

QUAN T. TRAN

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## RESEARCH STATEMENT

My research interests include human-computer interaction, ubiquitous computing, and mobile computing. I am particularly interested in assistive technology and intercultural communication, and I have prior research experience in educational technology and software engineering. I create innovative applications by conducting focus groups and contextual inquiries to identify real-world needs. I rapidly build fully interactive prototypes to evaluate usability and iterate on designs, and I simulate technically hard components (e.g., computational perception, pattern recognition, sensing) to gauge their automation requirements and impact on the user. I design controlled laboratory experiments that compare engaging user experiences to test theories derived from preliminary findings. I am seeking a junior researcher or postdoc position with an emphasis on creating new applications for future information technology.

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## EDUCATION

- Ph.D., Computer Science, Georgia Institute of Technology** August 2007  
Thesis: Exploring If, When, and How Automated Visual Summaries Can Support Memory for Actions  
Committee: Dr. Elizabeth Mynatt (advisor), Dr. Gregory Abowd, Dr. Blair MacIntyre, Dr. Wendy Rogers, Dr. Itiro Stio
- M.S., Computer Science, University of Texas at Dallas** May 1998  
Thesis: A CASE Tool for the Non-Functional Requirements Framework, Advisor: Dr. Lawrence Chung
- B.S., Computer Science, University of Texas at Dallas** May 1997  
Thesis: Petri-Net Construction, Advisor: Dr. Lawrence Chung  
Graduated Summa Cum Laude in 3 years, participated in Fast Track program (MS level classes for BS elective classes)

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## RESEARCH EXPERIENCE

- Research Assistant** Aug 2000 to Aug 2006  
Aware Home Research Initiative, Georgia Institute of Technology, Advisor: Dr. Elizabeth D. Mynatt  
Prototyped visual and auditory information displays as memory aids for household activities, result: [i.4][i.2][c.3][c.2]
- Summer Intern** May 2004 to Aug 2004  
NSF East Asia and Pacific Summer Institute, Yamanashi University, Japan, Advisor: Dr. Kentaro Go  
Developed photographic surveys as alternative approach alleviating language and cultural barriers in diary studies.
- Summer Intern** May 2002 to Aug 2002  
Mobile Interactions Group, Fuji-Xerox Palo Alto Labs, Advisor: Dr. David Hilbert and Dr. Jonathan Trevor  
Created desktop application that recommends personal contacts from the company video guestbook, result: [p.1] [c.5]
- Summer Intern** May 2001 to Aug 2001  
CoolTown Group, Hewlett-Packard Labs, Advisor: Dr. Mirjana Spasojevic  
Created mobile application that captures summary of a visit to the science museum.
- Summer Intern** May 2000 to Aug 2000  
Accenture Research Labs, Advisor: Dr. Joseph McCarthy  
Worked on mobile application that recommends nearby restaurants for an ad-hoc group of people.
- Summer Intern** May 1999 to Aug 1999  
Pervasive Computing, IBM Watson Research Center, Advisor: Dr. Parviz Kermani  
Worked on Bluetooth application for transferring images.
- Research Assistant** Sept 1998 to April 1999  
Multimedia Distance Learning Lab, University of Texas at Dallas, Advisor: Dr. I-ling Yen  
Worked on algorithm animation and interactive multimedia applications, result: [c.1]
- Summer Intern** May 1994 to July 1994  
Laser Lab, Clark Summer Research Program, University of Texas at Dallas, Advisor: Dr. Duncan MacFarlane  
Worked on circuits of photo-diode sensors, and migrated detection programs to different software platforms.

## PUBLICATIONS

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### (Refereed) Conference Full Papers

- [C.3] Sanchez, J., Calcaterra, G., Tran, Q. (2005) "Automation in the Home: The Development of an Appropriate System Representation and its Effects on Reliance." Proceedings of *HFES: Human Factors and Engineering Society*.
- [C.2] Tran, Q., Calcaterra, G., Mynatt, E. (2005) "Cook's Collage: Deja Vu Display for a Home Kitchen." Proceedings of *HOIT: Home Oriented Informatics and Telematics Conference*, 15-32.
- [C.1] Ruddaraju, R., Haro, A., Nagel, K., Tran, Q., Essa, I., Abowd, G., Mynatt, E. (2003) "Perceptual User Interfaces Using Vision-based Eye Tracking." Proceedings of *PUI: Perceptual User Interface*, 227-233.

### (Refereed) Conference Short Papers, Posters, and Demonstrations

- [c.6] Tran, Q., Mynatt, E., Rogers, W. (2006) "Memory for Actions: Designing a Cognitive Augmentation System." Poster at *CAC: Cognitive Aging Conference*.
- [c.5] Trevor, J., Hilbert, D., Billsus, D., Vaughan, J., and Tran, Q. (2004) "Contextual Contact Retrieval." Extended Proceedings of *IUI: Intelligent User Interfaces*, 337-339.
- [c.4] Tran, Q., Truong, K. Mynatt, E. (2001) "Cook's Collage: Recovering from Interruptions." Demo at *Ubicomp: Ubiquitous Computing*.
- [c.3] Tran, Q., Mynatt, E. (2000) "Music Monitor: Ambient Musical Data for the Home." Extended Proceedings of *HOIT: Home Oriented Informatics and Telematics Conference*, 85-92.
- [c.2] Tran, Q., Mynatt, E. (2000) "Music Monitor: Dynamic Data Display." Proceedings of *ICAD: International Conference on Auditory Displays*, 125.
- [c.1] Tran, Q., Checka, N. (1999) "AIMS for CS Education: An Interactive Multimedia Environment for Algorithm Animation." Extended Proceedings of *SIGCSE: Special Interest Group for Computer Science Education Symposium*.

### Patents

- [p.1] Hibert, D., Tran, Q., Trevor, J., Billsus, D., Vaughan, D. (2003) "Context-Based Contact Information Retrieval Systems and Methods." in *New U.S. Patent Application*, (pending).

### Workshops

- [w.1] Tran, Q., Mynatt, E. (2002) "Cook's Collage: Two Exploratory Designs." In *New Technologies for Families Workshop* at *CHI: Conference on Human Factors*.

### (Invited) Journals, Conference Papers, and Demonstrations

- [i.5] Tran, Q., Calcaterra, G., Mynatt, E. (2005) "How an Older and a Younger Adult Adopted a Cooking Memory Aid." Proceedings of *HCI: Human-Computer Interaction International*, CD-ROM.
- [i.4] Tran, Q., Mynatt, E. "Memory Mirror" (2004) Demonstration at *CAST: Center for Aging Services Technologies*. Dirksen Senate Building, Washington, DC.
- [i.3] Mynatt, E.D., Rowan, J., Tran, Q., Abowd, G., Rogers, W., Siio, I. (2003) "Designing Home Appliances for Older Adults." *Cognitive Studies: Bulletin of the Japanese Cognitive Science Society*, Vol. 1, No. 3, 344-352.
- [i.2] Tran, Q., Truong, K. Mynatt, E. and Abowd, G. (2001) "What Was I Cooking?" Part of the "As We May Live" Demo at *ACM1: Beyond Cyberspace Conference*.
- [i.1] Tran, Q., Chung, L. (1999) "NFR-Assistant: Tool Support for Achieving Quality." Proceedings of *ASSET: Application-Specific Systems and Software Engineering Technology*, IEEE Press.

### Technical Reports

- [r.1] Tran, Q., Mynatt, E. (2003) "What Was I Cooking? Towards Deja Vu Displays of Everyday Memory." *Georgia Institute of Technology Technical Report GIT-GVU-TR-03-33*.

### (Selected) Media and Press

- [m.8] Murphy, M. "The Aware Home." In *CBS Early Show*, May 4, 2006.
- [m.7] "Smart Mirrors." In *Gizmodo: the Gadgets Weblog*, February 16, 2005.
- [m.6] Costlow, T. "RFID Monitors Help Trim Health Costs." In *Pervasive Computing Magazine* "in brief". April-June 2004.
- [m.5] Baard, M. "RFID Keeps Track of Seniors." In *Wired News*, March 19, 2004.
- [m.4] Greene, K. "Take a Glimpse into the Home of the Future." In *The Wall Street Journal*, May 24, 2004.
- [m.3] Dembo, P. "What's Cooking" in *CNN Special Projects: New Explorers*. September 17, 2004.
- [m.2] Baard, M. "Helping Cooks Unsalt their Game." In *Wired News*, October 8, 2002.
- [m.1] Ackerman, E. "Geek's World Fair Celebrated." In *The Mercury News*, March 12, 2001.

### TEACHING EXPERIENCE

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<b>Research Supervisor for PhD in HCC</b>	Sept 2003?, Sept 2004?
College of Computing, Georgia Institute of Technology Advisee and Project Topic: Tamara Clegg (Teaching Cook's Collage), Susan Wyche (Home Medication Practices)	
<b>Research Supervisor for MS in HCI</b>	Jan 2004 to May 2005
College of Computing, Georgia Institute of Technology Advisee and Thesis: Gina Calcaterra "Evaluating Cook's Collage", Olufemi Olumoko "Talking Memory Mirror"	
<b>Research Mentor for Undergraduate Minorities and Underrepresented Groups</b>	Jan 2002 to May 2004
Intel Opportunity Scholarship Program, Georgia Institute of Technology Mentored and supervised research projects for two female sophomores, two male sophomores, and one male freshman	
<b>Research Supervisor for Undergraduates in CS</b>	Jan 2002 to May 2003
Undergraduate Research Opportunities in Computing program, College of Computing, Georgia Institute of Technology Advisee: Jenny Cheung and Mahmudul Jilani	
<b>Teaching Assistant</b>	Aug 1999 to May 1999
Real-World Lab, Information Visualization Class, College of Computing, Georgia Institute of Technology Graded software engineering team reports for and individual reports	
<b>Teaching Assistant</b>	Jan 1998 to May 1998
Software Engineering Class and Requirements Engineering Class, University of Texas at Dallas Graded software engineering team reports	

### HONORS/AWARDS

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<i>Society of Women Engineers / Hewlett-Packard</i> Scholarship	1996
<i>All-American Scholar</i> Collegiate Award	1996
<i>University of Texas at Dallas Founders/Silver Anniversary</i> Scholarship	Fall 1994 to Spring 1998
<i>University of Texas at Dallas</i> Dean's List	Fall 1994 to Fall 1996
Outstanding member of National "Best New SWE Student Section"	1996

### TECHNICAL SKILLS

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Proficiency in Java (JMF), C/C++, Pascal, Visual Basic, Assembly, UNIX, Windows, Palm OS, Windows CE  
Able to self-teach new languages and attain coding proficiency in very short time  
Competency in working with hardware kits with RFID, low-level sensors, and relay switch boards  
Competency in "do-it-yourself" home installations of physical prototypes for on-site demonstrations

### PERSONAL

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*U.S. Citizen. speaks English, Chinese-Mandarin, Vietnamese, French, Japanese.*

### REFERENCES

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Dr. Elizabeth D. Mynatt (mynatt@cc.gatech.edu),      Dr. Mirjana Spasojevic (mirjana.spasojevic@nokia.com)  
Dr. Gregory Abowd (abowd@cc.gatech.edu),