

ANTHONY TANG

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Research Interests

Human-Computer Interaction, Computer Supported Cooperative Work,
Pervasive Computing, Information Visualization, Ubiquitous Computing

Professional Employment

Georgia Institute of Technology, Atlanta GA
Post-Doctoral Fellow in the Graphics, Visualization and Usability Center.
Advised by Dr. W. Keith Edwards and Dr. Gregory Abowd

Education

University of British Columbia, Vancouver BC
Ph.D., Specialization: Human-Computer Interaction (gpa: 4.33). Advised by
Dr. Sid Fels, May, 2010.

University of Calgary, Calgary AB
M.Sc., Specialization: Human-Computer Interaction (gpa: 4.0). Advised by Dr.
Saul Greenberg, January, 2005.

Simon Fraser University, Burnaby BC
B.Sc., Double Major: Computing Science & Psychology (gpa: 3.82), August,
2002.

Sir Winston Churchill, Vancouver BC
International Baccalaureate Diploma, June, 1997.

Awards and Distinctions

NSERC Post-Doc Fellowship
2010-2012

ACM Interactive Tabletops & Surfaces Application Design Contest, co-winner
2009

Pacific Century Graduate Scholarship
2007-2009

NSERC Post-Graduate Scholarship D
2005-2007

NSERC Post-Graduate Scholarship A

2002-2004
iCore Post-Graduate Scholarship
2002-2004
Dean's Excellence in Research Award, University of Calgary
2002
C. D. Nelson Memorial Graduate Scholarship, Simon Fraser University
2002 (declined)
University Honour Roll, Simon Fraser University
2001 (Spring), 2000 (Fall)
Applied Science Dean's Honour Roll, Simon Fraser University
1997-2001 (All semesters inclusive)
Open Undergraduate Scholarship, Simon Fraser University
2000 (Spring, Summer, Fall), 1998 (Summer)

Publication Summary

Journal articles

Miyaoku, K., Tang, A., and Fels, S. (2007). C-Band: A Ring Tag System Using A Color Pattern Code. *Information Processing Society of Japan Journal*, Vol. 48, No. 3, March, pp: 1361-1371.

Jeffrey, P., Blackstock, M., Finke, M., Tang, A., Lea R., Deutscher, M., Miyaoku, K. (2007). Chasing the Fugitive on Campus: Designing a Location-based Game for Collaborative Play. *Loading...*, Vol 1, No. 1.

Tang, A., Boyle, M. and Greenberg, S. (2005). Understanding and Mitigating Display and Presence Disparity in Mixed Presence Groupware. *Journal of Research and Practice in Technology*, Volume 37, No. 2, pp: 71-88. (Invited paper.)

Refereed conference papers

Tang, A., Pahud, M., Carpendale, S., and Buxton, B. (in press). *VisTACO: Visualizing Tabletop Collaboration*. To Appear in Proceedings of Interactive Tabletops and Surfaces (ITS 2010). (November 7-10, Saarbrucken, Germany). (Acceptance: 32/120 – 26%)

Wu, A., Reilly, D., Tang, A., and Mazalek, A. (in press). *Tangible Navigation and Object Manipulation in Virtual Environments*. To Appear in Proceedings of Tangible, Embodied and Embedded Interaction 2011 (TEI 2011). (January 23-26, Funchal, Portugal). (Acceptance: 65/203 – 32%)

Neustaedter, C., Tang, A., and Judge, T.K. (2010). *The Role of Community and Groupware in Geocache Creation and Maintenance*. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2010). (April 10 – 15, Atlanta, USA). ACM Press. pp: 1757-1766. (Acceptance: 302/1346 – 22%)

Tang, A., Pahud, M., Inkpen, K. M., Benko, H., Tang, J. C., and Buxton, W. (2010). *Three's Company: Understanding Communication Channels in Three-way Distributed Collaboration*. In Proceedings of the ACM Conference on Computer Supported Cooperative Work (CSCW 2010). (February 6 – 10, 2010, Savannah, USA). ACM Press. pp: 271-280. (Acceptance: 58/288 – 20%; **Best Paper Nominee**: top 5%)

Wong, N., Tang, A., Livingston, I., Gutwin, C., and Mandryk R. (2009). *Character Sharing in World of Warcraft*. In Proceedings of the European conference on Computer Supported Cooperative Work (ESCW 2009). (September 7-11, 2009, Vienna, Austria). Springer. pp: 343-362. (Acceptance: 19/66 – 29%)

Tang, A., Lanir, J., Greenberg, S., and Fels, S. (2009). *Supporting Transitions in Work: Informing Large Display Application Design by Understanding Whiteboard Use*. In Proceedings of GROUP 2009. (May 10-13, 2009, Sanibel Island, USA). ACM Press. pp: 149-158. (Acceptance: 40/110 – 36%)

Finke, M., Tang, A., Leung, R., and Blackstock, M. (2008). *Lessons Learned: Game Design for Large Public Displays*. In Proceedings of the 3rd international Conference on Digital Interactive Media in Entertainment and Arts (DIMEA 2008). (September 10-12, Athens, Greece). ACM Press. pp: 26-33. (Acceptance: 59-77 - 77%)

Isenberg, P., Tang, A., and Carpendale, M. S. T. (2008). *Exploratory Study of Visual Information Analysis*. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2008). (April 5-10, Florence, Italy). ACM Press. pp: 1217-1226. (Acceptance: 157/714 - 22%)

Lanir, J., Booth, K. S., and Tang, A. (2008). *MultiPresenter: A Presentation System for (Very) Large Display Spaces*. In Proceedings of the 16th international Conference on Multimedia (MULTIMEDIA 2008). (October 27- November 1, Vancouver, Canada). ACM Press. pp: 149-158. (Acceptance: 56/280 - 20%)

Tang, A., Finke, M., Blackstock, M., Leung, R., Deutscher, M., and Lea, R. (2008). *Designing for Bystanders: Reflections on Building a Public Digital Forum*. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2008). (April 5-10, Florence, Italy). ACM Press. pp: 879-882. (Acceptance: 61/340 - 18%)

Tang, A., Greenberg, S., and Fels, S. (2008). *Exploring Video Streams using Slit-Tear Visualizations*. In Proceedings of the working conference on Advanced Visual Interfaces (AVI 2008). (May 28-30, Napoli, Italy). ACM Press. pp: 191-198. (Acceptance: 32/117 - 27%)

Miyaoku, K., Tang, A., and Fels, S. (2007). *C-Band: A Flexible Ring Tag System for Camera-Based User Interface*. In Proceedings of HCI International 2007 (HCII 2007). (July 22-27, Beijing, China). Springer LNCS 4563. pp: 320-328.

Shoemaker, G., Tang, A., and Booth, K. S. (2007). *Shadow Reaching: A New Perspective on Interaction for Large Wall Displays*. In Proceedings of the 20th ACM Symposium on User Interface Software Technology (UIST 2007). (October 7-10, Newport, RI, USA), pp: 53-56. ACM Press. (Acceptance: 9/66 – 14%).

Fels, S., Hausch, R., and Tang, A. (2006). *Investigation of Haptic Feedback in the Driver Seat*. In *Proceedings of 9th International IEEE Conference on Intelligent Transportation Systems (ITSC 2006)*. (September 17-20, Toronto, Canada). (Acceptance: 286/424 – 68%)

Miyaoku, K., Tang, A., and Fels, S. (2006). *C-Band: A Flexible Color Ring Tag System*. In *Proceedings of Interaction 2006*. (March 2-3, Tokyo, Japan), pp: 3-10.

Siu, N., Iverson, L., and Tang, A. (2006). *Go with the Flow: Email Awareness and Task Management*. In *Proceedings of 2006 ACM Conference on Computer Supported Cooperative Work (CSCW 2006)*. (November 4-8, Banff, Alberta, Canada), pp: 441 – 450. ACM Press. (Acceptance: 47/212 – 22%)

Tang, A., Neustaedter, C., and Greenberg, S. (2006). *VideoArms: Embodiments for Mixed Presence Groupware*. In *Proceedings of 20th British HCI Group Annual Conference (HCI 2006)*. (September 11-15, Queen Mary, University of London). (Acceptance: 13/53 – 25%)

Tang, A., Tory, M., Po, B., Neumann, P., and Carpendale, M. S. T. (2006). *Collaborative Coupling over Tabletop Displays*. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2006)*. (April 24-27, Montreal, Canada), pp: 1181-1190. ACM Press. (Acceptance: 118/508 – 23%)

Kruger, R., Carpendale, M.S.T, Scott, S. D., and Tang, A. (2005). *Fluid Orientation on a Tabletop Display: Integrating Rotation and Translation*. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2005)*. (April 2-7, Portland, Oregon), pp: 601-610. ACM Press. (Acceptance: 93/371 – 25%)

Tang, A., McLachlan, P., Lowe, K., Saka, C. R., and MacLean, K. (2005). *Perceiving Ordinal Data Haptically Under Workload*. In *Proceedings of the Seventh International Conference on Multimodal Interfaces (ICMI 2005)*. (October 4-6, Trento, Italy), pp: 317-324. ACM Press. (Acceptance: 24/97 – 25%) [**Best Paper Award**]

Refereed conference videos

Tang, A., Greenberg, S., and Fels, S. (2009). Exploring Video Streams Using Slit-Tear Visualizations. In Proceedings of the 27th international Conference Extended Abstracts on Human Factors in Computing Systems (CHI 2009). (April 4-9, 2009, Boston, USA). ACM Press. pp: 3509-3510. [**Best Research Video Nominee**]

Tang, A., Pattison, E. and Greenberg, S. (2005). DartMail: Digital Information Transfer through Physical Surrogates. In *Video Proceedings of the Ninth European Conference on Computer Supported Cooperative Work (ECSCW 2005)*. (September 18-22, Paris, France). ACM Press, duration 4:39.

Tang, A., Neustaedter, C. and Greenberg, S. (2004). VideoArms: Supporting Remote Embodiment in Groupware. In *Video Proceedings of the ACM CSCW Conference on Computer Supported Cooperative Work (CSCW 2004)*. (November 6-10, Chicago, Illinois). ACM Press, duration 5:20.

Other refereed contributions

Tang A. (2006). Surface Use in Meeting Room Collaboration. In *Conference Companion of of 2006 ACM Conference on Computer Supported Cooperative Work (CSCW 2006)*. (November 4-8, Banff, Alberta, Canada), pp: 43-44. ACM Press. [Doctoral Colloquium]

Tang, A., Parker, J. K., Lanir, J., Booth, K. S. and Fels, S. (2006). Studying Collaborative Surface Use to Guide Large Display Interaction Design. In *Conference Companion of of 2006 ACM Conference on Computer Supported Cooperative Work (CSCW 2006)*. (November 4-8, Banff, Alberta, Canada), pp: 219-220. ACM Press. [Interactive Poster]

Thesis

Tang, A. (2010). Understanding and Supporting Transitions with Large Display Applications. Ph.D. Thesis. University of British Columbia, Vancouver, BC. May, 2010.

Tang, A. (2005). Embodiments in Mixed Presence Groupware. M.Sc. Thesis. University of Calgary, Calgary, AB. February, 2005.

Reviewed Workshop papers

Lanir, J., Booth, K. S., and Tang, A. (2010). Enabling Student Control of a Classroom's Shared Screen. *ACM CHI 2010 Workshop on Next Generation of HCI and Education: Workshop on UI Technology and Educational Pedagogy*. Organized by Tse, E., Schöning, J., Rogers, Y., Shen, C., and Morrison, G.

Tang, A., Genest, A., Shoemaker, G., Gutwin, C., Fels, S., and Booth, K. S. (2010). Enhancing Expressiveness in Reference Space. *ACM CSCW 2010 Workshop on*

New Frontiers in Telepresence. Organized by Venolia, G., Inkpen, K., Olson, J., and Nguyen, D.

Tang, A. and Fels, S. (2008). Four Lessons from Traditional MDEs. *ACM CSCW 2008 Workshop on Beyond the Laboratory: Supporting Authentic Collaboration with Multiple Displays*. Organized by Biehl, J., Golovchinsky, G., and Lyons, K.

Tang, A., Finke, M., Blackstock, M., Leung, R., Deutscher, M., Tain, G., and Giesbrecht, C. (2008). Designing for Bystanders: Reflections on Building a Public Digital Forum. *ACM CHI 2008 Workshop on Designing and Evaluating Mobile Phone-based Interaction with Public Displays*. Organized by Sas, C., and Dix, A.

Tang, A. and Neustaedter, C. (2006). Visualizing Egocentric Relationships in Instant Messaging. *ACM CHI 2006 Workshop on Social Visualization: Exploring Text, Audio and Video Interactions*. Organized by Karahalios, K. and Viegas, F.

Tang, A. and Greenberg, S. (2005). Supporting Awareness in Mixed Presence Groupware. *ACM CHI 2005 Workshop on Awareness Systems: Known Results, Theory, Concepts and Future Challenges*. Organized by Markopoulos, P., de Ruyter, B., and Mackay, W.

Workshop Organization

Judge, T., Neustaedter, C., Tang, A. and Harrison, S. (2010). Bridging the Gap: Moving from Contextual Analysis to Design. *Workshop at ACM 2010 Conference on Human Factors in Computing Systems (CHI 2010)*, Atlanta, USA, April 2010.

Technical Reports

Tang, A., Lanir, J., Greenberg, S. and Fels, S. (2008). *Uncovering Activity and Patterns in Video using Slit-Tear Visualizations*. Report UBC CS Technical Report TR-2008-08, Department of Computer Science, University of British Columbia, Vancouver, British Columbia, Canada V6T 1Z4, July.

Tang, A., and Fels, S. (2006). "What I Want, Where I Want:" Reference Material Use in Tabletop Work. Report UBC CS TR-2006-05, Department of Computer Science, University of British Columbia, Vancouver, British Columbia, Canada V6T 1Z4, March.

Neustaedter, C., Elliot, K., Tang, A. and Greenberg, S. (2004). Where are you and when are you coming home? Foundations of Interpersonal Awareness. Report 2004-760-25, Department of Computer Science, University of Calgary, Calgary, Alberta, Canada T2N 1N4, September.

Tang, A., Kratt, D., Carpendale, S. and Dunning, A. (2003). Sensing and Visualising Physiological Arousal. Report 2003-727-30, Department of

Computer Science, University of Calgary, Calgary, Alberta, Canada T2N 1N4,
July.

Supervision

Jonathan Massy, *Tangible and Tracked Navigation in Virtual Environments*,
B.Sc. project, 2010 (co-supervised with Derek Reilly).

Clement Leung, *Object Detection in Slit-Tear Visualizations*, ECEE 496 project,
2008.

Roujia Manouchehri & Rimalda van Beurden, *Investigating Information
Sharing between Tabletop and Upright Displays*, Undergraduate internship,
2007.

Gregory Mason, *Shadow Touch: Interaction with Large Wall Displays*, ECEE
496 project, 2007 (co-supervised with Garth Shoemaker).

Invited Talks

Mixed presence groupware: Sharing a visual workspace with distributed
teams. *Challenging Groupware: Emerging configurations for distributed
interactions*. Organized by Dylan Tutt and Michael Fraser. Commonwealth
Club, London, UK. February 12, 2008.

How and why wall and table displays will be used. *MAGIC Workshop on Large
Displays*. Organized by Mattias Finke and Rodger Lea. University of British
Columbia, Vancouver, BC. March 29, 2007.

Experience

Industry

Microsoft Research, Advanced Development Team, Seattle WA

Research intern: Responsible for the iterative design, prototyping and
evaluation of several teleconferencing+shared workspace systems
involving the Microsoft Surface.

Manager: Bill Buxton, Kori Inkpen, Michel Pahud
Spring, 2009

Microsoft Research, Adaptive Systems and Interaction, Seattle WA

Research intern: Responsible for the design and implementation of a
contextually aware information management tool for programmers.

Manager: Gina Venolia
Summer, 2004

Microsoft, Mobile Services, Seattle WA

Program manager: Responsible for the user experience of PocketMSN,
and for fostering and managing inter-team relationships related to its
design.

Summer, 2002

Microsoft, Mobile Services, Seattle WA

Program manager: Responsible for identifying and analyzing market opportunities for InfoBot, a two-way SMS information retrieval service, and two-way SMS support for MSN Messenger. Guided cross-team design for both applications.

Summer, 2001

Microsoft, Visual C++ .NET, Seattle WA

Program manager: Investigated and identified design issues in the user interface of the programming tool Visual C++. Collaborated with usability engineers, designers and software design engineers to implement and test user interface enhancements.

Summer, 2000

National Research Council, Networking Group, Ottawa ON

Programmer: Implemented a monitoring and deployment tool for a Java-based agent system, modifying the existing infrastructure to allow lightweight encrypted communication and deployment.

Spring, 1999

Research

Psychology Department, Simon Fraser University, Burnaby BC

Research assistant: Responsible for running subjects in a study about close interpersonal relationships.

Spring, 2002

Teaching

Computer Science Department, University of British Columbia, Vancouver BC

Curriculum development: Designed two tutorials for a new fourth year HCI class covering field study methods.

Summer, 2006

Computer Science Department, Simon Fraser University, Burnaby BC

Teaching assistant: Graded assignments and provided 1-1 help to students in a third year AI class.

Fall, 2000

Service

Program Committee

ITS 2010

CHI 2010 Media Showcase

CHI 2009 Work-In-Progress

Organization

CHI 2011 Posters Chair
GROUP 2007 (web & publicity co-chair)

Reviewer

CHI 2011, CSCW 2011, TEI 2011, GI 2010, CHI 2010, CSCW 2010, InfoVis 2010, UbiComp 2009, UIST 2009, Tabletop 2009, CHI 2009, Tabletop 2008, CSCW 2008, InfoVis 2008, CHI 2008, GI 2007, CHI 2007, BCS-HCI 2006 (short papers), CSCW 2006, NIME 2006, GI 2006, CHI 2006, CHI 2005 (short papers), GROUP 2005, HCI 2005, ICMI 2005, UbiComp 2005, IEEE CG&A, Interacting with Computers, International Journal of Human-Computer Studies

Computer Science Graduate Society, University of Calgary
Vice President of Social Activities: 2003-2004

Discover SFU, Simon Fraser University
Orientation Leader: 1998-2001

Computer-Human Interaction Conference, Various
Student Volunteer: 2001-2005

Community Volunteering
High School Volleyball Head Coach: 2006, 2004

Art Shows

iWorks: Nickle Arts Museum, University of Calgary, Calgary AB, 2004