered Interfaces Group, Lockheed Martin Advanced Technology Laboratories (LM ATL), Cherry Hill NJ 2008-2010  
Applied advanced user interface technologies such as multimodal interaction and context-sensitive systems to the needs and requirements of the military end user. Led user-centered design and development for multiple projects, including a mobile spoken-language field reporting system for front-line medics and a heads-up display for distributed patrol team situational awareness. LM ATL is a research and development laboratory specializing in government contracts. [Publications: C.6, W.3, B.1]
- Summer Graduate Intern**, Fuji-Xerox Palo Alto Laboratory (FXPAL), Palo Alto CA Summer 2007  
Conducted requirements analysis, expert interviews, and contextual inquiry of video searching tasks to inform the design of a collaborative information seeking system. Designed, developed, and evaluated rapid-serial-visual-presentation (RSVP) interface for collaborative video search. System used in 2007 NIST Text Retrieval Conference Video Retrieval Evaluation (TRECVID) competition. [Publication: O.4]
- Summer Undergraduate Intern**, OpenCASCADE, Matra DataVision, Palaiseau France Summer 2001  
Self-directed investigation of OpenCASCADE's 3D solid modeling kernel and application framework for building user interfaces to databases of 3D artifacts. Liaison between OpenCASCADE and Geometric & Intelligent Computing Laboratory (GICL) at Drexel. Trained Drexel student peers to use framework.
- NIST Summer Undergraduate Research Fellow (SURF)**, Design Process Group, National Institute of Standards & Technology (NIST), Gaithersburg MD Summer 2000  
Designed and developed web interface to allow users to query online repository of 3D solid models of engineering design components. Dynamic query interface allowed guided exploration of valid search criteria for NIST Design Repositories Project. [Publication: O.1]

## SERVICE AND MEMBERSHIPS

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### -- University

#### 1. Departmental

- Member**, PhD Program Recruiting Committee (University of Florida—CISE) 2014-2015
- Member**, Departmental Hiring Committee (University of Florida—CISE) 2014-2015
- Coordinator**, PhD Thesis Defense Toasts (Carnegie Mellon University—HCII) 2006-2007
- Coordinator**, PhD Biweekly Lunch Seminars (Carnegie Mellon University—HCII) 2005-2007
- Member**, Admissions Committee (Carnegie Mellon University—HCII) 2003
- Member**, Mathematics and Computer Science Society (Drexel University) 1997-2002
- Assistant Webmaster**, Mathematics and Computer Science Department (Drexel University) 1997-1998

#### 2. College or Divisional

- Faculty Advisor**, Game Makers' Guild (student organization) 2015
- Faculty Coordinator**, Computer Science Day for Women in Science & Engineering (WiSE) "Spring Girlz Camp" events 2014-2015

<b>Judge</b> , University of Florida Graduate Student Research Day	2013-2014
<b>Member</b> , School of Computer Science Graduate Women Mentoring Program (Carnegie Mellon University)	2007-2008
<b>Program Committee</b> , Opportunities for Undergraduate Research in Computer Science (Carnegie Mellon University)	2007
<b>Member</b> , Women@SCS Graduate Student Council (Carnegie Mellon University)	2002-2008
<b>Member</b> , School of Computer Science Dec/5, Inc. (Carnegie Mellon University)	2002-2003

## -- Professional

### 1. Conference Committees

<b>AAAI</b> : AAAI Conference on Artificial Intelligence 2013: Program Committee Member [reviewing only]	2013
<b>CHI</b> : ACM SIGCHI Conference on Human Factors in Computing Systems 2015: Interactivity Program Committee Member [reviewing only] 2014: Student Research Competition Program Committee Member [reviewing only]	2014-2015
<b>ICMI</b> : ACM International Conference on Multimodal Interfaces 2015: Publication Co-Chair [proceedings management] 2013: Publication Co-Chair [proceedings management] 2011: Program Committee Member [reviewing only]	2011, 2013, 2015
<b>IDC</b> : ACM SIGCHI Conference on Interaction Design and Children 2015: Program Committee Member [reviewing only] 2014: Program Committee Member [reviewing only] 2013: Program Committee Member [reviewing only]	2013-2015
<b>IUI</b> : International Conference on Intelligent User Interface 2015: Program Committee Member [reviewing only] 2014: Program Committee Member [reviewing only]	2014-2015
<b>GI</b> : Graphics Interface 2014: Program Committee Member [full member] 2013: Program Committee Member [full member]	2013-2014
<b>MM</b> : ACM Multimedia 2010: Program Committee Member [reviewing only]	2010

### 2. Reviewing

<b>AIEd</b> : International Conference on Artificial Intelligence in Education	2007
<b>CHB</b> : Computers and Human Behavior (journal)	2014
<b>CHI</b> : ACM SIGCHI Conference on Human Factors in Computing Systems	2008-2014
<b>CSUR</b> : ACM Computing Surveys	2013
<b>DIS</b> : ACM Conference on Designing Interactive Systems	2010, 2014
<b>EICS</b> : ACM SIGCHI Symposium on Engineering Interactive Computing Systems	2013
<b>GI</b> : Graphics Interface	2011-2012
<b>HCI</b> : Human-Computer Interaction (journal)	2010
<b>ICMI</b> : International Conference on Multimodal Interfaces	2008, 2011-2014



<b>IJDAR:</b> International Journal of Document Analysis and Recognition (journal)	2007, 2009
<b>IJHCS:</b> International Journal of Human-Computer Studies (journal)	2012-2014
<b>ITS:</b> International Conference on Intelligent Tutoring Systems	2008
<b>IUI:</b> International Conference on Intelligent User Interfaces	2013
<b>IWC:</b> Interacting with Computers (journal)	2012-2014
<b>MobileHCI:</b> ACM SIGCHI International Conference on Human-Computer Interaction with Mobile Devices and Services	2012-2013
<b>MM:</b> ACM Multimedia	2010
<b>Pervasive:</b> International Conference on Pervasive Computing	2011
<b>Tabletop:</b> ACM International Conference on Interactive Tabletops and Surfaces	2010, 2012
<b>TEI:</b> International Conference on Tangible, Embodied, and Embedded Interaction	2014-2015
<b>TOCHI:</b> ACM Transactions on Computer-Human Interaction	2014
<b>Ubicomp:</b> ACM SIGCHI International Conference on Ubiquitous Computing	2012
<b>UIST:</b> ACM Symposium on User Interface Software and Technology	2006, '08, '11-12
 <b>3. Other Professional Service</b>	
<b>NCWIT:</b> National Council on Women in Information Technology Award for Aspiration Reviewer	2013-2015
 <b>4. Student Volunteer</b>	
<b>IJCAI:</b> International Joint Conferences on Artificial Intelligence	2001
 <b>5. Professional Memberships</b>	
<b>ACM:</b> Association for Computing Machinery	2000-present
<b>SIGCHI:</b> ACM Special Interest Group in Computer-Human Interaction	2010-present
<b>EICS:</b> ACM SIGCHI Symposium on Engineering Interactive Computing Systems (ACM SIGCHI Community)	2013-present
<b>IUI:</b> International Conference on Intelligent User Interfaces (ACM SIGCHI Community)	2013-present
 <b>-- Community</b>	
<b>Volunteer,</b> Philadelphia Animal Welfare Society (PAWS)	2010-2013
<b>Volunteer,</b> Philadelphia Clean Air Council	2009-2010
<b>Organizing Member,</b> Technology Night for Girls	2005-2006

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## REFERENCES

Available upon request.