

Elaine M. Huang

Department of Computer Science
University of Calgary
2500 University Drive
Calgary, AB T2N 1N4
Canada

Phone: +1.403.918.6912
E-Mail: elainemayhuang@gmail.com
WWW: <http://www.elainehuang.com>
Citizenship: USA

EDUCATION

Georgia Institute of Technology, Atlanta, GA (August 2000-May 2006)

Graduated with Ph.D. in Computer Science under advisor Dr. Elizabeth D. Mynatt. Focus area in Human Computer Interaction in the Everyday Computing Lab.

Swarthmore College, Swarthmore, PA (August 1994-June 1998)

Graduated Bachelor of Arts, June 1998. Double major in Computer Science and Linguistics.

HONORS AND AWARDS

[A8] **Best Paper Award Nominee**, *ACM Conference on Human Factors in Computing Systems (CHI 2008)* recognizing [C6]

[A7] **Humboldt Fellowship**, *Alexander von Humboldt Foundation (2007)*

[A6] **Best Paper Award**, *Fourth International Conference on Pervasive Computing (Pervasive 2006)* recognizing [C5]

[A5] **CETL/BP Outstanding Teaching Assistant Award**, *Georgia Institute of Technology (2003)*

[A4] **Outstanding Graduate Teaching Assistant Award**, *College of Computing, Georgia Institute of Technology (2003)*

[A3] **Presidential Fellowship**, *Georgia Institute of Technology (2000-2005)*

[A2] **Applied Linguistics Research Prize**, *Swarthmore College (1998)*

[A1] **Joel Dean Award for Research in Social Sciences**, *Swarthmore College (1997)*

RESEARCH AND TEACHING EXPERIENCE

Assistant Professor, *University of Calgary, Canada (July 2009-Present)*

Faculty in the Department of Computer Science, member of the Interactions Lab. Conduct research in the areas of Human-Computer Interaction, Computer-Supported Cooperative Work, and Ubiquitous Computing.

Senior Staff Research Scientist, *Motorola Labs (July 2006-June 2009)*

Member of the Social Media Research Lab. Conducting studies of social networking and social exchange, investigating sustainable technology and sustainable design. Resulted in [B1, J4, J5, BC2, C8, c7].

Humboldt Fellowship Visiting Researcher, *RWTH Aachen University, Germany (January 2007–December 2008)*

Visiting researcher in the Media Computing Group, working with Prof. Dr. Jan Borchers. Examined the use of existing large displays (non-research, non-prototype applications) in public settings;

explored current practices for technology disposal and possibilities for sustainable design. Resulted in [J3, C6, C7, c8].

Visiting Instructor, *ETH Zurich, Switzerland (April 2007-July 2007)*

Designed, implemented, and instructed a new combined lecture and seminar course in HCI topics with Dr. Marc Langheinrich.

Summer Research Intern, *IBM Almaden Research Center (May 2003-August 2003)*

Mentor: Alison Sue

Manager: Daniel M. Russell

Conducted field studies on the adoption of groupware on large-scale displays. Applied findings to the design and deployment of IM Here, a groupware system to facilitate workgroup awareness and communication using public instant messaging terminals. Resulted in [J1, C4, c4].

Instructor, *Georgia Institute of Technology (May 2004-July 2004, January 2003-May 2003)*

Instruct undergraduate Human-Computer Interaction course. Responsibilities include preparing and delivering lectures, working with students on semester-long projects, creating and grading homework assignments. Awarded [A4, A5].

Summer Research Intern, *IBM Almaden Research Center (May 2002-August 2002)*

Mentors: Beverly Harrison, Thomas P. Moran

Manager: Daniel M. Russell

Conducted user studies on unscheduled task management. Used open-ended interviewing techniques and data analysis to understand procedures involved in task and time management.

Summer Research Intern, *Accenture Technology Labs/CSTaR (May 2001-August 2001)*

Mentors: Joseph F. McCarthy, Tony J. Costa

Manager: Joseph F. McCarthy

Created a system using ubiquitous peripheral displays and the Unicast framework to increase group awareness in an office environment. The system afforded high level awareness information using public kiosks while also permitting users to get in depth information in their personal spaces by swiping RFID cards at the kiosk. Resulted in [c1].

Graduate Teaching Assistant, *Georgia Institute of Technology (August 2000-May 2006)*

Teaching assistant for Computer Supported Collaborative Learning under professor Mark Guzdial.

Teaching assistant for Human Computer Interaction under professor Elizabeth D. Mynatt.

Graduate Research Assistant, *Georgia Institute of Technology (August 2000-May 2006)*

Research assistant for Elizabeth D. Mynatt. Ongoing research on technology to support information awareness and collaboration between work colleagues, including user studies, design, implementation, and evaluation. Resulted in [D1, J1, B1, C2, C5, DC1, DC2, c2, c3]

Research assistant for Norbert Ezquerra. Assisted in developing WebPerfex, a web-based interface for a heart disease diagnostic expert.

Research Assistant, *University of Pennsylvania Institute for Research in Cognitive Science (Summer 1997)*

Mentor/Manager: Aravind Joshi

Worked on XTAG, a computational parser of natural language. Created and tested expert system software, researched various linguistic phenomena in English.

Teaching Assistant, *Swarthmore College Computer Science Department (Spring 1995-Spring 1998)*

Provided lab assistance for an undergraduate computer science course. Ran weekly clinics to aid students with assignments and understanding concepts.

PUBLICATIONS: DISSERTATION

[D1] Huang, E.M. (2006). **“On the design and adoption of large display groupware applications.”**

PUBLICATIONS: BOOK

[B1] Blevins, E., Huang, E.M. (2009). **“Do Less with Design: Foundations of Sustainable Interaction Design.”** Under review for the *Deep Design* Series, Friedman K. & Stolterman, E., (Eds.) MIT Press.

PUBLICATIONS: JOURNAL ARTICLES AND BOOK CHAPTERS

[J5] Huang, E. M., Yatani, K., Truong, K. N., Kientz, J. A., Patel, S. N. (2009). **“Understanding the situated sustainability of mobile phones: The influence of local constraints and practices on transferability.”** To appear in *IEEE Pervasive Computing: Special Issue on Environmental Sustainability*, January-March 2009.

[BC2] Harboe, G., Huang, E. M., Massey, N., Metcalf, C., Novak, A., Romano, G., Tullio, J. (2009). **“Getting to know social television: One team’s discoveries from library to living room.”** To appear in Cesar, P., Geerts, D., Chorianopoulos, K. (Eds.) *Social Interactive Television: Immersive Shared Experiences and Perspectives*, IGI Global.

[J4] Harboe, G., Metcalf, C., Tullio, J., Massey, N., Romano, G., Huang, E. M., Bentley, F. (2008). **“Examining presence and lightweight messaging in a social television experience.”** *ACM Transactions on Multimedia Computing, Communications, and Applications*, ACM Press.

[J3] Huang, E. M., Truong, K. N. (2008). **“Situated sustainability for mobile phones.”** In *ACM Interactions*, 15(2), March-April 2008, ACM Press, pp 16-19.

[J2] Huang, E.M., Mynatt, E.D., Trimble, J.P. (2007). **“When design just isn’t enough: The unanticipated challenges of the real world for large collaborative displays.”** In *Personal and Ubiquitous Computing: Special Issue on Ubiquitous Computing in the Real World*, 11(7), October 2007, Springer-Verlag, pp 537-547.

[J1] Huang, E.M., Mynatt, E.D., Russell, D.M., Sue, A.E. (2006). **“Secrets to success and fatal flaws: The design of large display groupware.”** In *IEEE Computer Graphics and Applications*, 26(1), January/February 2006, IEEE Press, pp 37-45.

[BC1] Mynatt, E. D., Huang, E. M., Volda, S., MacIntyre, B. (2003). **“Large displays for knowledge work.”** In O’Hara, K., Perry, M., Churchill, E., Russell, D. (Eds.) *Public and Situated Displays*. Kluwer Academic Publishers, 2003, pp 80-102.

PUBLICATIONS: PEER-REVIEWED FULL-LENGTH CONFERENCE PAPERS

[C8] Huang, E. M., Harboe, G., Tullio, J., Novak, A., Massey, N., Metcalf, C., Romano, G. (2009) **“Social Television comes home: A field study of communication choices and practices in TV-based text and voice chat.”** To appear in the *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2009).

[C7] Huang, E. M. Koster, A., Borchers, J. (2008) **“Overcoming assumptions and uncovering practices: When does the public really look at public displays?”** In the *Proceedings of the Sixth International Conference on Pervasive Computing* (Pervasive 2008). Sydney, Australia (15% acceptance)

[C6] Huang, E. M., Truong, K. N. (2008). **“Breaking the disposable technology paradigm: Opportunities for sustainable interaction design for mobile phones.”** In the *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2008). Florence, Italy. (22% acceptance). **BEST PAPER NOMINEE.**

[C5] Huang, E.M., Mynatt, E.D., Trimble, J. (2006). **“Displays in the wild: Understanding the dynamics and evolution of a display ecology.”** In the *Proceedings of the Fourth International Conference on Pervasive Computing* (Pervasive 2006). Dublin, Ireland. (13% acceptance). **BEST PAPER AWARD.**

[C4] Huang, E. M., Russell, D. M., Sue, A. E. (2004). **“IM Here: Public instant messaging on large, shared displays for workgroup interactions.”** In the *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2004). Vienna, Austria. ACM Press, pp 279-286. (16% acceptance)

[C3] Truong, K. N. Huang, E. M., Abowd, G. D. (2004). **“CAMP: A magnetic poetry interface for end-user programming of capture applications for the home.”** In the *Proceedings of the 6th International Conference on Ubiquitous Computing* (UbiComp 2004). (18% acceptance)

[C2] Huang, E. M. and Mynatt, E. D. (2003). **“Semi-public displays for small, co-located groups.”** In the *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2003). Fort Lauderdale, Florida: ACM Press, pp 49-56. (16% acceptance)

[C1] Huang, E. M., Terry, M., Mynatt, E D., Lyons, K., and Chen, A. (2002). **“Distributing event information by simulating word-of-mouth exchanges.”** In the *Proceedings of the Symposium on Human Computer Interaction with Mobile Devices* (Mobile HCI 2002). Pisa, Italy: ACM Press, pp. 60-68. (40% acceptance)

PUBLICATIONS: DOCTORAL CONSORTIA

[DC2] Huang, E. M. (2005). **“Design and analysis of groupware for large displays.”** In the *Extended Abstracts of the ACM Conference on Human Factors in Computing Systems* (CHI 2005). Portland, Oregon. ACM Press. (21% acceptance)

[DC1] Huang, E. M. (2004). **“Design and analysis of groupware for large displays.”** In the *Companion Proceedings of the ACM Conference on Computer-Supported Cooperative Work* (CSCW 2004). Chicago, Illinois. (same as D1) (43% acceptance)

PUBLICATIONS: PEER-REVIEWED EXTENDED ABSTRACTS

[c9] Huang, E. M., Blevis, E., Mankoff, J., Nathan, L. P., Tomlinson, W. (2009). **“Defining the role of HCI in the challenges of sustainability.”** Workshop to appear in the *Extended Abstracts of the ACM Conference on Human Factors in Computing Systems* (CHI 2009.) Boston, MA. ACM Press.

[c8] Huang, E. M. (2007). **“When does the public look at public displays?”** In the *Companion Proceedings of the Conference on Ubiquitous Computing* (UbiComp 2007). Innsbruck, Austria. **BEST ONE-MINUTE MADNESS AWARD.**

[c7] Huang, E. M. (2007). **“Talking about “stuff”: Artifacts and expectation in social communication.”** In the *Extended Abstracts of the ACM Conference on Human Factors in Computing Systems* (CHI 2007). San Jose, CA. ACM Press.

[c6] Huang, E. M. (2005). **“Design and analysis of groupware for large displays.”** In the *Extended Abstracts of the ACM Conference on Human Factors in Computing Systems* (CHI 2005). Portland, Oregon. ACM Press. (also listed under Doctoral Consortia)

[c5] Truong, K. N., Huang, E. M., Stevens, M. M., Abowd, G. D. (2004). **“How do users think about ubiquitous computing?”** In the *Extended Abstracts of the ACM Conference on Human Factors in Computing Systems* (CHI 2004). Vienna, Austria. ACM Press, pp 1317-1320.

[c4] Huang, E. M., Sue, A., Russell, D. M. (2003). **“On the adoption of groupware for large displays: Factors for design and deployment.”** In the *Companion Proceedings of the Conference on Ubiquitous Computing* (UbiComp 2003). Seattle, Washington.

[c3] Tyman, J, and Huang, E. M. (2003). **“Intuitive visualizations for presence and recency information for ambient displays.”** In the *Extended Abstracts of the ACM Conference on Human Factors in Computing Systems* (CHI 2003). Fort Lauderdale, Florida: ACM Press, pp 1002-1003.

[c2] Huang, E. M. and Mynatt, E. D. (2002). **“Tailoring public displays for small, co-located groups.”** In the *Companion Proceedings of the ACM Conference on Computer Supported Cooperative Work* (CSCW 2002). New Orleans, Louisiana.

[c1] Huang, E., Tullio, J., Costa, T., and McCarthy, J. (2002). **“Promoting awareness of work activities through peripheral displays.”** In the *Extended Abstracts of the ACM Conference on Human Factors in Computing Systems* (CHI 2002). Minneapolis, Minnesota: ACM Press, pp. 648-649.

PEER-SELECTED WORKSHOP POSITION PAPERS/INVITED WORKSHOP PAPERS

[w5] Huang, E. M., Truong, K. N. (2007) **“Understanding the paradigm of disposable technology: What happens to old mobile phones?”** Position paper for the UbiComp 2007 Workshop on Sustainability: Technologies for Green Values.

[w4] Huang, E. M. (2006). **“Evaluating the MER display ecology.”** Position paper for the CHI 2006 workshop on Information Visualization and Interaction Techniques for Collaboration across Multiple Displays.

[w3] Huang, E. M. (2005). **“A case study of multi-display transition seams in the Mars Exploration Rover missions.”** Position paper for the UbiComp 2005 workshop on The Spaces in-between: Seamlful vs. Seamless Interactions. Tokyo, Japan.

[w2] Huang, E. M. and Mynatt, E. D. (2002). **“Shared displays for small communities: Optimizing for privacy and relevance.”** Position paper and Invited Presentation for the Workshop on Public, Community, and Situated Displays at the ACM Conference on Computer Supported Cooperative Work (CSCW 2002). New Orleans, Louisiana.

[w1] McCarthy, J., Costa, T., Huang, E., Tullio, J. (2001). **“Defragmenting the organization: Disseminating community knowledge through peripheral displays.”** Position paper for the Workshop on Community Knowledge at the Seventh European Conference on Computer Supported Cooperative Work (ECSCW 2001). Bonn, Germany.

INVITED TALKS (NON-CONFERENCE)

[IT14] **“Towards sustainable mobile phones.”** (May 2008). University of Zurich. Host: Prof. Dr. Abraham Bernstein

[IT13] **“Sustainable interaction design for mobile phones.”** (April 2008). Nokia Research Palo Alto. Host: Dr. Rafael Ballagas.

[IT12] **“Putting communication in the environment with large, situated displays.”** (June 2006). Nokia Corporation. Host: Jonna Hakkila.

[IT11] **“Putting communication in the environment with large, situated displays.”** (March 2006). RWTH Aachen University, Media Computation Group. Hosts: Prof. Dr. Jan Borchers, Rafael Ballagas.

[IT10] **“What happens when we set people loose around large display groupware?”** (March 2006). Intel Research Seattle, Seattle Washington.

[IT9] “**Making things fit: Large shared displays for supporting workgroup interactions.**” (February 2006). Swarthmore College, Swarthmore, Pennsylvania.

[IT8] “**Large displays and display ecologies: Understanding the NASA MERBoard.**” (February 2006). University of Toronto, Dynamic Graphics Project Group. Host: Dr. Ravin Balakrishnan.

[IT7] “**A question of fit: Large shared displays for supporting workgroup interactions.**” (February 2006). Wellesley College, Wellesley, Massachusetts.

[IT6] “**Putting communication in the environment with large, situated displays.**” (January 2006). Motorola Labs, User Centered Solutions Lab, Schaumburg, Illinois. Host: Dr. Larry Marturano.

[IT5] “**The NASA MERBoard: Exploring a large display environment.**” (July 2005). Institution for Computing Education, Georgia Institute of Technology, Atlanta, Georgia.

[IT4] “**IM Here: Public instant messaging on large, shared displays for workgroup interactions.**” (December 2004). Ludwig-Maximilians-University, Munich, Germany. Host: Dr. Albrecht Schmidt.

[IT3] “**CAMP: Leveraging user intuitions for end-user programming in ubicomp.**” (December 2004). ETH Zurich, Zurich, Switzerland. Host: Vlad Coroama.

[IT2] “**CAMP: Leveraging user intuitions for end-user programming in ubicomp.**” (December 2004). Fraunhofer IGD, Darmstadt, Germany. Host: Dr. Thomas Kirste.

[IT1] “**Innovations from CHI 2004.**” (July 2004). Part of *CHI for the Rest of Us: Three Vienna Travelers Report Back*. CHI*Atlanta, Atlanta, Georgia.

COMMUNITY ACTIVITIES

Conference Service – Organizing Committee

- Doctoral Consortium Co-Chair – UbiComp 2010
- Posters Co-Chair – Pervasive 2010
- Workshops Co-Chair – Pervasive 2009
- Supplemental Proceedings Chair – CSCW 2008
- Posters Co-Chair – UbiComp 2005
- Co-Chair of Student Volunteers – UbiComp 2004

Conference Service – Program Committee

- Reserve Associate Chair – CHI 2010
- Program Committee Member – Pervasive 2009, 2010
- Program Committee Member – INTETAIN 2008

Conference Service -- Other

- Workshop Organizer – CHI 2009 “Defining the Role of HCI in the Challenges of Sustainability”
- Posters Committee Member – UbiComp 2008, UbiComp 2009
- Doctoral Consortium Faculty – Pervasive 2006
- Session Chair – CHI 2006 Interactivity Session, “Meet the Artists: Music, Dance, and Painting”
- Workshop Committee Member – UbiComp 2005
- Student Volunteer – CSCW 2002

Reviewing

- CHI 2004, CHI 2005 (3 Outstanding Review recognitions), CHI 2006, CHI 2007, CHI 2008, CHI 2009
- CSCW 2006, CSCW 2008, CSCW 2009
- Graphics Interface 2005
- Internet of Things (IOT) 2007

- Pervasive 2007, 2008
- UbiComp 2001, UbiComp 2002, UbiComp 2005, UbiComp 2006, UbiComp 2007, UbiComp 2008, 2009
- UIST 2005, UIST 2006, UIST 2008
- Journals: Foundations and Trends in HCI, International Journal of Human-Computer Interaction (IJCHI), IEEE Pervasive Computing
- Workshops: NordiCHI, CSCW, Pervasive
- Posters: CHI, Pervasive, UbiComp

GT College of Computing Recruiting Committee (2000-2001)

Coordinate student run activities for Georgia Tech College of Computing recruiting weekends for prospective PhD students.

GT College of Computing Graduate Student Committee (2000-2005)

Work with a team of Georgia Tech College of Computing graduate students to coordinate activities and discuss administrative issues relevant to the student community.

GT College of Computing Graduate Committee(2000-2005)

Act as the student representative to the committee of Georgia Tech College of Computing faculty area advisors who make decisions regarding PhD course curricula, program requirements and academic policy.

ACM Member

Professional member of the Association for Computing Machinery.

PROFESSIONAL EXPERIENCE

Application Developer and Programmer, *MathForum.com (January 1999-June 2000)*

Designed and implemented web based applications to provide math resources and activities to educators and math students of all ages for the Math Forum, a premiere educational website. Responsibilities included Perl, SQL, and shell coding, database design and user interface design.

Systems Administrator, *Inventure America (June 1998-December 1998)*

Administrated UNIX (Solaris 2.5.1, 2.6) and Windows NT systems for a financial software company. Responsibilities included software and hardware installation, troubleshooting, maintenance, networking, shell scripting, TCP/IP, VPN, OpenBSD, Linux, web and ftp server administration.

Systems Administrator, *Swarthmore College Computer Society (Fall 1995-Spring 1998)*

Administrated servers which provided UNIX (OSF/1, Linux) and web service to approximately 900 users. Installed software, provided UNIX support and education services, maintained system.

Resident Advisor, *Swarthmore College (Fall 1997-Spring 1998)*

Organized social activities and served as peer counselor on a residence hall to create a fun, comfortable environment for students. Acted as a liaison between students and administration.

Technical Support Manager, *Swarthmore College Computing Center (Summer 1996-Spring 1998)*

Supervised a team of twelve computer consultants for faculty and staff. Responsibilities included organizational meetings, interviewing, hiring, and training new employees, as well as troubleshooting, software education, and software and hardware installation.

SKILLS AND INTERESTS

Computer

C, C++, Java, JSP, XML, Scheme, Perl, UNIX shell scripting, LaTeX, HTML, CSS

Languages

English (native speaker), German (highly proficient, Zertifikat Deutsch: 289/300), French (basic proficiency).

Additional Teaching Experience

Tutored grades 1-12 and college students in a variety of subjects. Taught classes to high school students in Mathematics and Group Skills. Gave piano lessons to children and graded assignments for Linguistics Department during undergraduate studies in addition to graduate teaching assistantships.

Hobbies

Enjoy ballet, modern, tango, swing and other types of dance, playing piano and banjo, writing fiction, various crafts, horticulture.