GREGORY D. ABOWD
REGENTS' PROFESSOR AND J.Z. LIANG CHAIR
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I. EARNED DEGREES

D. Phil., 1991, University of Oxford, United Kingdom, Computation. Thesis: *Formal Aspects of Human-Computer Interaction*, Mr. Bernard Sufrin (advisor).
M.Sc., 1987, University of Oxford, United Kingdom, Computation. Thesis: *Arabic Word Processing*, Dr. Michael Spivey (advisor).
B.S. (*summa cum laude*), 1986, University of Notre Dame, Honors Mathematics.

II. EMPLOYMENT HISTORY

Regents' Professor, School of Interactive Computing, Georgia Institute of Technology, 2012-present.
W. George Professor and Director, Health Systems Institute, Georgia Institute of Technology, 2008-2010.
Full Professor and Distinguished Professor, School of Interactive Computing, Georgia Institute of Technology, 2007-present.
Associate Professor, College of Computing, Georgia Institute of Technology, 2000-2007.
Visiting Faculty, Intel Research Seattle, July 2004-June 2005.
Founding Director, Aware Home Research Initiative, Georgia Institute of Technology, 2000-2003. 2005-2008.
Associate Director for Broadband Institute in charge of Residential Laboratory, 1998-2003.
Assistant Professor, College of Computing, Georgia Institute of Technology, 1994-2000.
Visiting Scientist, Software Engineering Institute, Carnegie Mellon University, 1994–97.
Postdoctoral Research Associate, Computer Science Department and Software Engineering Institute, Carnegie Mellon University, 1992-1994.
Research Associate, Human-Computer Interaction Group, Computer Science Department, University of York, 1989-1992.

III. HONORS AND AWARDS

1993. SIGSOFT'93/FSE-1 conference paper commended for high technical merit and recommended for extension and submission to ACM TOSEM journal.
1994. One of two nominees by Georgia Tech for NSF Presidential Faculty Fellows Program.
1995. Received Georgia Tech nomination for Packard Foundation Fellowship.
1996. MobiCom'96 paper commended as one of top 9 papers in conference and recommended for submission to *ACM Wireless Networks* journal.
1997. Sigma Xi, Georgia Tech Chapter Young Faculty Research Award.
NSF CAREER award recipient.
College of Computing William A. "gus" Baird Outstanding Faculty Teaching Award.

1998. Intelligent User Interface'98 conference paper nominated as one of top papers at conference and recommended for extension and submission to *Knowledge Based Systems* journal.
Georgia Tech, Outstanding Use of Innovative Educational Technology Award.
1999. Georgia Tech, College of Computing, Outstanding Junior Faculty Research Award.
2000. Schlumberger Foundation Technical Fellow, with $35,000 award.
2001. IBM Research Faculty Fellowship, with $20,000 award.
Schlumberger Foundation Technical Fellow, with $25,000 award.
2002. Selected to attend National Academy of Engineering Symposium on Frontiers in Engineering, Irvine, CA.
2005. Best paper award at *Symposium On Usable Privacy and Security (SOUPS)*.
Best of CHI selection for paper presented to *ACM SIGCHI Conference on Human Factors and Computing (CHI 2006)*.
Best paper nominations at *The 4th International Conference on Pervasive Computing*.
Top Technology Idea from *New York Times Magazine*. Awarded to Capture Resistant Environment.
2006. College of Computing Senior Research Award.
Best paper nomination at the *ACM SICHI Conference on Computer Supported Cooperative Work(CSCW 2006)*.
2007. Best paper award and best presentation award at Ubicomp 2007.
ACM SIGCHI Social Impact Award.
Georgia Tech Don Bratcher Human Relations Award.
2008. Best paper award at Pervasive Computing 2008.
Elected to ACM SIGCHI Academy.
Georgia Tech Doctoral Dissertation Advisor Award.
Elected Fellow of the Association of Computing Machinery (ACM).
2010. ACM Eugene Lawler Humanitarian Award.
2017. Georgia Tech College of Computing Senior Faculty Research Award
State of Georgia Outstanding Achievement in Autism

IV. RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITIES

Asterisk (*) indicates work done at Georgia Tech. co-authors in boldface.

A. PUBLISHED BOOKS, PARTS OF BOOKS, AND EDITED VOLUMES

A1. Books

B1. Dix, Alan J., Janet E. Finlay, Gregory D. Abowd, and Russell Beale. (Principal contributions from Dix, Finlay and Abowd, with assistance from Beale) *Human-Computer Interaction*. Prentice Hall International, 1993. 2nd edition published in November 1997. 3rd edition published in 2004.

A2. Refereed Book Chapters

BC1. Abowd, Gregory D. and Russell Beale. (Significant contributions from both authors) Contextualizing novel research in HCI. In Beale, R. and Finlay, J., editors, *Neural*

Networks and Pattern Recognition in Human-Computer Interaction, Chapter 1. Ellis Horwood, 1992.

BC2. Harrison, Michael, Gregory D. Abowd, and Alan J. Dix. (Significant contributions by all authors with Harrison as principal author) Analysing display oriented interaction by means of systems models. In Byerley, Paul F., Barnard, Philip J. and May, Jon, editors, *Computers, Communication and Usability: Design Issues, Research and Methods for Integrated Services*, pp. 147–163, Elsevier Science, 1993.

BC3. Bass, Len. Paul Clements, Rick Kazman and Gregory D. Abowd. (significant contributions by all authors, principal authorship by Bass, Clements and Kazman). Analyzing Development Qualities at the Architectural Level: The Software Architecture Analysis Method (SAAM). *Software Architecture in Practice*. Chapter 8. by Addison-Wesley. March 1997.

BC4. Bass, Len, Paul Clements, Rick Kazman, Gregory D. Abowd, Linda Northrop and Amy Zaremski. (significant contributions by all authors, principal authorship by Bass, Clements and Kazman). Architectural Reviews. *Software Architecture in Practice*. Chapter 9. Addison-Wesley. March 1997.

BC5. * Abowd, Gregory D. and Elizabeth Mynatt (equal contribution from both authors) Charting past, present and future research in ubiquitous computing. In *HCI in the New Millenium*, edited by Jack Carroll, Chapter 23. Addison-Wesley, 2001. Adapted from [J.12].

BC6. * **Dey, Anind K**., Daniel Salber and Gregory D. Abowd. (principal research by Dey with joint authorship by all) A conceptual framework and a toolkit for supporting the rapid prototyping of context-aware applications. Book chapter adapted from [J.16]. Appears in book adapted from special three-issue Human-Computer Interaction (HCI) Journal. special issue on Context-Aware Computing, To appear 2002.

BC7. * Abowd, Gregory D. and **Jason Brotherton** (equal contribution by both authors) eClass. Chapter 6 in Hazemi, Reza, Stephen Hailes and Steve Wilbur (eds.) *The Digital University: Building a Learning Community*, London: Springer Verlag, 2002, pp.252, ISBN 185233-478-9.

BC8. * **Anind K. Dey** and Gregory D. Abowd (principal authorship by Dey) Support for adapting applications and interfaces to context. In Seffah, Ahmed and Homa Javahery (eds.) *Multiple User Interfaces: Engineering and Application Frameworks*. John Wiley and Sons 2003.

BC9. * Ann L. Horgas and Gregory D. Abowd. (shared authorship). The Impact of Technology on Living Environments for Elderly Adults. In National Research Council report *Workshop on Adaptive Aging*. March 2003, pp. 230-252, ISBN 0-309-09116-0.

BC10. * Gregory D. Abowd and Elizabeth D. Mynatt (principal authorship by Abowd) Designing for the Human Experience in Smart Environments. In *Smart Environments: Technologies, Protocols and Applications*, Diane Cook and Sajal Das (editors), John Wiley. 2004.

BC11. * **Giovanni Iachello** and Gregory D. Abowd, Emerging Ubiquitous Computing Technologies and Security Management Strategy, in *Information Security: Policy, Processes, and Practices*, D.W. Straub, S. Goodman, R.L. Baskerville eds., M.E.Sharpe 2007.

BC12. * **Shwetak N. Patel, Khai N. Truong, Gillian R. Hayes, Giovanni A. Iachello, Julie A. Kientz**, and Gregory D. Abowd (principal research and authorship by all) The Personal Audio Loop: A Ubiquitous Audio-Based Memory Aid. *Handbook of Research on User Interface Design and Evaluation for Mobile Technology*, Joanna Lumsden, Editor.

BC13. * Mynatt, E.D., Abowd, G.D., **Mamykina, L., Keintz, J.A**., (principal authorship by all) Understanding the Potential of Ubiquitous Computing for Chronic Disease Management, in *Health Informatics: A patient-centered approach to diabetes*, (Asprey, W., Hayes, B., editors), Chapter 2, pp. 85-106. MIT Press, Cambridge, MA, 2010.

BC14. Abowd, Gregory D., Hayes, Gillian R., Kientz, Julie A., Arriaga, Rosa I., and **Nazneen** (principal research and authorship shared by all) Tools to Support Simplified Capture of Activities in Natural Environments. In Goodwin and Boser (eds.) *Technology and Autism*.

A3. Other Parts of Books

None

A4. Edited Volumes

IEEE Pervasive Computing magazine, Volume 1, Issue 3, July-September 2002. Guest Editor for special issue on Context-Aware with Maria Ebling, Guerney Hunt, Hui Lei and Hans Gellersen.
IEEE Pervasive Computing magazine, Volume 4, Issue 2, April-June 2005. Guest Editor for special issue on The Smart Phone: A First Platform for Pervasive Computing with Liviu Iftode and Helena Mitchell.
IEEE Pervasive Computing, Special Issue on Pervasive Computing for Successful Aging (with Sumi Helal and Andrew Sixsmith), vol. 3, no. 2, Apr–June 2004.
IEEE Computer, Special Issue 21st Century User Interface Design (with A. Oulasvirta), vol. 49. no. 7, July 2016.

B. Refereed Publications and Submitted Articles

B1. Published and Accepted Journal Articles

J1. Abowd, Gregory D. and Kozak, John J. (Abowd is principal author, based on research work directed by Kozak) Pattern Development in Cellular Automata Triggered by Site-Specific Reactive Processes, *Physics Letters A*, **127**(3), February 15, 1988.

J2. Abowd, Gregory D. and Dix, Alan J. (Equal contribution by both authors) Giving undo attention, *Interacting with Computers*, **4**(3):317:342, 1992.

J3. Abowd, Gregory D., Robert Allen, and David Garlan. (Significant contribution by all authors with Abowd as principal author) Formalizing style to understand descriptions of software architecture. *ACM Transactions on Software Engineering and Methodology*. **4**(4):319-364, October 1995.

J4. Abowd, Gregory D., Jonathan Engelsma, Luigi Guadagno and Okonon Okon. (Significant contribution from all authors, principal authorship by Engelsma and Abowd) Architectural Analysis of Object Request Brokers. *Object Magazine* special issue on distributed systems, March 1996, pp. 44-51.

J5. Kazman, Rick., Abowd, Gregory D., Bass, Len. and Clements, Paul. (Significant contributions and authoring by all) Scenario-based analysis of software architecture, *IEEE Software*. **13**(6):47–56, November 1996.

J6. Dix, Alan and Gregory D. Abowd. (Significant contribution from both authors, principal authorship by A. Dix) Moelling status and event behaviour of interactive systems. *Software Engineering Journal*. **11**(6)334–346, November 1996.

J7. * Abowd, Gregory D. Software Engineering and Programming Language Considerations for Ubiquitous Computing. Computing Surveys, 28A(4). in *Computing Surveys*, Vol. 28A, No. 4.

J8. * Abowd, Gregory D., Christopher G. Atkeson, **Anind Dey, Jason Hong, Sue Long, Rob Kooper** and **Mike Pinkerton**. (significant contributions from all authors, principal authorship by Abowd) Cyberguide: A mobile context-aware tour guide. *ACM Wireless Networks*. Volume 3, pages 421-433, November 1997.

J9. * **Dey, Anind**, Gregory D. Abowd, and **Andrew Wood**. Cyberdesk: A Framework for Dynamic Integration of Desktop and Network-based applications. *Knowledge Based Systems Journal*, Volume 11, pages 3-13. 1998.

J10. * Abowd, Gregory D., **Anind K. Dey, Robert Orr** and **Jason Brotherton** (Significant contributions by all; authorship by Abowd and Dey). *British VR Journal*, special issue on wearable computing, Volume 3, pages 200-11, 1998.

J11. * Gregory D. Abowd. Classroom 2000: An Experiment with the Instrumentation of a Living Educational Environment. *IBM Systems Journal*. Special issue on HCI / Pervasive computing, Volume 38, Number 4, pp. 508-530, October 1999. See http://www.research.ibm.com/journal.

J12. * Gregory D. Abowd and Elizabeth D. Mynatt. (equal contributions by both authors) Charting past, present and future research in ubiquitous computing. *ACM Transactions on Computer-Human Interaction*, special issue on HCI research in the new millenium. Volume 7, Number 1 pp. 29-58, March 2000.

J13. * Gregory D. Abowd and Sterbenz, J. (principal authorship by Abowd) Report on the Inter-Agency Workshop on Research Issues for Smart Environments. *IEEE Personal Communications*, Volume 7, Number 5, pp. 36-40, October 2000.

J14. * **Jennifer Mankoff**, Gregory D. Abowd and Scott E. Hudson (principal research and writing by Mankoff) OOPS: A toolkit supporting mediation techniques for resolving ambiguity in recognition-based interfaces. *Computers and Graphics*, Special issue on Calligraphic Interfaces: towards a new generation of interactive systems. Elsevier Science. Volume 24, Number 6, pp. 819-834, December 2000.

J15. * Maria da Graca Pimentel, Yoshihide Ishiguro, **Bolot Kerimbaev**, Gregory D. Abowd and Mark Guzdial (principal research and writing by Pimentel, Ishiguro and Abowd) Supporting long-term educational activities through dynamic web interfaces. *Interacting with Computers*, special issue on interfaces for the active Web. Volume 13, Number 3, pp. 353-374, February 2001.

J16. * **Anind K. Dey**, Daniel Salber and Gregory D. Abowd. (principal research by Dey with joint authorship by all) A conceptual framework and a toolkit for supporting the rapid prototyping of context-aware applications. *Human-Computer Interaction (HCI) Journal*. Anchor article of a special triple issue on Context-Aware Computing, Vol. 16, Numbers 2-4, 2001. Also published separately by Lawrence Erlbaum as edited book in January 2002, ISBN 0805896856.

J17. * Gregory D. Abowd, Elizabeth D. Mynatt and Tom Rodden. (principal writing by Abowd) The human aspect of ubiquitous computing. *IEEE Pervasive Computing*. Volume 1, Number 1, pp. 48-57, 2002.

J18. * **Stevens, Molly M.**, Gregory D. Abowd, Khai N. Truong and Florian Vollmer (principal research by Stevens, principal authorship by Stevens and Abowd) Getting into the Living

Memory Box: Family archives and holistic design. *Personal and Ubiquitous Computing Techology*, Vol. 7 (3-4), 2003, pp. 210-216.

J19. * **Anne R. Jacobs** and Gregory D. Abowd (equal contribution on research and writing) A framework for comparing perspectives on privacy and pervasive technologies. *IEEE Pervasive Computing Magazine*. Volume 2, Number 4, October-December, 2003, pp. 78-84.

J20. * Elizabeth D. Mynatt, Jim Rowan, **Quan Tran**, Gregory Abowd, Wendy Rogers and Itiro Siio (invited paper, principal writing by Mynatt, principal research by Mynatt, Rowan, Tran and Rogers) Designing Home Appliances for Older Adults. *Cognitive Studies: Bulletin of the Japanese Cognitive Science Society*. Vol. 10, No. 3, pp. 343-352, Sep 2003.

J21. * **Richter, Heather A., Chris Miller**, Gregory D. Abowd, and Harry Funk. (principal research by Richter, authorship by all, extended version of conference paper C68, one of 6 out of 30 conference papers recommended for journal publication) Tagging Knowledge Acquisition To Facilitate Knowledge Traceability. *International Journal on Software Engineering and Knowledge Engineering*, World Scientific, Volume 14, Number 1, pages 3-19, February 2004.

J22. * **Brotherton, Jason A**. and Gregory D. Abowd (principal research and writing by Brotherton) Lessons learned from eClass: Assessing automated capture in the classroom. *ACM Transactions on Computer-Human Interaction.* Volume 11, Number 2, pp. 121-155, 2004.

J23. * Werner Geyer, **Heather A. Richter**, and Gregory D. Abowd. (principal research and writing by Geyer and Richter) Towards a Smarter Meeting Record – Capture and Access of Meetings Revisited. *Multimedia Tools and Applications*, Kluwer Academic Publishers. Volume 27, Number 3, December 2005.

J24. * Gregory D. Abowd, **Gillian R. Hayes, Giovanni Iachello, Julie A. Kientz, Shwetak N. Patel, Molly M. Stevens** and **Khai N. Truong**. (principal research by all, principal writing by Abowd, Iachello, Hayes, Truong and Patel) Prototypes and Paratypes: Designing Mobile and Ubiquitous Computing Applications. *IEEE Pervasive Computing Magazine*. Volume 4, Number 4, October-December, 2005, pp. 67-73.

J25. * **Martin Modahl, Bikash Agarwalla, T. Scott Saponas**, Gregory Abowd and Umakishore Ramachandran. (principal research by Modahl and Agarwalla, writing by all). UbiqStack: a taxonomy for a ubiquitous computing software stack. *Personal and Ubiquitous Computing*, Volume 10, Number 1. Springer London, February 2006.

J26. * **Kristine Nagel, Ja-Young Sung** and Gregory D. Abowd (principal research and authorship by Nagel and Sung) Designing Home Availability Studies. *Personal and Ubiquitous Computing.* Springer London, Volume 11, Issue 5, p. 361-375,.

J27. * **Julie A. Kientz, Gillian R. Hayes, Tracey L. Westeyn**, Thad E. Starner and Gregory D. Abowd (principal work and authorship by Kientz, Hayes and Westeyn) Pervasive computing and autism: Assisting caregivers of children with special needs. .*IEEE Pervasive Computing Magazine*. Volume 6, Number 1, January-March 2007.

J28. * **Gillian R. Hayes, Erica S. Poole, Giovanni Iachello, Shwetak N. Patel, Andrea Grimes**, Gregory D. Abowd and K.N. Truong (principal work and authorship by Hayes) Physical, Social, and Experiential Knowledge in Pervasive Computing Environments, *IEEE Pervasive Computing* 6(4), IEEE Press (2007) 56–63.

J29. * **Giovanni Iachello**, Gregory D. Abowd (principal work and authorship by Iachello) From Privacy Methods to a Privacy Toolbox: Evaluation Shows That Heuristics Are Complementary, *ACM ToCHI*, 15(2), (2008), Article No. 8.

J30. * **Heather Richter Lipford** and Gregory D. Abowd. Reviewing Meetings in TeamSpace.(principal work and authorship by Lipford) *HCI Journal*, Taylor and Francis Group, Volume 23, Number 4, pp. 406-432.

J31. **Svetlana Yarosh, Yee Chieh "Denise" Chew** and Gregory D. Abowd (principal research and authorship by Yarosh) Supporting Parent-Child Communication in Divorced Families. *International Journal of Human Computer Studies*, (2008). doi:10.1016/j.ijhcs.2008.09.005.

J32. Jaeseok Yun, Gregory D. Abowd, Jeha Ryu and Woontack Wu (principal research and authorship by Yun) User identification with user's stepping pattern over the UbiFloorII. *International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 22, No. 3 (2008) pp. 497-514. World Scientific Publishers.

J33. * **Mario Romero, Jay Summet**, John Stasko and Gregory D. Abowd (principal research by Romero, authorship by Romero, Summet and Abowd) Viz-a-Vis: Toward Visualizing Video through Computer Vision. *IEEE Transactions on Visualization and Computer Graphics*. Vol. 14, Issue 6, pp. 1261-1268, Nov.-Dec. 2008.

J34. * Jaeseok Yun, **Shwetak Patel**, Matt Reynolds, Gregory D. Abowd (principal research and authorship by all) Design and Performance of an Optimal Inertial Power Harvester for Human-powered Devices. *IEEE Transactions on Mobile Computing*, Volume 10, Number 5, pp. 669-683, May 2011.

J35. * **Tracy Westeyn**, Thad Starner and Gregory D. Abowd. (principal research and authorship by Westeyn) Monitoring children's developmental progress using augmented toys and activity recognition. *Personal and Ubiquitous Computing*, special issue on technology and autism. 2011.

J36. * **Nazneen, Mario Romero, Yi Han**, Agata Rozga, Nathan Call, Addie Finlay, Gregory D. Abowd and Rosa Arriaga. Supporting parents for in-home capture of problem behaviors of children with developmental disabilities. *Personal and Ubiquitous Computing*, special issue on technology and autism. 2011.

J37. * Julie A. Kientz, Matthew S. Goodwin, Gillian R. Hayes, and Gregory D. Abowd (principal research by all, principal authorship by Kientz, Hayes and Goodwin) Interactive Technologies for Autism: A review. *Synthesis Lectures on Assistive, Rehabilitative, and Health-Preserving Technologies Series*, Morgan & Claypool Publishers. November 2013, 177 pages. doi:10.2200/S00533ED1V01Y201309ARH004.

J38. * James M. Rehg, Agata Rozga, Gregory D. Abowd, and Matthew S. Goodwin (principal authorship by Rehg) Behavioral Imaging and Autism. *IEEE Pervasive Computing*, Volume 13, Number 2, pages 84-87.

J39. * Michael Brown, Tim Coughlan, Thomas Ploetz, Peter Tolmi and Gregory D. Abowd. Methods for studying technology in the home. *Interacting with Computers*, Volume 27, Issue 1, pp. 1-2. 2015.

J40. * **Yi Han**, Melissa Spezia Faulkner, Heather Fritz, Doris Fadoju, Andrew Muir, Gregory D. Abowd, Lauren Head, and Rosa I. Arriaga (principal research by Han, Faulkner and Arriaga) A pilot randomized trial of text-messaging for symptom awareness and diabetes knowledge in adolescents with Type 1 diabetes. *Journal of Pediatric Nursing*, Volume 30, Issue 6 November-December 2015, pp. 850-861. doi:10.1016/j.pedn.2015.02.002.

J41. * Santosh Kumar, Gregory D. Abowd, William T Abraham, Mustafa al'Absi, J Gayle Beck, Duen Horng Chau, Tyson Condie, David E Conroy, Emre Ertin, Deborah Estrin, Deepak Ganesan, Cho Lam, Benjamin Marlin, Clay B Marsh, Susan A Murphy, Inbal Nahum-Shani, Kevin Patrick, James M. Rehg, Moushumi Sharmin, Vivek Shetty, Ida Sim, Bonnie

Spring, Mani Srivastava, David W. Wetter (principal authorship by Kumar) Center of Excellence for Mobile Sensor Data-to-Knowledge (MD2K), *Journal of the American Medical Informatics Association*, 2015;0:1–6. doi:10.1093/jamia/ocv056, Brief Communication.

J42. * **Nazneen**, Agata Rozga, Christopher J. Smith, Ron Oberleitner, Gregory D. Abowd, Rosa I. Arriaga (principal research and authorship by all) A Novel System for Supporting Autism Diagnosis Using Home Videos: Iterative Development and Evaluation of System Design, *Journal of Medical Internet Research MHEALTH and UHEALTH*, 2015;3(2):e68. doi:10.2196/mhealth.4393.

J43. * **Nazneen**, Nichole Matthews, Christopher J. Smith, Agata Rozga, Gregory D. Abowd, Ronald Oberleitner, Uwe Reischl, and Rosa I Arriaga. Use of a novel imaging technology for remote diagnosis: A reflection on experience of stakeholders. *Procedia Manufacturing*, Volume 3, pp. 293-300, 2015.

J44. * Gregory D. Abowd. Beyond Weiser: From ubiquitous to collective computing. *IEEE Computer*, Volume 49, Issue 1, pp. 17-23. 2016. Lead cover article.

J45. * Christopher Smith, Agata Rozga, **Nazneen**, Nicole Matthews, Gregory D. Abowd, and Ron Oberleitner (principal research by Smith, Rozga and Nazneen, authorship added Abowd) Investigating the accuracy of novel telehealth diagnostic approach for Autism Spectrum Disorder, *Journal of Psychological Assessment*. To appear 2016.

J46. * Eun Kyoung Choe, Saeed Adbullah, Mashfiqui Rabbi, Edison Thomaz, Daniel A. Epstein, Matthew Kay, Felicia Cordeiro, Gregory D. Abowd, Tanzeem Choudhury, James Fogarty, Bongshin Lee, Mark Matthews and Julie A. Kientz (principal research by all, principal authorship by Choe and Kientz) Semi-Automated Tracking: A Balanced Approach for Self-Monitoring Applications. *IEEE Pervasive Computing*, Volume x, Number y, pages nn-mm. To appear 2017.

J47. * **Cheng Zhang**, **Sinan Hersek**, **Yiming Pu**, **Danrui Sun**, **Qiuyue Xue**, Thad E. Starner, Gregory D. Abowd and Omer Inan (principal research by all, authorship by Zhang, Starner, Abowd and Inan) Bioacoustics-based human body mediated communication. *IEEE Computer*, Special issue on Human Augmentation, vol. 50, no. 2, February 2017.

B2. Conference Presentation with Proceedings (Refereed)

C1. Abowd, Gregory D. Agents: Communicating interactive processes. In Diaper,D., Gilmore, D., Cockton, G. and Shackel, B., editors, *Human-Computer Interaction - INTERACT'90*, pp. 143-148, Elsevier Science Publishers, 1990.

C2. Abowd, Gregory D. and Russell Beale. (Significant contributions from both authors) Users, systems and interfaces: a unifying framework for interaction. In Diaper, D. and Hammond, N., editors, *HCI'91: Usability Now: Proceedings of the British Computer Society Special Interest Group on Human-Computer Interaction,* pp. 73-87, Cambridge University Press, 1991.

C3. Abowd, Gregory D., Alan J. Dix and Michael D. Harrison. (Significant contributions from all authors) Formalising user recognisable structures of graphics packages. In Duce, David A. and Faconti, Georgio, editors, *The Proceedings of the Eurographics Workshop on Formal Methods in Computer Graphics*, Eurographics, 13 pages, June, 1991.

C4. Abowd, Gregory D., Properties of a graphical interface within a formal interactive system architecture. In Duce, David A. and Faconti, Georgio, editors, *The Proceedings of the Eurographics Workshop on Formal Methods in Computer Graphics*, Eurographics, 16 pages, June, 1991.

C5. Abowd, Gregory. D., Joelle Coutaz and Laurence Nigay. (Significant contributions from all authors with Abowd as principal author) Structuring the space of interactive system properties. In Larson, Jim and Unger, Claus, editors, *The proceedings of the IFIP Working Conference on Engineering for Human-Computer Interaction*, pp. 113–128, Elsevier Science, 1992.

C6. Abowd, Gregory D., Rob Allen and David Garlan. (Significant contributions by all authors with Abowd as principal author) Using style to understand descriptions of software architectures. *Software Engineering Notes*, **18**(5):9-20, December 1993. Published proceedings of SIGSOFT'93 with acceptance rate of 18/93. **Best paper selection.**

C7. Reizer, Neal. R., Gregory D. Abowd, B. C. Meyers, and Patrick R.H. Place. (Significant contributions by Reizer, Abowd and Place under research directed by Meyers.) Using formal methods for requirements specification of a proposed POSIX standard. In *IEEE International Conference on Requirements Engineering — ICRE'94*, pp. 118–125, IEEE Computer Society Press, April 1994.

C8. Abowd, Gregory D. and Alan J. Dix. (Equal contributions by both authors) Integrating status and event phenomena in formal specifications of interactive systems. *Software Engineering Notes*, **19**(5):44-52, December 1994. Published proceedings of SIGSOFT'94 with acceptance rate of 17/122.

C9. Bass, Len J., Gregory D. Abowd, and Rick Kazman. (Significant contribution by all authors with Bass as principal author) Issues in the evaluation of user interface tools. In Taylor, Richard N. and Coutaz, Joelle, editors, *Workshop on Software Engineering and Human-Computer Interaction: Joint Research Issues*, pp. 1–12, May, 1994. Springer-Verlag will published a revised version of these proceedings in 1995.

C10. Kazman, Rick, Len Bass, Gregory D. Abowd and S. M. Webb. (Significant contributions by Kazman, Bass and Abowd with Kazman as principal author) SAAM: A method for analyzing the properties of software architectures. In *The proceedings of the International Conference on Software Engineering — ICSE'16*, pp. 81–90, IEEE Computer Society Press, May 1994.

C11. Young, Richard. M. and Gregory D. Abowd. (Significant contribution by both authors with Young as principal author) Multi-perspective modelling of interface issues: Undo in a collaborative editor. In Cockton, G., Draper, S.W. and Weir, G.R.S. *People and Computers IX: Proceedings of HCI'94*, pp. 249–260, Cambridge University Press, 1994.

C12. Kazman, Rick, Len Bass, Gregory D. Abowd, and Paul Clements. (Significant contribution by Kazman, Bass and Abowd, Kazman as principal author) An architectural analysis case study: Internet information systems. In *Proceedings of the ICSE'17 Workshop on Software Architecture*, Seattle, WA, May 1995.

C13. Abowd, Gregory D., Hung-Ming Wang and Andrew F. Monk. (Significant contributions by Abowd and Wang with Abowd as principal author) A formal technique for automated dialogue development. In the proceedings of *DIS'95 — Symposium on Designing Interactive Systems: Processes, Practices, Methods and Techniques*, G. Olson and S. Schuon, editors, pp. 219–226, ACM, Ann Arbor, MI, August 1995.

C14. Clements, Paul, Len Bass, Rick Kazman and Gregory D. Abowd. (Significant contributions by Clements and Bass with Clements as principal author) Predicting software quality by architecture-level evaluation. In the proceedings of *Fifth International Conference on Software Quality*. Austin, TX, October 1995.

C15. Abowd, Gregory D., Rick Kazman and Jim Pitkow. (Significant contributions from Abowd and Kazman with Abowd as principal author) Analyzing Differences Between Internet

Information System Software Architectures, Proceedings of ICC '96, (Dallas, TX), June 1996.

C16. Dix, Alan J. and Gregory D. Abowd. (Significant contribution from both authors, principal authorship by Dix) Delays and temporal incoherence due to mediated status-status mappings. *1995 University of Glasgow Workshop on Temporal Methods for HCI. SIGCHI Bulletin*, **28**(2)47-49, April 1996.

C17. * **Long, S., Aust, D.,** Abowd G. D. and Atkeson, C. (Significant contributions by all with principal authorship by Abowd) Cyberguide: Prototyping Context-Aware Mobile Applications. In *Companion Proceedings of CHI'96,* Short paper, pages 293-294, April 1996.

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C105. * **Khai N. Truong, Gillian R. Hayes** and Gregory D. Abowd (principal work and writing by Truong and Hayes) Storyboarding: An empirical determination of best practices and effective guidelines. *Proceedings of the Symposium on Designing Interactive Systems (DIS 2006)*, University Park, Pennsylvania, June 26-28, 2006, pp. 12–21.

C106. T. Scott Saponas, Madhu Prabaker, Gregory D. Abowd and James A. Landay (principal work and writing by Saponas, Prabaker and Abowd) The impact of pre-patterns on the design of digital home applications. *Proceedings of the Symposium on Designing Interactive Systems (DIS 2006)*, University Park, Pennsylvania, June 26-28, 2006, pp. 189–198.

C107. * **Shwetak N. Patel, Khai N. Truong** and Gregory D. Abowd (principal research by Patel, writing by all) Powerline positioning: A practical sub-room-level indoor location system for domestic use. *International Symposium on Ubiquitous Computing (Ubicomp 2006)*, Irvine, California, September 2006, Springer-Verlag LNCS Volume 4206, pp 123–140.

C108. * **Shwetak N. Patel, Julie A. Kientz, Gillian R. Hayes, Sooraj Bhat** and Gregory D. Abowd (principal research by Patel and Kientz, writing by all) Farther than you may think: An empirical investigation of the proximity of users to their mobile phones. *International Symposium on Ubiquitous Computing (Ubicomp 2006)*, Irvine, California, September 2006, Springer-Verlag LNCS Volume 4206, pp 441–458.

C109. * **Julie A. Kientz, Shwetak N. Patel, Arwa Z. Tyebkhan, Brian Gane, Jennifer Wiley** and Gregory D. Abowd (principal work and writing by Kientz, Patel and Tyebkhan) Where's My Stuff? Design and Evaluation of a Mobile System for Locating Lost Items for the Visually Impaired . In *Proceedings of the Eighth International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2006)*, ACM Press, Portland, Oregon, October 2006, pp. 103–110.

C110. * **Julie A. Kientz, Gillian R. Hayes**, Gregory D. Abowd and Rebecca E. Grinter (principal research by Kientz, writing by all) From the war room to the living room: Decision support for home-based therapy teams. *Proceedings of Computer Supported Cooperative Work (CSCW '06)*, Banff, Canada, November, 2006, pp. 209–218. **One of only 7 overall submissions selected for consideration as Best Paper.**

C111. * **Moritz Köhler, Shwetak Patel, Jay Summet, Erich Stuntebeck** and Gregory D. Abowd (principal research and authorship by Köhler, Patel and Summet) TrackSense: Infrastructure-free precise indoor positioning using projected patterns. *Proceedings of The 5th International Conference on Pervasive Computing*. Toronto, Canada, May 13-16, 2007 Springer-Verlag LNCS Volume 4480, pp. 334-350.

C112. * **Julie A. Kientz**, Rosa I. Arriaga, **Marshini Chetty, Gillian R. Hayes, Jahmeilah Richardson, Shwetak N. Patel** and Gregory D. Abowd (principal research and authorship

by Kientz) Grow and Know: Understanding record-keeping needs for the development of young children. *Proceedings of the ACM Human Factors in Computing Systems (CHI 2007)*, San Jose, California April 29-May 3, 2007, ACM Press.

C113. * Gillette, D. R., **Hayes, G. R**., Abowd, G. D., Cassell, J., el Kaliouby, R., Strickland, D., and Weiss, P. Interactive technologies for autism. In *CHI '07 Extended Abstracts on Human Factors in Computing Systems* (San Jose, CA, USA, April 28 - May 03, 2007).

C114. * **Dounia Berrada, Mario Romero**, Gregory D. Abowd, Marion Blount and John Davis (principal research and authorship by Berrada and Romero) "Automatic administration of the get up and go test." International Conference On Mobile Systems, Applications And Services. Proceedings of the *1st ACM SIGMOBILE International Workshop on Systems and Networking Support for Healthcare and Assisted Living Environments*. ACM, July 2007.

C115. * **Shwetak N. Patel**, Tom Robertson, Julie A. Kientz, Matthew S. Reynolds, and Gregory D. Abowd (principal research by Patel and Robertson, authorship by all) At the flick of a switch: detecting and classifying unique electrical events on the residential power line. *International Symposium on Ubiquitous Computing (Ubicomp 2007)*, Innsbruck, Austria, September 16-19, 2007, Springer-Verlag LNCS Volume 4717, pp 271-288. **Best paper and Best presentation awards.**

C116. * **Shwetak N. Patel** and Gregory D. Abowd (principal research and authorship by Patel) BLUI: Low-cost Localized Blowable User Interfaces. In the *Proceedings of the ACM Symposium on User Interface Software and Technology (UIST 2007)*. Newport, RI. 2007.

C117. **Erich Stuntebeck**, John Davis II, Gregory D. Abowd, Marion Blount. (principal research and authorship by Stuntebeck and Davis) HealthSense: Classification of Health-related Sensor Data through User-Assisted Machine Learning, *Workshop on Mobile Computing Systems and Applications (HotMobile '08)*, Napa, California, February 2008.

C118. * **Gillian R. Hayes, Lamar M. Gardere**, Gregory D. Abowd, and **Khai N. Truong** (principal research and authorship by Hayes) CareLog: a selective archiving tool for behavior management in schools. In *Proceeding of the Twenty-Sixth Annual SIGCHI Conference on Human Factors in Computing Systems (CHI 2008)*, Florence, Italy, April 05 - 10, 2008, ACM, New York, NY, pp. 685-694.

C119. * **Julie A. Kientz** and Gregory D. Abowd. (principal research and authorship by Kientz) When the Designer Becomes the User: Designing a System for Therapists by Becoming a Therapist. *In CHI '08 Extended Abstracts on Human Factors in Computing Systems* (Florence, Italy, April 05 - 10, 2008). ACM, New York, NY, 2071-2078.

C120. * **Shwetak N. Patel**, Mathew S. Reynolds, and Gregory D. Abowd (principal research by Patel, authorship by all) Detecting Human Movement by Differential Air Pressure Sensing in HVAC System Ductwork: An Exploration in Infrastructure Mediated Sensing. *Proceedings of The 6th International Conference on Pervasive Computing (Pervasive Computing 2008)*. Sydney, Australia May 19-22, 2008 Springer-Verlag LNCS Volume 5013, pp. 1-18. **Best paper award.**

C121. **Gillian R. Hayes**, Gregory D. Abowd, Maria Ebling, John Davis, Marion Blount and Elizabeth Mynatt (principal research and authorship by Hayes) Opportunities for pervasive computing in chronic cancer care. *Proceedings of The 6th International Conference on Pervasive Computing (Pervasive Computing 2008)*. Sydney, Australia May 19-22, 2008 Springer-Verlag LNCS Volume 5013, pp. 262-279.

C122. * Jaeseok Yun, **Shwetak Patel**, Matthew Reynolds and Gregory D. Abowd (principal research by Yun authorship by Yun, Reynolds and Abowd) A quantitative investigation of inertial power harvesting for human-powered devices. *International Symposium on*

Ubiquitous Computing (Ubicomp 2008), Seoul, Korea, September 21-24, 2008, ACM, New York, pp 74-83.

C123. * **Erich Stuntebeck**, Tom Robertson, **Shwetak N. Patel**, Matthew S. Reynolds and Gregory D. Abowd (principal research by Stuntebeck, authorship by all) Wideband powerline positioning for indoor localization. *International Symposium on Ubiquitous Computing (Ubicomp 2008)*, Seoul, Korea, September 21-24, 2008, ACM, New York, pp 94-103.

C124. * **Sunyoung Kim, Julie A. Kientz, Shwetak N. Patel** and Gregory D. Abowd (principal research and authorship by Kim and Kientz) Are you sleeping? Sharing portrayed sleeping status within a social network. *Proceedings of Computer Supported Cooperative Work (CSCW '08)*, San Diego, CA, November, 2008, ACM, New York, pp. 619-628 .

C125. * **Mario Romero, Jay Summet**, John Stasko and Gregory D. Abowd (principal research by Romero, authorship by all) Viz-a-Vis: Toward visualizing video through computer vision. *Proceedings of IEEE InfoVis 2008*, Columbus, OH, October 19-24, 2008, pp. 1261-1268. Appears in *IEEE Transactions on Visualization and Computer Graphics.*

C126. * **Julie A. Kientz**, Rosa Arriaga and Gregory D. Abowd (principal research and authorship by Kientz) Baby Steps: Supporting Better Record-Keeping and Decision-Making for Parents of Young Children. In *Proceeding of the Twenty-Seventh Annual SIGCHI Conference on Human Factors in Computing Systems (CHI 2009)*, Boston, MA, April 04 - 9, 2009, ACM, New York, NY, pp. 1713-1722.

C127. * **Julie A. Kientz** and Gregory D. Abowd (principal research and authorship by Kientz) Experiences of participant observation when dealing with children with special needs. In *Proceedings of the Twenty-Seventh Annual SIGCHI Conference on Human Factors in Computing Systems (CHI 2009)*, Experience report. Boston, MA, April 04 - 9, 2009, ACM, New York, NY, pp. xxx-yyy.

C128. * **Julie A. Kientz**, Rosa Arriaga and Gregory D. Abowd (principal research and authorship by Kientz) KidCam. In *Proceedings of Pervasive Computing*, Nara, Japan, May 2009.

C129. * **Svetlana Yarosh**, S. Cuzzort, H. Mueller and G. D. Abowd. (principal research and authorship by Yarosh) Developing a Media Space for Remote Synchronous Parent-Child Interaction. *In Proceedings of the 8th International Conference on Interaction Design and Children (IDC 2009)*. ACM, June 3-5, 2009, Cuomo, Italy.

C130. * **Ping Wang**, Gregory D. Abowd and James M. Rehg. (principal research by Wang and Rehg, principal authorship by Wang and Rehg) Quasi-Periodic Event Analysis for Social Game Retrieval. In *Proceedings of the Twelfth IEEE International Conference on Computer Vision (ICCV 2009)*, Kyoto, Japan, September 29-October 4, 2009. One of 5% of submissions selected for oral presentation.

C131. * **Yi Han, Erich P. Stuntebeck**, John T. Stasko, Gregory D. Abowd (principal research by Yi Han, authorship by all) A Visual Analytics System for Radio Frequency Fingerprinting-based Localization. *IEEE Symposium on Visual Analytics Science and Technology (IEEE VAST 2009)*, pages 35-42, Atlantic City, NJ, October 2009.

C132. * **Fatima A. Boujarwah, Hwajung Hong**, Jackie Isbell, Rosa I. Arriaga, and Gregory D. Abowd (principal research and authorship by all) Training social problem solving skills in adolescents with high-functioning autism. In *Proceedings of the 4th International Conference on Pervasive Computing Technologies for* Healthcare, March 22-25, 2010, Munich, Germany.

C133. * **Tae-Jung Yun, Hee Young Jeong, Hee Rin Lee**, Rosa I. Arriaga, and Gregory D. Abowd (principal research and authorship by Yun, Jeong, Rin and Arriaga) Assessing asthma management practices through in-home technology probes. In *Proceedings of the 4th*

International Conference on Pervasive Computing Technologies for Healthcare, March 22-25, 2010, Munich, Germany.

C134. * **Matthew Bonner, Jeremy Brudvik**, Gregory D. Abowd, and W. Keith Edwards (principal research and authorship by Bonner and Brudvik) No Look Notes: Accessible Eyes-Free Multi-Touch Text Entry. In *Proceedings of Pervasive Computing*, Helsinki, Finland, Springer-Verlag LNCS Volume 6030, pp. 409-426, May 2010.

C135. * **Karthir Prabhakar, Ping Wang, Sangmin Oh**, Gregory D. Abowd, and James M. Rehg. (principal research by Prabhakar and Rehg) Temporal Causality for the analysis of visual events. In IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2010). Oral presentation.

C136. * **Gabe Cohn, Erich Stuntebeck, Jagdish Pandey**, Brian Otis, Gregory D. Abowd, and Shwetak N. Patel. 2010. SNUPI: sensor nodes utilizing powerline infrastructure. In Proceedings of the 12th ACM international conference on Ubiquitous computing (UbiComp '10). ACM, New York, NY, USA, 159-168. DOI=10.1145/1864349.1864377 http://doi.acm.org/10.1145/1864349.

C137. * **Nazneen, Fatima A. Boujarwah, Shone Sadler, Amha Mogus**, Gregory D. Abowd, and Rosa I. Arriaga (principal research by Nazneen, Boujarwah, Sadler and Mogus, principal authorship by Nazneen and Boujarwah) Understanding the challenges and opportunities for richer descriptions of stereotypical behaviors of children with ASD: A concept exploration and validation. In *Proceedings of the 13th International ACM SIGACCESS Conference on Computers and Accessibilty (ASSETS 2010)*, October 25-27, 2010, Orlando, FL, pages 19-26.

C138. * **Svetlana Yarosh** and Gregory D. Abowd (principal research and authorship by Yarosh) Mediated parent-child contact in work-separated families. In *Proceedings of the 2011 annual conference on Human factors in computing systems*(CHI '11). ACM, New York, NY, USA, pages 1185-1194.

C139. * **Mario Romero, Alice Vialard**, John Peponis, John Stasko, and Gregory D. Abowd. (principal research and authorship by Romero). Evaluating video visualizations of human behavior. In *Proceedings of the 2011 annual conference on Human factors in computing systems* (CHI '11). ACM, New York, NY, USA, pages 1441-1450.

C140. * **Hee Young Jeong, Gillian R. Hayes, Tae-Jung Yun, Ja-Young Sung**, Gregory D. Abowd and Rosa Arriaga (principal research by all, primary authorship by Jeong, Hayes, Abowd and Arriaga). Act Collectively: Opportunities for technologies to support low-income children with asthma. In *Proceedings of the 25th BCS Conference on Human-Computer Interaction*, Newcastle-upon-Tyne, UK, 4-8 July 2011.

C141. * **Fatima A. Boujarwah, Jennifer Kim**, Gregory D. Abowd and Rosa I. Arriaga (principal research and authorship by Boujarwah and Arriaga) Developing scripts to teach social skills: Can the crowd assist the author? *AAAI 2011 Workshop on Human Computation (WS-11-11)*, August 8-11, 2011, San Francisco, CA.

C142. * **Fatima A. Boujarwah, Nazneen, Hwajung Hong**, Gregory D. Abowd, and Rosa I Arriaga (principal research by Boujarwah, Nazneen and Hong, authorship by all) Towards a framework to situate assistive technology design in the context of culture. In *Proceedings of the 13th International ACM SIGACCESS Conference on Computers and Accessibilty (ASSETS 2011)*, October 24-26, 2011, Dundee, Scotland, pages 19-26.

C143. * **Tae-Jung Yun, Hee Young Jeong**, Tanisha Hill, Bert Lesnick, Randall Brown, Gregory D. Abowd, and Rosa I. Arriaga (principal research and authorship by all) Using SMS to provide continuous assessment and improve health outcomes for children with asthma.

In *2012 ACM SIGHIT International Health Informatics Symposium (IHI 2012)*, Orlando, FL, January 28-30, 2012.

C144. * **Hwajung Hong, Jennifer Kim**, Gregory D. Abowd, and Rosa I. Arriaga (principal research and authorship by all) Designing a Social Network to Support the Independence of Young Adults with Autism. In *Proceedings of Computer Supported Cooperative Work (CSCW '12)*, pages 627–636 Seattle, WA, February 11-15, 2012.

C145. * **Fatima A. Boujarwah**, Gregory D. Abowd and Rosa I Arriaga (principal research by Boujarwah, primary authorship by all) Socially computed scripts to support social problem solving skills. In *Proceedings of the Twenty-Seventh Annual SIGCHI Conference on Human Factors in Computing Systems (CHI 2012)*, Austin, TX, May April 5-10, 2012, ACM, New York, NY.

C146. * **Nazneen**, Gregory D. Abowd, Rosa I. Arriaga (principal research and authorship by Nazneen) Towards in-home collection of behavior specimens within the cultural context of autism in Pakistan. *Proceedings of the 6th International Conference on Pervasive Computing Technologies for Healthcare*, May 21-24, 2012, San Diego, CA.

C147. * **Caleb Southern, James Clawson, Brian Frey** Gregory D. Abowd, and Mario Romero, M. (principal research by Southern and Romero, principal writing by Southern and Romero) An evaluation of BrailleTouch: mobile touchscreen text entry for the visually impaired. *Proceedings of the 14th International Conference on Human-computer interaction with mobile devices and services (MobileHCI).* September 24-27, 2012, pages 317-326, ACM, New York, NY.

C148. * **Edison Thomaz, Vinay Bettadapura, Gabriel Reyes, Megha Sandesh**, Grant Schindler, Thomas Ploetz, Gregory D. Abowd, and Irfan A. Essa. (principal research and authorship by Thomaz) Recognizing water-based activities in the home through infrastructure-mediated sensing. *International Symposium on Ubiquitous Computing (Ubicomp 2012)*, Pittsburgh, PA, USA, September, 2012, ACM, New York, pp 85-94.

C149. * Thomas Ploetz, **Nils Hammerla**, Agata Rozga, Andrea Reavis, Nathan Call and Gregory D. Abowd. (principal research and authorship by all). Automatic Assessment of Problem Behavior in Individuals with Developmental Disabilities. *International Symposium on Ubiquitous Computing (Ubicomp 2012)*, Pittsburgh, PA, USA, September, 2012, ACM, New York, pp. 391-400. (**best paper honorable mention)**

C150. * Gregory D. Abowd. What next, Ubicomp? Celebrating an intellectual disappearing act. *International Symposium on Ubiquitous Computing (Ubicomp 2012)*, Pittsburgh, PA, USA, September, 2012, ACM, New York, pp 31-40.

C151. * **Svetlana Yarosh, Anthony Tang, Sanika Mokashi** and Gregory D. Abowd (principal research and authorship by Yarosh) Almost Touching: Parent-Child Remote Communication Using theShareTable System. *Proceedings of Computer Supported Cooperative Work (CSCW '13)*, pages 181-192, San Antonio, TX, February 23-27, 2013.

C152. * **Hwajung Hong, Svetlana Yarosh, Jennifer G. Kim**, Gregory D. Abowd and Rosa I. Arriaga (principal research and authorship by Hong, Abowd and Arriaga) Investigating the Use of Circles in Social Networks to Support Independence of Individuals with Autism. In *Proceedings of the Twenty-Eighth Annual SIGCHI Conference on Human Factors in Computing Systems (CHI 2013)*, Paris, France, May April 27-May 2 2013, ACM, New York, NY.

C153. * **Sanika Mokashi, Svetlana Yarosh** and Gregory D. Abowd (principal research and authorship by Mokashi and Yarosh) Exploration of Videochat for Children with Autism. In *Proceedings of the International Conference on Interaction Design and Children (IDC 2013).* Short paper. June 24-27, 2013, New York, NY, pp. 320-323.

C154. * Rehg, James M., Gregory D. Abowd, Agata Rozga, Mario Romero, Mark A. Clements, Stan Sclaroff, Irfan Essa, Opal Ousley, **Yin Li, Chanho Kim, Hrishikesh Rao, Jonathan Kim, Liliana Lo Presti, Jianming Zhang, Denis Lantsman, Jonathan Bidwell, Zhefan Ye**, (principal research by all, principal authorship by Rehg, Abowd and Rozga) "Decoding Children's Social Behavior," *2013 IEEE Conference on Computer Vision and Pattern Recognition (CVPR),* pp.3414,3421, 23-28 June 2013. doi: 10.1109/CVPR.2013.438.

C155. * Yoshihiro Kawahara, Steve Hodges, Benjamin Cook, **Cheng Zhang**, Gregory D. Abowd (principal research and authorship by Kawahara) Instant Inkjet Circuits: *Lab-based Inkjet Printing to Support Rapid Prototyping of UbiComp Devices*. *2013 ACM International Joint Conference on Pervasive and Ubiquitous Computing* (*UbiComp '13)*, pp. 363-372, Sep 8-12, 2013, Zurich, Switzerland. **Best Paper Award winner (one of 5 awarded).**

C156. * **Edison Thomaz, Aman Parnami, Jonathan Bidwell**, Irfan Essa and Gregory D. Abowd (principal research by Thomaz and Parnami, authorship by all) Technological Approaches For Addressing Privacy Concerns When Recognizing Eating Behaviors With Wearable Cameras. *2013 ACM International Joint Conference on Pervasive and Ubiquitous Computing* (*UbiComp '13)*, pp. 739-748, Sep 8-12, 2013, Zurich, Switzerland.

C157. * **Edison Thomaz, Aman Parnami**, Irfan Essa, and Gregory D Abowd (principal research and authorship by Thomaz) Feasibility of identifying eating moments from first-person images leveraging human computation. *Proceedings of the 4th International SenseCam & Pervasive Imaging Conference*, pp. 26-33, San Diego, CA, November 2013.

C158. * **Svetlana Yarosh**, Panos Markopoulos and Gregory D. Abowd (principal research and authorship by Yarosh) Towards a Questionnaire for Measuring Affective Benefits and Costs of Communication Technologies. *Proceedings of Computer Supported Cooperative Work (CSCW 2014*), **Best Paper Award winner (one of 4 awarded at conference out of 134 accepted papers)**.

C159. * **Yangfen Ji, Hwajung** Hong, Rosa Arriaga, Agata Rozga, Gregory D. Abowd and Jacob Eisenstein (principal research and authorship by Ji, Hong, and Eisenstein) Mining themes and interests in the Asperger's and Autism community. *Proceedings of Association of Computational Linguistics (ACL 2014)*, June 2014.

C160. * Javier Hernandez, **Ivan Riobo**, Agata Rozga, Gregory D. Abowd, and Rosalind Picard (principal research by Hernandez and Riobo, principal authorship by all) Using electrodermal activity to recognize ease of engagement in children during social interactions. *2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing* (*UbiComp '14)*, pp. 307-317, September 2014, Seattle, USA.

C161. * **Jonathan Bidwell**, Irfan A. Essa, Agata Rozga and Gregory D. Abowd (principal research by Bidwell, principal authorship by Bidwell, Rozga and Abowd) Measuring child visual attention using markerless head tracking from color and depth sensing cameras. *Proceedings of the 16th International Conference on Multimodal Interaction (ICMMI 2014)*, pp. 447-454, November 12, 2014, Istanbul, Turkey.

C162. * **Vinay Bettadapura, Edison Thomaz, Aman Parnami**, Irfan A. Essa, and Gregory D. Abowd (principal research and authorship by Bettadapura and Thomaz) Leveraging context to support automated food recognition in restaurants. *Proceedings of the Workshop on Applications of Computer Vision (WACV 2015).*

C163. * **Hwajung Hong**, Gregory D. Abowd, and Rosa I. Arriaga *(*principal work by Hong, authorship by all*)* Towards designing social question-and-answer systems for behavioral support of individuals with autism. *Proceedings of the 2015 9th International Conference on Pervasive Computing Technologies for Healthcare (Pervasive Health 2015), pp. 17-24, IEEE.*

C164. * **Edison Thomaz, Cheng Zhang**, Irfan Essa and Gregory D. Abowd. Inferring Meal Eating Activities in Real World Settings from Ambient Sounds: A Feasibility Study. *Proceedings of the 20th ACM International Conference on Intelligent User Interfaces (IUI 2015),* pp. 427-431. Atlanta, GA. **Best paper awardee**

C165. * **Cheng Zhang, Anhong Guo, Caleb Southern** and Gregory D. Abowd BeyondTouch: Extending the Input Language with Built-in Sensors on Commodity Smartphones. *Proceedings of the 20th International Conference on Intelligent User Interfaces (IUI 2015),* pp. 67-77. Atlanta, GA.

C166. * **Felicia Cordero, Daniel A. Epstein, Edison Thomaz**, Elizabeth Bales, Arvind Jagannathan, Gregory D. Abowd and James Fogarty (principal authorship by all, principal research by all) Barriers and Negative Nudges: Exploring Challenges in Food Journaling, *International ACM Conference on Human Factors in Computing Systems (CHI 2015*), Seoul, Korea, May 2015. To appear. **Best paper honorable mention.**

C167. * **Hwajung Hong**, Eric Gilbert, Gregory D. Abowd, and Rosa Arriaga (principal research and authorship by Hong) In-group Questions and Out-group Answers: Crowdsourcing Information and Advice for Individuals with Autism to Navigate Everyday Life**.** *International ACM Conference on Human Factors in Computing Systems (CHI 2015*), pp. 777-786 Seoul, Korea, May 2015.

C168. * **Yi Han**, Agata Rozga, Nevena Dimitrova, Gregory D. Abowd and John Stasko, "Visual Analysis of Proximal Temporal Relationships of Social and Communicative Behaviors", Computer Graphics Forum, Volume 34, Issue 3, pages 51-60. Proceedings of EuroVis 2015.

C169. * **Arpita Bhattacharya, Mirko Gelsomini**, Patricia Perez-Fuster, Gregory D. Abowd and Agata Rozga (principal research and authorship by Bhattacharya, Gelsomini and Rozga) Designing motion-based activities to engage students with autism in classroom settings. In *Proceedings of the International Conference on Interaction Design and Children (IDC 2015)*. Pp. 69-78, ACM, June 21-24, 2015, Boston, MA, USA.

C170. * **Edison Thomaz**, Irfan Essa and Gregory D. Abowd (principal research and authorship by Thomaz) A practical approach for recognizing eating moments with wrist-mounted inertial sensing. In *2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing* (*UbiComp '15)*, pp. 1029-1040, September 2015, Osaka, Japan.

C171. * **Daniel Castro, Steven Hickson, Vinay Bettadapura, Edison Thomaz**, Gregory D. Abowd, Henrik Christensen, and Irfan A. Essa (principal research by Castro, Hickson, Bettadapura and Thomaz) Predicting daily activities from egocentric images using deep learning. *Proceedings of the 2015 ACM International Symposium on Wearable Computing (ISWC 2015)*, pp. 75-82, September 2015, Osaka, Japan.

C172. * **Cheng Zhang**, Mitesh Patel, Senaka Buthpitiya, Kent Lyons, Beverly Harrison, and Gregory D. Abowd (principal research by Zhang, Patel, Buthpitiya, authorship by all) Driver classification based on driving behaviors. *Proceedings of the 21st International Conference on Intelligent User Interfaces (IUI 2016),* Sonoma, CA, March 7-10, 2016.

C173. *** Gabriel Reyes**, **Dingtian Zhang**, **Sarthak Ghosh**, **Pratik Shah**, **Jason Wu**, **Aman Parnami**, **Bailey Bercik**, Thad Starner, Gregory D. Abowd and W. Keith Edwards (principal work and authorship by Reyes) Whoosh: Non-voice acoustics for low-cost, hands-free, and rapid input on smartwatches. In *Proceedings of the 2016 ACM International Symposium on Wearable Computers* (ISWC '16). ACM, New York, NY, USA, 120-127. DOI: http://dx.doi.org/10.1145/2971763.2971765.

C174. *** Cheng Zhang**, **Junrui Yang**, **Caleb Southern**, Thad E. Starner, and Gregory D. Abowd. (principal research by Zhang and Yang; principal authorship by Zhang). WatchOut:

extending interactions on a smartwatch with inertial sensing. In *Proceedings of the 2016 ACM International Symposium on Wearable Computers* (ISWC '16). ACM, New York, NY, USA, 136-143. DOI: http://dx.doi.org/10.1145/2971763.2971775.

C175. *** Caleb Southern**, **Yunnuo Cheng**, **Cheng Zhang**, and Gregory D. Abowd. (principal research all; principal authorship by Southern) Understanding the cost of driving trips. *International ACM Conference on Human Factors in Computing Systems (CHI 2017*), Denver, Colorado, May 2017. To appear.

B3. Other refereed material

B4. Submitted Journal Articles (with date of submission)

C. OTHER PUBLICATIONS

List all other publications that are not otherwise included in Sections IV. A. and B.

Harrison, M. D., Gregory D. Abowd and Alan J. Dix. (Significant contribution by all three authors, presented by Harrison) State of the art: Formal aspects of user interfaces. Invited presentation at Eurographics'90 conference, May 1990.

Abowd, Gregory D. (extended abstract reviewed by program committee) Using formal methods for the specification of user interfaces. In Selby, R., editor, Proceedings of the 2ndAnnual Irvine Software Symposium — ISS'92, pp. 109– 130. Irvine Research Unit in Software, University of California, Irvine, 1992.

Abowd, Gregory D. Using formal methods of software engineering in HCI. Position paper for Basic Research Symposium at INTERCHI'93 conference, Amsterdam, April 1993.

Abowd, Gregory D. and Bonnie E. John. (Significant contribution by Abowd through research directed by John) Using formal methods to improve the usability of Soar. Poster presented at HCI Consortium Winter Workshop, Fraser, Colorado, February 1994.

Abowd, Gregory D. and Bonnie E. John. (Significant contribution by Abowd through research directed by John) Using formal methods to improve the usability of Soar. Paper presented at Soar-13 Workshop, Columbus, Ohio, March 1994.

Abowd, Gregory D. Interface refinement. Position paper for Basic Research Symposium at CHI'94 conference, Boston, MA, April 1994.

Abowd, Gregory D. Defining reference models and software architectural styles for cooperative systems. Position paper for CSCW'94 workshop on software architectures for cooperative systems, October 1994.

Abowd, Gregory D. Automated dialogue verification. Position paper for Basic Research Symposium at CHI'95 conference, Denver, CO, May 1995.

Dey, Anind and Gregory Abowd. (principal contributions and authorship by Dey) Position paper on wearable computing. Submitted to CHI'97 Workshop on Wearable Computing, January 1997.

Dey, Anind and Gregory D. Abowd (Significant contributions from Dey, principal authorship by Dey). Cyberdesk demonstration. Presented at the User Interface Software Technology Symposium — UIST'97. October 1997.

Appelbe, B. and Abowd, G.D. (Equal contributions by both authors) Beyond objects: A response. *Software Engineering Notes,* **20**(3):45–48.

Abowd, Gregory D. What's in a name? Article in Beyond the Desktop: considering the future of interaction. In *SIGCHI Bulletin*, 2000.

Dey, Anind K. and Gregory D. Abowd (principal research and authorship by Dey and Abowd) Towards a Better Understanding of Context and Context-Awareness. Presented at the CHI 2000 Workshop on The What, Who, Where, When, Why and How of Context-Awareness, April 1-6, 2000.

Dey, Anind K. and Gregory D. Abowd (principal research and authorship by Dey) The Context Toolkit: Aiding the Development of Context-Aware Applications. In Workshop on Software Engineering for Wearable and Pervasive Computing, workshop affiliated with ICSE 2000 conference, Limerick, Ireland, June 6, 2000.

O'Connell, Thomas, Peter Jensen, Anind Dey and Gregory D. Abowd. Location in the Aware Home. Position paper for Workshop on Location Modeling for Ubiquitous Computing, at Ubicomp 2001 conference, September 30, 2001. See http://www.teco.edu/locationws.

Richter, Heather and Gregory D. Abowd. Evaluating capture and access through authentic use. Position paper for Workshop on Evaluation Methodologies for Ubiquitous Computing, at Ubicomp 2001 conference, September 30, 2001. See http://zing.ncsl.nist.gov/ubicomp01.

Abowd, Gregory D. Challenges to construction beyond the desktop. Article in Beyond the Desktop: considering the future of interaction. In *SIGCHI Bulletin*, 2001.

Scholtz, Jean, Heather Richter and Gregory D. Abowd.. Report from Ubicomp 2001 Workshop: Evaluation methodologies for ubiquitous computing. Article in Beyond the Desktop: considering the future of interaction. In *SIGCHI Bulletin*, 2001.

Abowd, Gregory D. A search is a search… The impact of awareness technologies on privacy litigation. Article in Beyond the Desktop: considering the future of interaction. In *SIGCHI Bulletin*, 2001.

Abowd, Gregory D. Is that a PDA in your pocket, or are you just happy to see me? Article in Beyond the Desktop: considering the future of interaction. In *SIGCHI Bulletin*, 2002.

Abowd, Gregory D. Sometimes we aim too high. Article in Beyond the Desktop: considering the future of interaction. In *SIGCHI Bulletin*, 2002.

Edwards, Keith, Beki Grinter and Gregory D. Abowd. Smart Homes or homes that smart? Article in Beyond the Desktop: considering the future of interaction. In *SIGCHI Bulletin*, 2002

Nagel, Kristine S. and Gregory D. Abowd (principal research and authorship by Nagel). Developing a Context-Aware Audio System Supporting Interpersonal Communication Presented at the HCI Consortium Annual Workshop, January, 2002, Fraser, Colorado.

Iachello, Giovanni and Gregory D. Abowd (principal research and writing by Iachello) Security requirements for environmental sensing technology, 2nd Workshop on Ubicomp Security, in conjunction with Ubicomp 2003. Oct. 2003, Seattle, WA, USA.

White, David R., Jose Antonio Camacho-Guerrero, Khai N. Truong, Gregory D. Abowd, Michael J. Morrier, Pooja C. Vekaria and Diane Gromala (principal research by White and Camacho-Guerrero, principal authorship by White and Abowd) Mobile capture and access for assessing language and social development in children with autism. Ubicomp 2003 companion proceedings. Demo paper. Oct. 2003, Seattle, WA, USA.

Abowd, Gregory D., Gaetano Borriello and Gerd Kortuem (equal contributions by all authors). Report from the Ubicomp education workshop. In *IEEE Pervasive Computing Magazine*, Volume 3, Number 1, January-March 2004, pp. 94-98.

Gillian R. Hayes, and Gregory D. Abowd. Assessment of Children with Autism Spectrum Disorders through Data Collection in the Natural Environment Worskhop on Health Issues in HCI at *CHI'05* (April 2-7, Portland, OR, USA), 2005.

Sebastian Boring, Julie A. Kientz, Gregory D. Abowd, and Gillian R. Hayes. Abaris: Capture and Access for Structured One-on-One Educational Settings. In the Extended Abstracts of *UBICOMP 2005: The 7th International Conference on Ubiquitous Computing*, September 11-14, Tokyo, Japan, 2005.

Julie A. Kientz, and Gregory D. Abowd. Collective Remembering in Evidence-Based Care. Workshop on Collective Remembering at *CHI 2006* (April 22-27, Montreal, Canada), 2006.

Gillian R. Hayes, Juane Heflin, Gregory D. Abowd, Lamar M. Gardere, Ellen Matthews, Julie A. Kientz, Ron Oberleitner (principal work by Hayes and Gardere) Evaluating a Selectively Archived Video Recording System for Functional Behavior Assessment in Schools. Poster abstract presented at *International Meeting for Autism Research (IMFAR 2006)*, Montreal, Canada, June 2006.

Ron Oberleitner, Uwe Reischl, James Ball, John Harrington, Suhas Pharkute, and Gregory Abowd (principal writing by Ron Oberleitner) Remote autism evaluation through telehealth technology. Poster abstract presented at *International Meeting for Autism Research (IMFAR 2006)*, Montreal, Canada, June 2006.

Hayes, G.R., Gardere, L.M., de Fazio, C., Abowd, G.D., Oberleitner, R. ABA Autism 2007 CareLog. In 2007 Progress and Challenges in the Behavioral Treatment of Autism Conference. Boston, Massachusetts. 2007.

Kientz, J.A. and G.D. Abowd. Abaris: Technology to Support Collaboration and Decision Making for Discrete Trial Training. In 2007 Progress and Challenges in the Behavioral Treatment of Autism Conference. Boston, Massachusetts. 2007.

Kientz, J.A., Hayes, G.R., Arriaga, R., Abowd, G.D. Designing and Developing Technology for Caregivers of Individuals with Autism CHI 2008 Workshop on Technology in Mental Health. Florence, Italy. April 2008.

Svetlana Yarosh and G. D. Abowd.. Segmented Institutionalism as a Perspective for Understanding Family Technologies. *Designing for Families Workshop. Ext. Abst. Of CSCW*. ACM (2008).

Yarosh, S., & Abowd, G. D. Embodied Interaction for Mediated Communication between Children and Parents. *Children and Embodied Interaction Workshop. Ext. Abst. of Interaction Design and Children*. ACM (2009).

Ping Wang, Gregory D. Abowd and James M. Rehg (principal research and authorship by Wang) Automatic retrieval of mother-infant social games from unstructured

videos. *International Meeting for Autism Research (IMFAR)*, poster presentation, Chicago, IL, 2009.

Matthew N. Bonner, Jeremy T. Brudvik, Hee Young Jeong, H.A. Mohamed, and Gregory D. Abowd (principal research and authorship by Bonner, Brudvik, Jeong and Mohamed) MEW: Coping with pediatric transplants. *Supplemental Proceedings of the 11th International Conference on Ubiquitous Computing (Ubicomp 2009)*, Poster presentation, Orlando, FL.

Ping Wang, Tracy Westeyn, Gregory D. Abowd and James M. Rehg (principal research and authorship by Wang and Westeyn) Automatic classification of parent-infant social games from video. *International Meeting for Autism Research (IMFAR)*, Philadelphia, PA, poster presentation, 2010.

Fatima A. Boujarwah, Hwajung Hong, Jackie Isbell, Rosa I. Arriaga, and Gregory D. Abowd (principal research and authorship by Boujarwah, Hong, and Isbell) Training social problem solving skills in adolescents with high-functioning autism. *International Meeting for Autism Research (IMFAR)*, May 20-22, 2010, Philadelphia, PA, poster presentation.

Nazneen, Fatima A. Boujarwah, Amha Mogus, Shone Sadler, Mohammed Habibula, Rosa I. Arriaga, and Gregory D. Abowd (principal research and authorship by Nazneen, Boujarwah, Mogus, Sadler and Habibula) Understanding the context of stereotypical behaviors. *International Meeting for Autism Research (IMFAR)*, May 20-22, 2010, Philadelphia, PA, poster presentation.

Fatima A. Boujarwah, Mark O. Riedl, Gregory D. Abowd, Rosa I. Arriaga (principal research and authorship by Boujarwah) REACT: Intelligent authoring of social skills instructional modules for adolescents with high-functioning autism. *SIGACCESS Newsletter*, Spring 2011.

Fatima A. Boujarwah, Nazneen, Hwajung Hong, Gregory D. Abowd, and Rosa I. Arriaga (principal research and authorship by Boujarwah, Nazneen, and Hong) Cross-cultural comparisons of social expectations of individuals with autism. *International Meeting for Autism Research (IMFAR)*, May 12-14, 2011, San Diego, CA, poster presentation.

Fatima A. Boujarwah, Jennifer G. Kim, Mark O. Riedl, Rosa I. Arriaga, and Gregory D. Abowd (principal research and authorship by Boujarwah, and Kim) Building a knowledge base to support the authoring of social skills instructional modules. *International Meeting for Autism Research (IMFAR)*, May 12-14, 2011, San Diego, CA, poster presentation.

Fatima A. Boujarwah, Nazneen, Hwajung Hong, Rosa I. Arriaga, and Gregory D. Abowd (principal research and authorship by Boujarwah, Nazneen and Hong) Cross-cultural comparisons of social expectations of individuals with autism and other intellectual disabilities. *40th Annual Meeting of the Society for Cross-Cultural Research*, February 16-19, 2011, Charleston, SC.

D. PRESENTATIONS

List all conference presentations (separate keynote and invited from submitted), testimony before legislative committees or other public bodies, invited seminars,

performances of creative works, etc. (Do not list a presentation here if it is listed elsewhere.)

D1. Keynotes and Invited Distinguished Lectures

K1. The Impact of New Technology in Education: Classroom 2000 and Beyond. Keynote presentation at Mobility Foundation Annual Conference, Los Angeles, CA. March 1, 1998.

K2. Building Software for Mobile and Ubiquitous Computing Applications. Invited presentation at IEEE CS Annual Workshop on VLSI: System Level Design. Orlando, FL, April 16, 1998.

K3. Building a digital library of captured experiences. International Conference on Digital Libraries. Invited keynote address, Kyoto, Japan, November, 2000.

K4. Designing and Building Living Laboratories for Ubiquitous Computing Research: Opportunities for Software Engineering Research. Keynote address for Promodis (Programming of Modular and Distributed Systems) Swedish National conference, December 11, 2000.

K5. Computing in living laboratories: Beyond dreaming beyond the desktop. State of Louisiana Center for Advanced Computing Studies Distinguished Lecture, Lafayette, March 8, 2002.

K6. Computing in living laboratories: A grand challenge. Invited keynote address at the High Performance and Distributed Computing Conference (HPDC 2002), Edinburgh, Scotland, July 22-24, 2002.

K7. Research challenges in ubiquitous computing. Invited keynote speaker at National Academy of Engineering Joint North America/Japan Frontiers in Engineering Symposium, Japan October 2002.

K8. Abowd, Gregory D. Programming environments…literally: Ubicomp's grand challenge for software engineering. Opening keynote at ACM SIGSOFT Foundations of Software Engineering conference, Charleston, S.C., Nov. 20-22, 2002.

K9. Challenges for applications research in ubiquitous computing. University of California, Irvine Institute for Research on Software (IROS) Distinguished Lecture, Irvine, CA, Jan. 17, 2003.

K10. Ubiquitous computing: Information technology challenges for the next 40 years. Invited keynote at 40th anniversary of the Chicago chapter of ACM, Chicago, IL, April 23, 2003.

K11. Programming Environments: A grand challenge for ubiquitous computing. Invited keynote address at ENC 2003, the Fourth Mexican International Conference on Computer Science, September 10, 2003.

K12. Programming Environments: A grand challenge for ubiquitous computing. Invited keynote address to UCS 2003, the first national Japanese conference on ubiquitous computing, Kyoto, Japan, Nov. 17, 2003.

K13. Realizing the dreams of ubiquitous computing: It's all in the family. Invited keynote address at *Graphics Interface* 2004, London, Ontario, Canada, May 19, 2004.

K14. The Aware Home Research Initiative: Balancing technology and applications research. Invited keynote address to ICOST 2004, Singapore, September 17, 2004.

K15. Technologies to Support the Care of Children With Autism. Invited keynote at Idaho Conference on Telehealth and Autism, March 10, 2006.

K16. From Whimsical to Medical: Why I care about automating the capture of everyday experiences. Distinguished Lecture for Department of Computer Science, University of Illinois at Urbana-Champaign. April 3, 2006.

K17. Hold That Thought: Why I care about automating the capture of everyday experiences. Distinguished Lecture, Faculty of Information Science, Cornell University, September 27, 2006.
K18. Hold That Thought: Why I care about automating the capture of everyday experiences. Technology and Social Social Behavior Series, Northwestern University, October 12, 2006.
K19. Make IT Matter. Keynote talk at Ambient Intelligence 2007, Darmstadt, Germany, November 7-10, 2007.
K20. Measuring behavior in the home. Keynote talk at Measuring Behavior 2008, Maastricht, The Netherlands, August 26-29, 2008.
K21. Make IT Matter: How Computing Can Make a Difference. Closing lunch plenary at SIGCSE 2009, Chattanooga, TN, March 7, 2009.
K22. Make IT Matter: The opportunities and responsibilities of pervasive computing research. Keynote talk at IEEE PerCom 2009, Galveston, TX, March 10, 2009.
K23. Make IT Matter: We Can Be Clever and Make a Difference. Keynote at ETC'09, Emerging Technologies Conference, Iowa State University, April 2, 2009.
K24. Ubiquitous Care: Case studies in human-centered technology for health and education. Virginia Tech Department of Computer Science Distinguished Lecture. February 19, 2010.
K25. Computing and Autism: An odyssey borne of passion. The 2010 International Symposium on Collaborative Technology and Systems (CTS 2010). Keynote, Chicago, May 17, 2010.
K26. Computing and Autism. Invited Distinguished Lecture, University of Newcastle, September 2010.
K27. Computing and Autism. Stanford University, HCI Distinguished Lecture Series, October 15, 2010.
K28. Computing and Autism, Emory University, Department of Computer Science Distinguished Lecture, October 25, 2010.
K29. Computing and Autism. Distinguished lecture, Arizona State University, February 2011.
K30. Computing Where IT Matters: Reflections on the Relevance of HCI Research. Invited closing keynote address for British HCI Conference, July 2011, Newcastle, United Kingdom.
K31. Pervasive Healthcare: The role of ubiquitous computing in chronic conditions Xi'an Northwestern Polytechnical University Distinguished Lecture, Xi'an, China, September 2011.
K32. Oh, the Ubiquity! Don't look back, but there is a LOT of data headed your way! Keynote address, 2011 American Medical Informatics Association, October 2011, Washington, D.C.
K33. Using Computing Technologies to Support the Challenges of Autism: How can a computational approach impact DIR? International Council on Developmental and Learning Disorders invited keynote address and panelist, November 2011, Washington, D.C.
K34. Computing and Autism: How Computer Science and Personal Passion Influence Each Other Keynote, SwSTE 2012 (IEEE CS International Conference on Sofware Science, Technology,and Engineering) 12 June 2012 in Herzliya Israel. Lecture delivered remotely.

K35. Computing and Autism: How a real-world challenge drives a computing research agenda. Invited distinguished lecture, Microsoft Research Cambridge, November 27, 2012.
K36. Computing and Autism: How a real problem can drive research in a different field, Swansea (Wales) University Distinguished Lectures in Computer Science, November 29, 2012.
K37. Computing and Autism: How real-world challenges drive a research agenda. Invited keynote lecture at Kuwaiti e-Systems International Conference, December 18, 2012, Kuwait City, Kuwait.
K38. Computing and Autism: How a real problem drives multimodal activity recognition research. Invited keynote address for 2013 IEEE Face and Gesture Conference, April 23, 2013, Shanghai, China.
K39. Ubicomp and the Home. Invited keynote for HomeSys 2013 workshop, collocated with Ubicomp 2013 conference. Zurich, Switzerland, Sep. 9, 2013.
K40. Ubicomp and Health: Merging Research Agendas. Cornell University School of Information Sciences Distinguished Lecture, October 28, 2013, Ithaca, NY.
K41. Computing and Autism: How a real-world challenge drives a computing research agenda. ACM Distinguished Speakers talk for American University of Athens, Athens, Greece, December 13, 2013.
K42. Ubicomp and Health: Merging Research Agendas. ACM Distinguished Speakers talk for ACM SIGCHI Greek chapter, University of Athens, Athens, Greece, December 13, 2013.
K43. Approaches to Ubiquitous Computing Research. Keynote talk at Broadening Participation in Computing workshop at Ubicomp 2014 conference. September 14, 2014, Seattle, WA.
K44. On being an applied computer scientist. University of Wisconsin-Madison Computer Science Department Distinguished Lecture, October 16, 2014.
K45. Beyond ubiquitous computing: The fourth generation of computing is already here! University of Wisconsin WHCI+D Distinguished Lecture, October 17, 2014.
K46. HCI: What does the future hold for the human experience? Invited keynote address for IEEE Rebooting Computing meeting in Santa Clara, CA, October 23, 2014
K47. On being an applied computer scientist. College of William and Mary Distinguished Lecture, Nov. 18, 2014.
K48. Health and technology: How to balance the research agendas effectively. Invited keynote address to Workshop on Interactive Systems for Health 2014, held in conjunction with the AMIA Annual Meeting, Washington, DC, Nov. 15, 2014.
K49. Beyond Ubicomp: Recognizing the next generation of computing technologies and applications. Distinguished Lecture at SMU Department of Computer Science, Dallas, TX, March 18, 2015.
K50. Autism and Technology: An autobiographical account. Invited keynote and tutorial at the Irvine Thompson Center for Autism, March 23, 2015.
K51. On being an applied computer scientist. Distinguished Lecture, CalTech Department of Computer Science. March 24, 2015.
K52. A new generation of computing and its potential for PATCH. Invited keynote address to PATCH workshop at the Intelligent User Interface conference, March 29, 2015.
K53. Applied computing research: Challenges and opportunities in a world of ubiquitous computing and beyond. Distinguished lecture at University of Texas Department of ECE, April 27, 2015.

K54. Computing and health: An interdisciplinary approach in an era of mobile and ubiquitous computing. Invited keynote address at Symposium on Patient Safety with Interactive Medical Devices, Reading, England, June 24, 2105.

K55. A new generation of computing and the promise for new social interactions. Keynote address for Mobile Systems for Computational Social Science workshop, in conjunction with the Ubicomp conference, Osaka, Japan, September 7, 2015.

K56. Beyond ubiquitous computing: Technology advances and applications. ACM Distinguished Speaker address at the College of New Jersey, October 20, 2015.

K57. Technology and autism: An autobiographical account. Geisinger-Bucknell Autism Center Distinguished Lecture, December 8, 2015.

K58. Beyond Weiser's ubiquitous computing: 2 hopeful ideas. Toronto User Experience (TUX) Sanders Series Distinguished Lecture, January 12, 2016.

K59. Hot or Not? Moving forward from Weiser's vision of ubiquitous computing. Invited keynote address for HotMobile, St. Augustine, FL, February 23, 2016.

K60. On being an applied computer scientist. University of Michigan CSE Distinguished Lecture, April 19, 2016.

K61. Interactive Computing Beyond Weiser's Ubicomp. University of Michigan School of Information Distinguished Lecture, April 20, 2016.

K62. On being an applied computer scientist. University of Newcastle Doctoral Summer School keynote lecture, July 20, 2016.

K63. Today's and tomorrow's interactive technologies: Collective computing and computational skins. University College London Symposium on HCI Grand Challenges, September 12, 2016.

K64. Mental health: A driving application for 4th generation computing. Closing keynote for Ubicomp 2016 Mental Health workshop, Sep. 13, 2016.

K65. Beyond Weiser: From ubiquitous computing to collective computing. University of Notre Dame Dept. of Computer Science Distinguished Lecture, Nov. 18, 2016.

D2. Other presentations

P1. Harrison, Michael D. and Gregory D. Abowd. (Significant contribution by both authors and equal presentation) Formal methods in human-computer interaction: a tutorial. Tutorial presentation for CHI'91 conference, New Orleans, LA, April 1991.

P2. Dix, Alan J. and Gregory D. Abowd. (Significant contributions by both authors and equal presentation) Applying formal methods to HCI research. Tutorial presentation for HCI'92 conference, York, England, September 15, 1992.

P3. Abowd, Gregory D. Evaluating user interface tools. Tutorial presented at HCI'94 conference, Glasgow, Scotland, August 23, 1994.

P4. Dix, Alan J. and Gregory D. Abowd. (Significant contributions by both authors and equal presentation) Formal methods and HCI. Tutorial presented at HCI'94 conference, Glasgow, Scotland, August 23, 1994.

P5. Abowd, Gregory D. Models and notations for interactive systems design and analysis. Tutorial presented at SIGSOFT'94 conference, New Orleans, LA, December, 1994.

P6. Abowd, Gregory D., Colin Potts and Spencer Rugaber. MORALE: Integrating techniques to support the evolution of software systems. Tutorial presented at the *International Conference on Software Maintenance — ICSM'99*. Oxford, England, August 30, 1999.

P7. (with Jason A. Brotherton) Classroom 2000: An experiment in automated capture and access in an educational environment. Invited lecture at Microsoft Research, January 15, 1999.

P8. Classroom 2000: An experiment in automated capture and access in an educational environment. Distinguished Lecture, Computer Science Department, Brown University. March 12, 1999.

P9. Research experiences in automated capture applied to an educational environment. Distinguished Lecture Vassar University, April 15, 1999.

P10. (with Barry Boehm, John Knight and David Parnas) Panel: The relevance to industry of software engineering research in academia. Motorola Software Engineering Symposium — SES'99, Ft. Lauderdale, FL, June 23, 1999.

P11. (with Richard N. Taylor) Panel: Software Architecture trends. Motorola Software Engineering Symposium — SES'99, Ft. Lauderdale, FL, June 23, 1999.

P12. Gregory D. Abowd. Panel: Technology Enhanced Learning. Internet2 Sociotechnical Summit. Ann Arbor, MI, Sept. 13-15, 1999.

P13. Gregory D. Abowd and Anind Dey (moderators); Peter J. Brown, Nigel Davies, Mark Smith and Pete Steggles (panelists). Panel: Towards a better understanding of context and context-aware computing. International Symposium on Handheld and Ubiquitous Computing — HUC'99. Karlsruhe, Germany, September 27-29 1999.

P14. Classroom 2000: Investigating automated capture in an educational setting. Carnegie Mellon HCI Institute Seminar, Pittsburgh, PA, October 13, 1999.

P15. Computing Beyond Your Dreams: Opportunities and Challenges for Cyberenvironments. Georgia Tech College of Computing John P. Imlay Dean's Lecture, November 4, 1999.

P16. Automated capture in a living laboratory: Classroom 2000. University of Washington Computer Science Seminar, Seattle, WA, November 22, 1999.

P17. Ubiquitous computing environments: Research accomplishments and future visions. Oregon Graduate Institute Center for Human-Computer Communication Distinguished Lecture Series on the Future of Human-Computer Interaction, February 4, 2000.

P18. Examining ubiquitous computing and automated capture and access in a living laboratory. Michigan-Ohio SIGCHI Chapter, invited lecture, February 11, 2000.

P19. Future Computing Environments Research. Invited talk to Andersen Consulting (now Accenture) Center for Strategic and Advanced Research (CSTaR), June 5, 2000. Joe McCarthy host.

P20. Research Challenges in Ubiquitous Computing. Invited lecture as Schlumberger Technical Fellow, September 15, 2000. Meyer Bengio host.

P21. Research in Future Computing Environments. Invited presentation at Sony Computer Science Labs, Tokyo, Japan, November 13, 2000. Jun Rekimoto host.

P22. Research in Future Computing Environments. Invited presentation at ATR MIC Labs, Kyoto, Japan, November 17, 2000. Kenji Mase host.

P23. Research in Future Computing Environments. Invited presentation at NEC Research Labs, Kyoto, Japan, November 17, 2000. Mikiya Tani and Yoshihide Ishiguro hosts.

P24. Research in Future Computing Environments. Invited presentation at the Interactive Institute, Gothenberg, Sweden, December 12, 2000. Lars-Erik Holmquist host.

P25. Abowd, Gregory D. Beyond Dreaming Beyond the Desktop: Challenges in Building and Evaluating Ubiquitous Computing Applications. Invited talk at IBM Research, Watson talk, May 2001.

P26. Abowd, Gregory D. Beyond Dreaming Beyond the Desktop: Challenges in Building and Evaluating Ubiquitous Computing Applications. Invited talk at Lucent Labs, Illinois, June 11 2001.

P27. (with James Rowan). Intel Smart Home Forum invited talk: As We May Live: Building an Aware Home. August 2, 2001.

P28. As We May Live: The Georgia Tech Broadband Institute Residential Laboratory and the Aware Home Research Initiative. Invited 45-minute presentation as part of panel for American Society of Interior Designers meeting, New Orleans, LA, Feb. 16, 2002.

P29. If a classroom could listen, would anyone care? Experiences with eClass. Invited lecture at University of Toronto Knowledge Media Design Institute Spring 2002 Seminar Series, March 6, 2002.

P30. Building a research program on ubiquitous computing in the home. Invited lecture at University of Texas, Arlington, March 25, 2002.

P31. Applications research in ubiquitous computing. Invited talk for National Academy of Engineering Joint Japan America Frontiers of Engineering Symposium, Nov. 2002.

P32. (joint with T. Rodden, W. Gaver, J. Wejchert) Panel on ubiquitous computing in the home. At Ubicomp 2002 conference, Gothenberg, Sweden, October 2002.

P33. As we may live. Invited talk to Michigan-Ohio ACM SIGCHI Special Interest Group (MOCHI), Ann Arbor, MI, Feb. 12, 2003.

P34. As we may live. Invited talk to Microsoft Research, Seattle, WA, March 3, 2003.

P35. As we may live. Invited talk to Intel Research, Seattle, WA, March 4, 2003.

P36. The Role of Technology for Healthy Aging. Statement prepared and presented by Gregory D. Abowd to U.S. Senate Special Committee on Aging, hearing on Baby Boomers at the Gate: Enhancing Independence through Innovation and Technology. May 20, 2003. Full statement available at http://aging.senate.gov/hearings/hr101ga.pdf

P37. The Role of Technology for Healthy Aging. Presentation to the National Governor's Association annual meeting, New Orleans, October 11, 2003.

P38. Ubiquitous Computing: An overview of research accomplishments and challenges. Delivered to Samsung Electronics Research, Seoul, Korea, Nov. 18, 2003.

P39. eClass: A retrospective. Invited presentation to Web Group at University of Notre Dame, Indiana, March 2, 2004.

P40. Realizing the dream of ubiquitous computing: It's all in the family. Invited seminar to CSE Department, University of Notre Dame, Indiana, March 2, 2004.

P41. Progress update on the Aware Home Research Initiative. Invited presentation to Intel, Hillsborough, OR, March 11, 2004.

P42. Pervasive Technologies and applications for a Smart Home. Invited presentation and panel participation at George Washington University, May 20, 2004.

P43. Technologies to Track Interventions for Autism. Invited presentation to Cure Autism Now Innovative Technologies for Autism Think Tank, June 11-13, 2004, San Francisco, CA.

P44. Application-led research in ubiquitous computing. Panel presentation in UbiApp workshop, held in conjunction with Pervasive Computing Conference, May 11, 2005. Munich, Germany. Other panelists included Gaetano Borriello, William Newman, and Abigail Sellen.

P45. Better living through technology for persons with disabilities: The Aware Home. Lunch speaker at 11th Annual Georgia Epilepsy Symposium, November 11, 2006.

P46. Abowd, Gregory D. Evaluation of real deployments in ubicomp. Tutorial presented at the *International Conference on Pervasive Computing (Pervasive 2007),* Toronto, Canada, May 16, 2007.

P47. Abowd, Gregory D. Pervasive computing: Introduction to research in the area. Tutorial presented at the *International Conference on Pervasive Computing (Pervasive 2008),* Sydney, Australia, May 22, 2008.

P48. Panel on the history and future of Ubicomp, *International Symposium on Ubiquitous Computing (Ubicomp 2008), Seoul, Korea,* September 21-24, 2008.

P49. HCI Research: Does it really matter? Carnegie Mellon University HCI Institute Seminar Series, Wednesday, October 1, 2008.

P50. Computing and Autism. Newcaste University Creative Play Group Lecture series, October 1, 2010.

P51. Computing and Autism. Stanford University Distinguished HCI Lecture series, October 15, 2010.

P52. Career Assistance for Autism Through High Technology and Science. American Academy of Pediatrics Georgia Chapter 2010 Annual Fall meeting. October 21, 2010.

P53. Computing and Autism. Emory University Computer Science Lecture series, October 22, 2010.

P54. Computational Approaches to Measuring Behavior, Autism Speaks Workshop on Outcome Measures for Clinical Trials with Individuals with ASD:Challenges and Opportunities, Washington, DC, January, 2011.

P55. Reflection on 20 years after Mark Weiser's Scientific American article. At Ubicomp 2011, Beijing, China.

P56. TEDxGeorgiaTech talk, April 2011.

P57. Center for Discovery talk, April 2011

P58. The COSMOS Conjecture: Dreaming and doing in a post-Moore's Law era. GVU Center Brown Bag talk, November 10, 2016.

E. GRANTS AND CONTRACTS

E1. AS PRINCIPAL INVESTIGATOR

List all funded grants and contracts as principal and co-principal investigator. List PI and Co-PI for each grant, with total grant funding followed by sub amount allocated to candidate. Proposals pending may be included, but must be listed separately. Do not include grants and contracts not funded.

Title of Project: An architectural case study in telecommunications
Agency/Company: Bell Northern Research
Total Dollar Amount: $20,000
Role: PI
Period of Contract: 6/1995-5/1996

Title of Project: Software architectures for global information systems
Agency/Company: Motorola University Partnerships in Research Program
Total Dollar Amount: $27,389

Role: PI
Period of Contract: 9/1996-8/1997

Title of Project: Classroom 2000
Agency/Company: NEC
Gregory Abowd and Christopher Atkeson
GVU Industrial Affiliates Program funding from NEC
Amount awarded: $30,000 for one year, beginning January 1996.

Title of Project: Ubiquitous Computing
Agency/Company: FX-PAL
Total Dollar Amount: $25,000
Role: PI
Collaborators: Christopher Atkeson (co-PI)
Period of Contract: 9/1996-8/1997

Title of Project: Applications of Java to the monitoring and control of physical systems
Agency/Company: Siemens
Total Dollar Amount: $30,000
Role: PI
Collaborators: Christopher Atkeson (co-PI)
Period of Contract: 4/1997-3/1998

Title of Project: Future Computing Environments
Agency/Company: Mitsubishi Electronic Research Laboratory
Total Dollar Amount: $30,000
Role: PI
Period of Contract: 1/1997-12/1997

Title of Project: Service creation and development environments for audio interfaces.
Agency/Company: Motorola Cellular Infrastructure Group
Total Dollar Amount: $100,000
Role: PI
Collaborators: Colin Potts (co-PI)
Period of Contract: 1/1997-12/1997

Title of Project: Research in Mobile and Ubiquitous Computing
Agency/Company: Mobility Foundation
Total Dollar Amount: $38,000
Role: PI
Collaborators: C. Atkeson (co-PI)
Period of Contract: 3/1997-2/1998

Title of Project: NSF IRI-9703384 CAREER: Investigating research issues in ubiquitous computing: The capture, integration, and access problem

Agency/Company: National Science Foundation
Total Dollar Amount: $438,376
Role: PI
Period of Contract: 9/1997-8/2002

Title of Project: Classroom 2000 infrastructure
Agency/Company: Sun Microsystems
Total Dollar Amount: $270,000 in kind equipment
Role: PI
Period of Contract: 1997

Title of Project: Research in capture, integration and access
Agency/Company: Corporation for National Research Initiatives
Total Dollar Amount: $25,000 cash and $8000 equipment
Role: PI
Period of contract: 1998

Title of Project: ESS: Automated Understanding of Captured Experience
Agency/Company: National Science Foundation
Total Dollar Amount: $850,000
Role: PI
Collaborators: C. Atkeson and I. Essa
Period of Contract: 7/1998-6/2001

Title of Project: Future Computing Environments research
Agency/Company: Hitachi Corporation
Total Dollar Amount:
Role: PI
Period of Contract: 8/1998-7/1999

Title of Project: Future Computing Environments research
Agency/Corporation: NEC Corporation
Total Dollar Amount: $50,000
Role: PI
Period of Contract: 10/1998-9/1999

Title of Project: Augmenting the Capture and Understanding of Everyday Experiences
Agency/Corporation: National Science Foundation CISE Infrastructure Grant
Total Dollar Amount: $120,000
Role: PI
Collaborators: Atkeson, Essa,MacIntyre, Mynatt, Potts, Ramachandran, Ribarsky, Rugaber and Starner (co-PIs)
Period of Contract: 1/1999-12/2001

Title of Project: Inter-Agency Workshop on Smart Environments
Agency/Corporation: National Science Foundation
Total Dollar Amount: $27,496
Role: PI
Period of Contract: August-December 1999

Title of Project: Development and Understanding of Automated Capture Environments to Support Long-Term Use
Agency/Company: National Science Foundation and CNPq Brazil
Total Dollar Amount: $201,670
Role: PI
Collaborators: Maria da Graca Pimentel (co-PI through CNPq in Brazil)
Period of Contract: 7/2000-6/

Title of Project: Handling sensed context in a ubiquitous computing setting
Agency/Company: DARPA ITO Ubiquitous Computing/Expeditions
Total Dollar Amount: $200,000
Role: PI
Period of Contract: 1/2000-12/2000

Title of Project: Battlefield Visualization System
Agency/Company: Army Research Labs
Total Dollar Amount: $100,000 subcontract to GTRI
Role: PI
Collaborators: Kirk Pennywitt co-PI
Period of Contract: 1/2000-12/2000

Title of Project: The Aware Home Research Initiative
Agency/Company: Intel, HP, MERL, Motorola, Accenture CSTAR, Visteon
Total Dollar Amount: $705,000
Role: PI
Collaborators: Aaron Bobick, Irfan Essa, Blair MacIntyre, Elizabeth Mynatt,Thad Starner (co-PIs)
Period of Contract: 5/2000-12/2003

Title of Project: ITRI: The Aware Home: Sustaining the Quality of Life for an Aging Population
Agency/Company: National Science Foundation Information Technology Research Initiative
Total Dollar Amount: $1,600,000
Role: PI
Collaborators: Aaron Bobick, Irfan Essa, Elizabeth Mynatt and Wendy Rogers (Psyhology) (co-PIs)
Period of Contract: 9/2001-8/2006

Title of Project: Developing automated capture applications for the Personal Server.
Agency/Company: Intel Research
Total Dollar Amount: $50,000
PI: Gregory Abowd
Period of Contract: 12/2003-11/2004

Title of Project: Using Visual Analytics to Support Data Analysis at the Center for Discovery
Agency/Company: Center for Discovery
Total Dollar Amount: $130,000
Role: PI:
Collaborators: John Stasko (co-PI), Johanna Lantz (co-PI)
Period of Contract: 3/1/2014-12/31/2015

Title of Project: Autism Center of Excellence award from State of New York
Agency/Company: State of New York through Center for Discovery subcontract
Total Dollar Amount: $30,000
Role: PI for subcontract
Collaborators: John Stasko (co-PI), Terry Hamlin (PI for total award at CfD)
Period of Contract: 1/2016-9/2017

Title of Project: Atlanta Autism Consortium
Agency/Company: Federal earmark subcontract from Children's Healthcare of Atlanta
Total Dollar Amount: $75,000
Role: PI
Period of Contract: 3/1/2011-12/2011

Title of Project: Intel Science and Technology Center on Pervasive Computing
Agency/Company: Intel
Total Dollar Amount: $800,000
Role: PI
Collaborators: James M. Rehg (PI)
Period of Contract: 2011-2016
Candidates' Share: $400,000

Title of Project: Using visual analytics to support data analysis at CfD
Agency/Company: Center for Discovery
Total Dollar Amount: $800,000
Role: PI
Collaborators: John Stasko (GT co-PI), Johanna Lantz (CfD), Matthew Northrop (CfD), Terry Hamlin (CfD)
Period of Contract: 2015-2016
Candidates' Share: $70,000

Title of Project: Applying a maker philosophy to teaching computer science
Agency/Company: VMWare Foundation
Total Dollar Amount: $25,000
Role: PI
Period of Contract: Foundation gift
Candidates' Share: $25,000

Title of Project: Exploring computational skin for on-body interactions
Agency/Company: Technicolor Labs
Total Dollar Amount: 50,000 Euros
Role: PI
Period of Contract: Foundation gift
Candidates' Share: 50,000 Euros

Title of Project: Exploring notification feedback in VR systems
Agency/Company: HP Labs
Total Dollar Amount: $30,000
Role: PI
Period of Contract: 2016-2017
Candidates' Share: $30,000

E2. AS CO-PRINCIPAL INVESTIGATOR

Title of Project: MORALE: Mission Oriented Architectural Legacy Evolution
Agency/Company: DAPRA BAA #95–05 Evolutionary Design of Complex Software
Total Dollar Amount: $1,226,108
Role: co-PI
Collaborators: Ashok Goel, W. Michael McCracken, Melody Moore, Colin Potts, Spencer Period of Contract: 7/1996-4/2000

Title of Project: The Home Information Infrastructure Lab
Agency/Company: Intel
Total Dollar Amount: $60,000
Role: co-PI
Collaborators: K. Calvert (PI), D. Howard (co-PI)
Period of Contract: 1/1997-12/1997

Title of Project: Educational innovation
Agency/Company: Hewlett-Packard
Total Dollar Amount: $1.3 million deep-discounted equipment
Role: co-PI
Collaborators: Tom Barnwell (PI)
Period of Contract: 1997
Candidate's Share: $289,360

Title of Project: Collaborative environments for capturing military tactics
Agency/Company: Army Research Laboratory
Total Dollar Amount: $135,000 subcontract with GTRI
Role: co-PI
Collaborators: Kirk Pennywitt
Period of Contract: 5/1998-9/1999

Title of Project: NMI: Exploration of Middleware Technologies for Ubiquitous Computing with Applications to Grid Computing
Agency/Company: National Science Foundation Middleware Initiative
Role: co-PI
Collaborators: Umakishore Ramachandran (PI), Raj Kumar (HP Labs, co-PI), Sujoy Basu (HP Labs, co-PI)
Period of Contrac: 9/2003-8/2006

Title of Project: Development of a home-based system for biobehavioral recording or individuals with autism
Agency/Company: Simons Foundation Autism Research Initiative
Total Dollar Amount: $1,065,607
Role: co-PI
Collaborators: PI: Matthew Goodwin (Northeastern); co-PI: James Rehg (Georgia Tech)
Period of Contract: 4/2013-3/2016
Candidate's Share: $204,029

Title of Project: Designing and studying maker oriented learning to transform advanced computer science education
Agency/Company: National Science Foundation
Total Dollar Amount: $718,753
Role: co-PI
Collaborators: PI: Betsy DiSalvo
Period of Contract: 9/1/2014-8/31/2016

Title of Project: Expeditions: Computational Behavioral Science: Modeling, Analysis and Visualization of Social and Communicative Behavior
Agency/Company: National Science Foundation
Total Dollar Amount: $10,000,000
Role: co-PI
Collaborators: PI: James Rehg, co-PIs: Gregory D. Abowd, Mark Clements, Agata Rozga with collaborators from Northeastern (Goodwin), Boston U. (Sclaroff), MIT (Picard), Illinois (Forsyth, Karahalios) CMU (Dey, Kanade), USC (Narayanan)
Period of Contract: 9/2010-8/2015
Candidate's Share: $3.6M to Georgia Tech

E3. AS SENIOR PERSONNEL OR CONTRIBUTOR

List all funded grants and contracts on which you were not Principal or Co-Principal investigator but were listed as senior personnel. Proposals pending may be included, but do not include grants and contracts not funded.

Title of Project: Research Infrastructure Grant
Agency/Company: National Science Foundation
Total Dollar Amount: $2,000,000
Role: Key Personnel
Collaborators: Ramachandran (PI)
Period of Contract: 7/1999-8/2002

Title of Project: DARPA ASSIST
Agency/Company: DARPA ITO
Total Dollar Amount: $2,000,000
Role: Key Personnel
Collaborators: PI: Starner (GT) Pentland (MIT); Co-Pis: Essa, Isbell, Picard (MIT)
Period of Contract: 6/2005-11/2006

Title of Project: Using Selective Archiving to support Functional Behavior Assessment in Schools
Agency/Company: NICHD SBIR Phase 1
Total Dollar Amount: $100,000
Role: Consultant
Collaborators: Ron Oberleitner, eMerge Medical Systems (PI)
Period of Contract: 1/2006-6/2006

Title of Project: Using Selective Archiving in telehealth settings
Agency/Company: NICHD SBIR Phase II
Total Dollar Amount: $2,400,000
Role: Consultant
Collaborators: Ron Oberleitner (Behavior Imaging Solutions, Inc.), co-PI: Agata Rozga (GT), Period of Contract: 6/2007-5/2009

Title of Project: Using smartphones to support naturalistic diagnostic and monitoring services for autism
Agency/Company: NIMH SBIR Phase II renewal
Total Dollar Amount: $3,000,000
Role: Consultant
Collaborators: Ron Oberleitner (Behavior Imaging Solutions, Inc.), co-PI: Agata Rozga (GT), Period of Contract: 6/2013-5/2016

Title of Project: Center for Excellence for Mobile Sensor Data-to-Knowledge (MD2K)
Agency/Company: NIH
Total Dollar Amount: $10,800,000
Role: Budgeted collaborator
Collaborators: PI: S. Kumar (Memphis), co-PI: J. Rehg (Georgia Tech)
Period of Contract: 9/29/2014-5/31/2018

E3. **PROPOSALS SUBMITTED BUT NOT FUNDED** (last two years)

Title of Project: Quantified Communities
Agency/Company: Intel
Total Dollar Amount: $2,000,000/year for up to 5 years
Role: PI
Collaborators: PIs: Anind Dey (CMU), Tanzeem Choudhury (Cornell), A. Campbell (Dartmouth)

F. OTHER SCHOLARLY ACCOMPLISHMENTS

List all other scholarly accomplishments such as software, patents, invention disclosures, start-up companies, etc.

Intellectual Property

IP1. Shwetak N. Patel, Gregory D. Abowd, Khai N. Truong, Jay Summet. Systems and Methods for Disabling Recording Features of Cameras. US Patent Application US2007013552 A1. Publication date: May 10, 2007. Priority date: Nov. 10, 2005. Pending.

IP2. Gillian R. Hayes, Khai N. Truong, Lamar M. Garder and Gregory D. Abowd. Systems and Methods for Archiving of Continuous Capture Buffers. US Patent application US20070214292 A1. Publication date: Sep. 13, 2007, Priority date: Feb. 24, 2006. Pending.

IP3. Julie Kientz, Sebastian Boring, Gregory D. Abowd. Method and computer program product for synchronizing, displaying and providing access to data collected from various media. US Patent 8,275,243 B2. Publication date: September 25, 2012. Priority date: August 31, 2006.

IP4. Shwetak N. Patel Thomas Robertson, Matthew Reynolds, Gregory D. Abowd. Detecting actuation of electrical devices using electrical noise over a power line. US Patent 8,094,034 B2. Publication date: January 10, 2012. Priority date: September 18, 2007. Also published as US 8334784 B2.

IP5. James M. Rehg, Karthir Prabhakar, Sangmin Oh, Ping Wang, Gregory D. Abowd. Systems and methods for retrieving causal set of events from unstructured signals. US Patent application US201220301105 A1. Publication date: Nov. 29, 2012. Priority date: Mar 22, 2011. Pending.

IP6. Shwetak Patel, Gregory D. Abowd, Matthew S. Reynolds, Thomas Robertson, Erich Stuntebeck. Sub room level indoor location system using wideband power line positioning. US Patent 8,494,762 B2. Publication date: July 23, 2013. Priority date: June 28, 2006.

IP7. Shwetak N. Patel, Matthew S. Reynolds, Gregory D. Abowd. Motion Detecting Device, Method of Providing the Same, and Method of Detecting Movement. US Patent application US20130289930 A1. Publication date: Oct 31, 2013. Priority date: May 12, 2009. Pending.

IP8. Gregory D. Abowd, Peter S. Abowd, Wesley Horner, Steven Tengler, Yi Han, and Chen Chen. Systems and methods for utilizing micro-interaction events on computing devices to administer questions. Pending US patent application US20140298260 A1.

Software Systems

SW1. Zen-Star 1.0. Software system for automated capture, integration and access of university lectures. Produced as part of the Classroom 2000 project. Designers: Gregory Abowd, Jason Brotherton, Christopher Atkeson and Janak Bhalodia.

SW2. The Context Toolkit 1.0. Software framework for the development of context-aware computing applications. Designers: Gregory Abowd, Anind Dey and Daniel Salber.

SW3. StuPad 1.0. Software system that works with Zen-Star system [S/W.1], to provide personalized note-taking by students in Classroom 2000.

SW4. OOPS toolkit. Software system that supports reusable mediation strategies to handle ambiguity in recognition-based interfaces. Designers: Jennifer Mankoff, Scott E. Hudson (CMU) and Gregory D. Abowd.

SW5. INCA toolkit. Software framework for development of automated capture and access applications. Designers: Khai Truong and Gregory D. Abowd.

SW6. TeamSpace. Software for distributed meeting capture. Designers: Heather Richter, Khai Truong, Ludwin Fuchs (Boeing), Werner Geyer (IBM/Lotus) and Gregory Abowd

SW7. The Location Service. System to support fusion of separate location-sensing technologies. Designers: Thomas O'Connell and Agathe Battestini and Gregory Abowd.

SW8. The Walden automated tracking system prototype. Prototype capture application for mobile analysis of behaviors of children with autism. Designers: David White,

SW9. The Family Video Archive. System to support annotation and browsing of digital home movies. Designers: Gregory Abowd, Matthias Gauger, Andreas Lachenmann and Shwetak Patel.

SW10. The Personal Audio Loop. Application developed for Motorola i-series handheld phones to support near-term audio remindes. Designers: Khai Truong, Shwetak Patel, Gillian Hayes, Julie Kientz, Giovanni Iachello, Rob Farmer and Gregory Abowd.

SW11. Abaris. An automated capture application to support the discrete trial intervention therapy of ABA. Designers: Gregory Abowd. David White, Julie Kientz and 3911 Senior Design team (Aldrian Harjati, Mark Bernardi, Pavel Kremer, Chris Widjaja). Version 2.0 developed in Fall 2004 by Gregory D. Abowd, Julie Kientz and Sebastian Boring.

SW12. CareLog. A system using the Intel Personal Server to support monitoring, diagnosis and intervention treatments of behavioral and learning disabilities in children. Designers: Gillian Hayes, Gregory Abowd and Trevor Pering (Intel).

SW13. GT Sound Source Location system An indoor 16-microphone array system to deliver location of sound sources. Designers: Xuehai Bian, Jim Rehg and Gregory Abowd.

SW14. The ContextCam. Automated video annotation system. Designers: Shwetak Patel and Gregory Abowd.

SW15. Multi-user Card Game Engine for the DiamondTouch. Designers: Shwetak Patel. Gregory D. Abowd and 3911 Senior Design team (John Bunch, Kyle Forkner, Logan Johnson, Tiffany Johnson, Michael Rosack).
SW16. LoCoL: a multiplayer location-aware game for mobile phones. Designers: Julie Kientz, Shwetak Patel and Jose Zagal.
SW17. GVU Procams Toolkit. Designers: James Rehg, Jay Summet and Matt Flagg. Offers a programming interface designed to allow programmers quickly build projector/camera applications on a Win32 platform. Virtual Rear Projection system variants have been produced with this toolkit, under the advisement of Rehg and Abowd.
SW18. The Capture Resistant Environment: Khai Truong, Jay Summet, Shwetak Patel and Gregory D. Abowd. Camera-projector system that prevents CCD-CMOS based phones and camcorders from being able to capture sensitive information in the environment. Selected as New York Times Magazine 2005 Top Idea of the Year and patent pending.
SW19. Experience Buffers, Bufferware, CareLog FBA: Gillian Hayes, Khai Truong, Lamar Gardere, Ellen Matthews. Selective archiving infrastructure used to support informal sensor data capture with annotation. Subject of pending utility patent.
SW20. Powerline positioning system: Shwetak N. Patel, Khai N. Truong and Gregory D. Abowd. Indoor positioning system leveraging domestic powerline infrastructure and fingerprinting. Invention disclosure April 2006 and provisional patent filed 2006.
SW21. TrackSense: Moritz Köhler, Shwetak Patel, Jay Summet, Erich Stuntebeck, Gregory D. Abowd. Infrastructure-free indoor localization system. Invention disclosure November 2006.
SW22. Continuous Flagging and Recording Technology (CRAFT): Nazneen, Yi Han. 2008
SW23. Refl-ex and REACT system. Fatima A. Boujarwah, 2011
SW24. Quedget: Lockscreen interaction to obtain quick answers to simple questions. Part of commercialization effort.

Startup Companies

DominINC LLC, technical co-founder 2006, working on camera-blocking technologies
uSenso/Zensi LLC, technical co-founder 2009, infrastructure-mediated sensing technologies. Acquired by Belkin in 2010.
BrailleTouch LLC, technical co-founder 2012, Braille input on smartphones.
Behavior Imaging Technologies, Inc. (originally Caring Technologies), Chief Research Office 2006-2015, telehealth solutions for the autism market
LSQ (dba Quedget), technical co-founder 2013, input techniques on smartphones

Consulting

Behavior Imaging Solutions, Inc. (formerly Caring Technologies, Inc.) 2005-present. I serve as Chief Research Officer for this start-up company and direct activities for grant funding of research involving information technologies and autism. Several successful SBIR grants (NICHD, Phase 1 and Phase 2, NIMH, Phase 2 renewal) have been received and executed upon.
Ultra Large Scale Software Systems panel, Carnegie Mellon University Software Engineering Institute, August 2005-April 2006.

NICTA, Sydney Australia. Visiting researcher teaching a course on HCI and Ubiquitous Computing, June 2005.
External member of Board of Directors, HomeCom Communications, Inc. 1997-1999.
Motorola Satellite Communications Division, Software architecture evaluation, April 10–11, June 28–29 1995.
Ford Motor Company, Electronics Division, Software architecture evaluation, April 28, 1995.
Motorola Cellular Infrastructure Group, Software architecture evaluation, August 22, 1995.
Software Engineering Institute, Software architecture evaluation report for Sandia Labs, two days consulting over summer 1995.
HomeCom Communications, Inc., Future interests in the Internet, May 6, 1995.
HomeCom Communications, Inc. Board of directors, September 1996–present.
Schlumberger, architecture consulting, January 1999.
Intel Microprocessor Research Labs (MRL) Board of Advisors, September 2000-present.
National Science Foundation Science and Technology Center at UCLA (Deborah Estrin, PI), Architectural Advisory Board, 2001--present.
University of Florida, consulting on development of laboratory for home technologies, September 2003.
Samsung Electronics, consulting on commercial potential of automated capture applications, Sep-Dec. 2003.
University of Florida CREATE Center academic advisory board, 2004-2008.
Advisory Board for Autism Speaks (formerly Cure Autism Now) Innovative Technologies for Autism (ITAB), 2004-2010.
Intel Research Seattle Visiting Faculty, July 2004-June 2005.
Center for Discovery, IT consulting for supporting research and educational practices, January 2012-2015. 1-6 hours per week.
LSQ Mobile LLC, Technical co-founder advising on mobile market research activities, April 2013-present.

Expert Witness experience

Since 2008, I have assisted numerous clients in intellectual property litigation. I have prepared declarations and expert reports in support of various trials. I have been deposed (3 times) and testified in court (1 time) in the US.

2008 Consulting expert witness for Sidley Austin LLP, Microsoft v. Tom-Tom. Summer 2008. Did claims analysis for a set of patents relating to navigation interfaces and services. Attorneys: Douglas Lews and John McBride.
2008-2010 Georgia Bureau of Investigation, request to provide an expert witness account on a case against former Georgia Tech faculty members accused of inappropriate use of sponsored research funds. 2008-2010.
2010 Subpoenaed by the International Trade Commission as an expert witness in a case between Nokia and Apple and I was deposed by lawyers representing both sides for

about 90 minutes. I was brought in to discuss details of some of my work from the 1990's that was being claimed as prior art. July 2010. Uncompensated.

2011 For Nokia with Alston & Bird LLP to assist in evaluating certain claims and issues Nokia had against Apple Inc. relating to Apple's iPhones, iPads, Macs, and other electronic devices This case was settled. Attorney contact: Adam Swain.

2011 For Openwave with Alston & Bird LLP in case against RIM/Google/Android/LG. Attorney contact: David Ben-Meir. Letter of engagement signed on July 15, 2011. Openwave decided in November 2011 to change representation, and I completed no work.

2011-2012 For Samsung with Quinn Emmanuel in International Trade Commission Investigation No. 337-TA-794. Attorneys: Alan Whitehurst, Anthony Zappin, Marissa Ducca. Wrote expert reports, was deposed and testified in court.

2012 For Samsung with Quinn Emmanuel in United States District Court, Northern District of California, San Jose Division, case number 11-CV-01846-LHK . Wrote expert reports. Attorney: Kenneth Suh. Patent dropped from case before deposition.

2013 For CooTek with Finnegan, Henderson, Farabow, Garrett and Dunner in International Trade Commission Investigation No. 337-TA-864 . Nuance Communications, Inc., Swype, Inc., Tegic Communications, Inc., and ZI Corporation of Canada, Inc., (collectively, "Nuance") v. Shanghai HanXiang (CooTek). Prepared expert reports and rebuttals and was deposed and prepared written expert testimony for trial. Case settled prior to court date. Attorneys: Aidan Skoyles and Qingyu Yin.

2014 For Learner's Digest International with Perkins Cole LLP in Astute Technology vs. Learner's Digest International, Eastern District of Texas case. Prepared evidence for invalidity arguments. Case settled. Attorney: David R. Pakarek Krohn.

2016 For Immersion Corp. with Irell & Manelli LLP in International Trade Commission Investigation Nos. 337-TA-1004 and 337-TA-990 (Consolidated) "Certain mobile and portable electronic devices incorporating haptics (including smartphones and laptops) and components thereof". Preparing expert reports. Ongoing. Attorney: Gavin Snyder.

G. SOCIETAL AND POLICY IMPACTS

Present a brief list of the broader impacts of your scholarship, and elaborate on them in your personal statement.

I started the Aware Home project in 1998 with funding from the Georgia Research Alliance. This effort has greatly influenced national and international efforts on aging in place, i.e., technologies for an aging population, as well as technologies for health in general. Many other universities followed Georgia Tech's lead by creating their own living home laboratories. I was invited to testify before the U.S. Senate Special Committee on Aging, hearing on baby Boomers at the Gate on May 20, 2003 (http://aging.senate.gov/hearings/hr101ga.pdf). I was also invited to write a chapter for the National Research Council on Technologies for Aging (see book chapter BC9).

In 2008, I founded the Atlanta Autism Consortium, a non-profit organization that facilitates broader understanding and communication between the research community and all stakeholder communities related to autism in the Greater Atlanta area. This effort started as an off-shoot of my own research in technology and autism.

V. TEACHING

A. COURSES TAUGHT

List course taught at Georgia Tech. (Most recent first and include the last six years)

Fall, 2016	CS/PSYC 3750	User Interface Design	68
Fall, 2015	CS/PSYC 3750	User Interface Design	67
Fall, 2015	CS 6452	Prototyping Interactive Systems	22
Spring, 2015	CS 4605	Mobile and Ubiquitous Computing	40
Fall, 2014	CS 6452	Prototyping Interactive Systems	28
Fall, 2013	CS 4911 C4G	Computing for Good	60 (w/Zegura)
Spring, 2013	CS 4605/7470	Mobile and Ubiquitous Computing	85 (w/ Starner)
Fall, 2012	CS 4911 C4G	Computing for Good	45 (w/Vempala)
Fall, 2011	CS/PSYC 6750	Human-Computer Interaction	40
Fall, 2011	CS 4605/7470	Mobile and Ubiquitous Computing	65
Fall, 2010	CS 7001	Introduction to Graduate Studies	40 (w/Feamster)
Fall, 2010	CS 4605/7470	Mobile and Ubiquitous Computing	65
Spring, 2010	CS 8803 TAU	Technology and Autism	15 (w/Arriaga)
Fall, 2009	CS 4605/7470	Mobile and Ubiquitous Computing	60
Spring, 2009	CS/PSYC 6750	Human-Computer Interaction	35

B. INDIVIDUAL STUDENT GUIDANCE

List all Postdoctoral Fellows, Ph.D. students, M.S. Thesis students, and undergraduate students supervised/advised. Explicitly indicate any co-advisement relationships. For Ph.D. and M.S. Thesis students, include date of graduation and title of thesis and, if known, the current position of the graduate students. For graduate students currently supervised, indicate the semester advisement began, their progression through appropriate exams, title of their project/dissertation, and current position if available. Provide any indicators you have of the quality of your mentorship.

B1. Postdoctoral Fellows

1. Daniel Salber, October 1997-September 1999. Worked on ubiquitous computing and context-aware computing. Work has resulted in conference publications. Work resulted in

Context Toolkit software system. Formerly a Research Scientist at IBM T.J. Watson Labs, currently back in France.

2. Jaeseok Yun, 2006-2009. Postdoctoral research scientist. Working on sensing in a home environment.
3. Mario Romero, 2009-2012. Postdoctoral research scientist. Working on visualization of human behavior. Currently Associate Professor at KTH in Sweden.
4. Thomas Ploetz, 2011-2012, Visiting Research Scientist from Germany. Work on behavior imaging and pattern recognition of on-body sensing. Currently Senior Lecturer at University of Newcastle.

B2. Ph.D. Students

Graduated

1. *Richard Kurt Stirewalt*, (co-advised with S. Rugaber) 1994-1997. Thesis "Automatic Generation of Interactive Systems from Declarative Models." Computer Science Ph.D. program, College of Computing, Georgia Tech. NSF CAREER Award winner 2000. Formerly Associate Professor (with tenure) at Michigan State University. Currently VP Application Architecture at LogicBlox.
2. *Anind Dey*, 1995-2000. Thesis: "Providing Architectural Support for Building Context-Aware Applications." Named 2000 College of Computing Outstanding Graduate Research Assistant. Currently Professor and Charles M. Geschke Director of the Human-Computer Interaction Institute at Carnegie Mellon University.
3. *Jennifer Mankoff*, 1996-2001. Thesis: "An architecture and interaction techniques for handling ambiguity in recognition-based input." Named 2001 College of Computing Outstanding Graduate Research Assistant. Sloan Fellow. IBM Faculty Fellow. Currently Professor in the Human-Computer Interaction Institute at Carnegie Mellon University.
4. *Jason Brotherton*, 1996-2001. Thesis: "Enriching Everyday Activities through the Automated Capture and Access of Live Experiences: eClass: Building, Observing and Understanding the Impact of Capture and Access in an Educational Domain." Working on automated capture and access for live experiences. Was Assistant Professor at Ball State University, 2001-2002. Awarded British Society Postdoctoral Fellowship 2002-2006. Current whereabouts unknown.
5. *Robert Waters*, 1997-2004. Thesis: "Obtaining Architectural Descriptions from Legacy Systems: The Architectural Synthesis Process (ASP)." Currently a full-time instructor in the College of Computing at Georgia Tech.
6. *Heather (Richter) Lipford*, 1997-2005. Thesis: "Designing and Evaluating Meeting Capture and Access Services." Currently a Full Professor in Dept. of Information Science at University of North Carolina Charlotte.
7. *Khai Truong*, 1998-2005. Thesis: "INCA: An Infrastructure to Support the Generation, Preservation & Use of Memories from Everyday Life." Currently a tenured Associate Professor and Associate Chair of Computer Science at University of Toronto.
8. *Lonnie Harvel*, 1999-2005. Thesis: "Using Student Generated Notes as an Interface to a Digital Repository." Formerly Vice President of Educational Technology, Georgia Gwinnett College. Deceased: November 4, 2010.
9. *Giovanni Iachello*, 2003-2006. Thesis: "Privacy and Proportionality." NSF Graduate Fellow, 2003-2006. Currently Head of International & New Markets at LinkedIn.

10. *Kris Nagel*, 2000-2006. Thesis: "Using Availability Indicators to Enhance Context-Aware Family Communication Applications." 2005 Google Anita Borg Fellowship. Formerly a tenured Associate Professor at Georgia Gwinnett College. Currently Academic Professional in the School of Electrical and Computer Engineering at Georgia Tech.
11. *Jay Summet*, 2002-2007. (co-advisor Jim Rehg) Thesis: "Virtual Rear Projection: Improving the User Experience with Multiple Redundant Projectors." Currently a full-time instructor with the College of Computing, Georgia Institute of Technology.
12. *Gillian Hayes*, 2003-2007. Thesis: "Documenting and Understanding Everyday Activities through the Selective Archiving of Live Experiences." Awarded IBM Research Fellowship and Anita Borg Fellowship in 2006. Currently a Professor and Robert A. and Barbara L. Kleist Chair in Informatics at University California, Irvine.
13. *Julie Kientz*, 2004-2008. Thesis: "Supporting Data-based Decision-Making for Caregivers through Embedded Capture and Access." NSF Graduate Fellow, 2004-2007. Google Anita Borg Fellowship in 2007. PEO Fellow 2007. Currently a tenured Associate Professor in the Department of Human-Centered Design and Engineering, University of Washington.
14. *Shwetak Patel*, 2003-2008. Thesis: "Infrastructure Mediated Sensing." 2007 College of Computing Outstanding GRA. NSF Graduate Fellow, 2005-2008. Currently Washington Research Foundation Entrepreneurship Endowed Professor in the Computer Science and Electrical Engineering Departments, University of Washington.
15. *Mario Romero*, 2006-2009. Thesis: "Supporting Human Interpretation and Analysis of Activity Capture Through Overhead Video." School of Interactive Computing CS Ph.D. program. Currently Associate Professor in Computing at KTH in Sweden.
16. *Ping Wang*, co-advisor with Jim Rehg, 2006–2010, Thesis: "Social Game Retrieval from Unstructured Videos." School of Interactive Computing CS Ph.D. program. Currently working as Research Scientist at ObjectVideo.
17. *Tracy Westeyn*, co-advisor (with Thad Starner), 2006–2010. Thesis: "Child's Play: Activity Recognition for Monitoring Children's Developmental Progress with Augmented Toys." School of Interactive Computing CS Ph.D. program. Currently working for NSA.
18. *Erich Stuntebeck*, 2006–2010. Thesis: "An Analysis of the Domestic Power Line Infrastructure to Support Indoor Real-Time Localiza1on." School of Electrical and Computer Engineering PhD student. Currently a VP of Research for AirWatch in Atlanta, GA a division of VMWare.
19. *Fatima Boujarwah*, co-advisor (with R. Arriaga), 2009–2012. Thesis: "Facilitating the Authoring of Multimedia Social Problem Solving Skills Instructional Modules." School of Interactive Computing CS Ph.D. program. Currently Assistant Professor at Kuwait University.
20. *Lana Yarosh*, 2007–2012. Thesis: "Supporting Remote Synchronous Communication Between Parents and Young Children." School of Interactive Computing Human-Centered Computing Ph.D. program. 2010 recipient of IBM Graduate Research Fellowship. Currently Assistant Professor at University of Minnesota.
21. *Tae-Jung Yun*, co-advisor (with R. Arriaga) 2007– 2012. Thesis: "Using Ubiquitous Communication Technology to Improve Pediatric Asthma Management." School of Interactive Computing Human-Centered Computing Ph.D. program. Currently Research Scientist with Samsung Electronics.
22. *Nazneen*, co-advisor (with R. Arriaga) 2009–2014, Thesis: "Supporting in-home collection and sharing of behavior specimens for diagnostic assessment of children with Autism."

School of Interactive Computing Computer Science Ph.D. program. Currently User Experience Researcher at Google.

23. *Hwajung Hong*, co-advisory (with R. Arriaga) 2010-2015, Thesis: "Specializing Social Networking Services to Support the Independence of Adolescents and Adults with Autism." School of Interactive Computing Human-Centered Computing Ph.D. program. Currently Assistant Professor at Ulsan National Institute of Science and Technology (UNIST), Korea.
24. *Edison Thomaz*, (with I. Essa), 2011-2015, Thesis: "Automatic Eating Detection in Real-World Settings with Commodity Sensing." School of Interactive Computing, Human Centered Computing Ph.D. program. Work on heath informatics and the home. Currently Research Assistant Professor at University of Texas, Austin.
25. *Arri Ciptadi,* (with J. Rehg), 2010-2016, Thesis: "Interactive Tracking and Action Retrieval to Support Human Behavior Analysis." School of Interactive Computing Computer Science Ph.D. program. Machine Learning Research Scientist at Amazon Lab126.
26. *Yi Han*, (with J. Stasko), 2011-2016, Thesis: "Understanding Visual Analysis Processes from User Interactions using Visual Analytics." School of Interactive Computing, Computer Science Ph.D. program. Currently looking for employment.
27. Aman Parnami, (with B. DiSalvo) 2013-2017, Thesis: "Enabling In Situ & Context-Based Motion Gesture Design." School of Interactive Computing, Computer Science Ph.D. program. Currently Assistant Professor IIIT Delhi.
28. Joelle Alcaidinho, (with M. Jackson) 2016-2017, Thesis: "The Internet of Living Things: Enabling Increased Information Flow In Dog–Human Interactions." School of Interactive Computing, Human Centered Computing Ph.D. program. Currently a Research Scientist at Intel Labs.
29. Gabriel Reyes, (with K. Edwards), 2010-2017, Thesis: "Enabling One-Handed Input for Wearable Computing." School of Interactive Computing, Computer Science Ph.D. program. Currently seeking employment.

Current

1. *Caleb Southern*, since August 2010, School of Interactive Computing, Human Centered Computing Ph.D. program. Work on personal informatics and persuasion. Expected graduation, May 2018.
2. *Cheng "Allen" Zhang*, (with O. Inan in ECE) since August 2012, School of Interactive Computing, Computer Science Ph.D. program. Work on always-available interaction techniques. Expected graduation, May 2018.
3. *Weiren Wang*, (with W. Lee) since August 2014, School of Computer Science, Computer Science Ph.D. program. Work on security for the Internet of Things.
4. *Dingtian "Alan" Zhang,* since January 2016, School of Interactive Computing, Computer Science Ph.D. program. Work on computational skin and future form factors of computational materials.
5. *Jung Wook Park*, (with R. Arriaga) since August 2016, School of Interactive Computing, Computer Science Ph.D. program. Work on collaborative sensing.
6. *Hayley Evans*, (with R. Arriaga) since August 2016, School of Interactive Computing, Human Centered Computing Ph.D. program.
7. Hyeokhyen "Allen" Kwon, (with J. Rehg) since August 2016, School of Interactive Computing, Computer Science Ph.D. program.

8. Nivedita Arora, since August 2016, School of Interactive Computing, Computer Science Ph.D. program.

B3. M.S. Students (Indicate thesis option for each student)

2016-2017 Shao-Yu Chen (MS HCI project), Yunnuo Cheng (MS HCI project), Sarthak Ghosh (MS HCI project), Aakanksha Mirdha (MS HCI project), Yiming Pu (MS HCI project), Tara Ramanan (MS HCI project), Felix Tener (MS HCI project), Sumeet Jain (MS independent study), Nikita Juneja (MS independent study), Pranav Kundra (MS independent study), Wei Yang Quek (MS independent study), Pratik Pravinkumar Shah (MS independent study), Vedant Das Swain (MS independent study), Anandghan Waghmare (MS HCI project)
2015-2016 Manasvi Llalwani (MS HCI project), Abdelkareem Bedri (MS CS project), Nivedita Arora (MS HCI project), Jonathan Shaw (MS HCI project), John Hinkel (MS HCI project), Sarthak Ghosh (MS CS project), Lawrence Chan (MS HCI project), Apoorva Verleker (MS HCI project)
2013-2015 Arpita Bhattacharya (MS CS project), Rushil Khurana (MS HCI project)
2012-2013 Anhong Guo (MS HCI project)
2012 Aman Parnami (MS HCI project)
2012 Ravi Karkar (MS CS project)
2011- Alex Lynch (MS CS project)
2010-2012 Jennifer Kim (MS HCI project)
2010-2011 Gregory Garrett (MS CS project)
2010 Dani Rayan (MS CS project)
2007-2009 Sidhant Gupta (MS CS project), Mayank Garg (MS CS project), Mayank Goel (MS CS project), Hyorim Park (MS HCI project), Yi Han (MS CS project), Sumit Savla (MS InfoSec project), Sidarsun Kannan (MS CS project), Hwajung Hong (MS HCI project)
2008 Jan Gillesen, Roel Hendrikx and Bart van den Boogard. Visiting masters students from Technical University Eindhoven.
2007-2008 Alicia Nachmann (MS HCI project).
2006-2008 Sunyoung Kim (MS HCI project), Dounia Berrada
2006 Moritz Köhler, Visiting student from Technical University of Munich
2005 Jennifer Wiley (MS HCI project) Ja-Young Sun (MS HCI project), Janna Kimmel (MS HCI project), Yelena Nakhimovsky (MS HCI project)
Sebastian Boring, 2004-2005. Visiting student from LMU, Munich Germany
2004-2005 Lamar Gardere (MS CS project)
2004 Michael Biebl. Visiting student from Karlsruhe University, Germany.
2004-2005 Jeremy Johnson (MS CS project), Peter Jensen (MS CS)
2003 Matthias Gauger and Andreas Lachenmann, Visiting students from Germany
2002-2003 David White (MS HCI project), Molly Stevens (MS IDT thesis), Palavi Garg (MS CS project)
2001-2003 Ramswaroop Somani (MS CS project), Gabe Hoffman (MS CS project), Venkataswaraman Ramachandran (MS CS project), Arpit Agarwal (MS CS project), Agathe Battestini (CS MS project)
2000-2002 Kuleen Mehta (MS CS project), Thomas O'Connell (MS CS project)

1999-2000 Gregory Krohne (MS CS project)
1998-1999 Vishal Dalal (MS CS project)
1997-1998 Roy Rodenstein (MS CS project)
1996-1997 Wasim Khan (MS CS project), James Seymour (MS CS project)
1996-1997 Mike Pinkerton, (MS CS Thesis: "Ubiquitous Computing: Extending Access To Mobile Data". GVU Technical Report GIT-GVU-97-09.)
1996-1997 Lein Ton, Visiting masters student from Delft University.
1995-1996 Sue Long (MS CS project), Rob Kooper (MS CS project), Savita Chandran (MS CS project), Yoosuf Goolamabbas (MS CS project), Ami Feinstein (MS CS project)
1995-1996 Nitin Sawhney (MS IDT project), Kipp Jones (MS CS project), Harinarayanan Balakrishnan (MS CS project)
1995-1996 Dietmar Aust, Visiting masters student from Germany

B4. Undergraduate Students

2016 Victor Chen (independent study), Anmol Lai (independent study), Saqib Ali (undergrad research), Casey Barnette (undergrad research), Bailey Bercik (undergrad research), Beiwen Liu (undergrad research), Joshua Morton (undergrad research), Jatin Nanda (undergrad research), James Park (undergrad research), Jason Wu (undergrad research), Jinming Yu (undergrad research).
2010-2011. Alex Lynch
2009. Pamela Overman, Jason Bennett
2008. Caitlin East.
2006. Roman Savaryn, Kate Rosier, Arwa Tyebkhan.
2005. Tejesh Patel, Ellen Matthews, Roman Savaryn, Ping Taing, Tina Chou, Asif Ladak, Jonathan McAbee Reher, Sunil Venkataram, Lauren Griffin, Forest Andrew Skaggs, Derek DeRaps, Tim Dorr, Kevin Kane , Nate Padgett, Eric Derenne, Axel Molina, Ping Taing, In Jae yi, Robert, Soe Htet, Will Clarke, Akash Shah, and Jarvis Greene, Shamsuddim Lakha
2004. Brian Adle, Patrick Jarrett, John Ndukuba, Forest Andrew Skaggs, Carlo Tambuatco, Jaime Yap, Irfan Kassam. Matt Balaun, Ray Cole, James Gaythwaite, Cory Jacobsen, William Allen, James Robert Farmer, Trevor Mann, Abiodun Otolorin, Ian Port, T. Scott Saponas, John Bunch, Kyle Forkner, Logan Johnson, Tiffany Johnson and Michael Rosack.
2003. Mohammad Ashraf, Meghan Byrne, Adam Gent, Christopher Gooley, Pavel Kremer, T. Scott Saponas, Wen Tian, Timothy Morton, Jonathan Razza, David Sharpe, Kevin Wong, William Allen, Kanishk Kapur, Ian Port, John Woehler, Mark Bernardi, Aldrian Harjati, Pavel Kremer and Christianto Widjaja, Shwetak Patel, Jesse Shieh, Nasir Barday, Tim Hardcastle, Scott Saponas, Trayton Otto, Adrian Abraham, Branden Hughes, Robert Martoncik, Dino Tufekcic.
2002. Shwetak Patel, Jesse Shieh, Nasir Barday, Scott Saponas, Trayton Otto, Samir Kaushal, Harold Owen Noll, Borna Safabaksh, Shuo Wang, Johnny S. Yen, Mohammed Ashraf, Lloyd Engebretsen, Lev Parnas, Randall Hutchison, Kamal Patel, Shwetak Patel, Jesse Shieh, Shuo Wang, Liang Wen, Johnny Yen, Gooley,

Seth Lilavivat, Belinda Nambooze, T. Scott Saponas, Timothy Bethea, Logan Hauenstein, Branden Hughes, Robert Martoncik, James McDuffie, Tali Padan, Hossein Sharifi, Maxwell Speyer, Andrew Wightwick, Christopher Geisler, Peter Jensen.

1999. Cheryl Kay Holifield and Jamonica DeRamus, Cory Kidd,Mark Chapman.

1998. Gregor Altvater, John Desetto, Colin Waters, Holloway, Thinh To, Lynn Bacher and Jimmy Nesmith.

1997. Janak Bhalodia, Ahmad Aslami, Khai Truong, Dale Everett, Vergilia Chin and Paul Gulley, Darin Heuerman, Jonathan Somers, Jason Anderson, Jason Pierce, Kristin, Chris Reynolds,

Caleb Billingsley, Tristan Jackson,Stephen Rushton, Thierry Ways, Kyle Phillips, Yonatan Feldman, Paul Gulley, Jonathan Somers, Jason Hong.

1996. David Chow, Darin Heurmann, Jason Hong, Gulley, Dale Everett, Scott Campbell.

1995. Greg Hankins, Casey Powell, DiIorio and John Lindsey.

B5. Service on thesis or dissertation committees

Georgia Tech

Annie Anton, Krishna Bharat, Erika Poole, Elaine Huang, Michael Terry, Kent Lyons, James Clawson, Andrea Forte, Temiloluwa Olubanjo (ECE), Maia Jacobs

External

Micah Rye, MIT Media Lab. Advisors: Mitchell Resnick and Rosalind Picard. Thesis topic: collaborative story creation and the impact on children with autism. External committee member, Defended December 2014.

João Sousa, Carnegie Mellon University School of Computer Science. Advisor: David Garlan. Thesis topic: Saving users from the distractions of ubiquity: an architectural framework. External committee member. Fall 2002-2005.

Antti Aaltonen, University of Groningen, Finland. 2007.

Remi Emoney, University of Grenoble, France. 2009. Advisor: James Crowley.

Andrea Tartaro, Northwestern University, 2010. Advisor: Justine Cassell.

Saunya Williams, Georgia Tech, School of Electrical and Computer Engineering. 2011. Advisor: Nikil Jayant.

Joshua Hailpern, University of Illinois, Department of Computer Science, 2012. Advisor: Karrie Karahalios.

B6. Mentorship of research scientists and visiting scholars

Mikiya Tani, September 1996-August 1997. Visiting Scientist from NEC in Japan. Work on retrieval interfaces for Classroom 2000.

Masayasu Futakawa, August 1998-August 1999. Visiting Scientist from Hitachi, Ltd. in Japan. Working on context-aware computing.

Yoshihide Ishiguro, since October 1998-September 1999. Visiting Scientist from NEC in Japan. Working on content-based retrieval for Classroom 2000.

Maria da Graca Pimentel, October 1998-January 2000. Visiting Scientist from University of San Paolo at Sao Carlos, Brazil. Working in automated support for capture and access to live experiences in the Classroom 2000 project.

Renata Fortes, January 2000-January 2001. Visiting Scientist from University of San Paolo, Brazil. Working in automated support for capture and access to meetings. Collaboration has also led to a joint NSF/CNPq grant from July 2000 – June 2003.

Cory D. Kidd, May 2000-May 2001. Research Scientist in charge of managing Residential Laboratory.

Thomas O'Connell, May 2001-August 2003. Research Scientist in charge of managing Residential Laboratory.

Annie Jacobs, January 2001-September 2002. Research Scientist examining socio-legal implications of research in the Aware Home.

Lamar Gardere, June 2005-January 2006. Research programmer employed to develop CareLog FBA system for use in schools.

Hideyuki Nakanishi, 2005. Visiting faculty from Keio University. Work on wearable computing and language support.

Rosa Arriaga, 2006-2007. Research Scientist in developmental psychology. Work on technologies for developmentally delayed and caregivers. Currently Senior Research Scientist in School of Interactive Computing at Georgia Institute of Technology.

Tom Robertson, 2006-2009. Research Scientist working on sensing solutions on the powerline.

Rongheng Lin, 2008-2009. Visiting Ph.D. student from Chinese Academy. Work on data collection techniques for center-based special education.

Jong Choi, 2010-2011, Visiting Research Scientist from Korea. Worked jointly with Rosa Arriaga on collaboration technologies for chronic health and location-aware social networking.

Agata Rozga, 2010-2015, Research Scientist II. Work on technology to support analysis of children with autism. Currently Senior Research Scientist in School of Interactive Computing at Georgia Institute of Technology.

Kaya de Barbaro, 2015-present, Research Scientist II. Working on Computational Behavioral Science associated with the CampusLife project.

C. OTHER TEACHING ACTIVITIES

I co-authored the textbook, *Human-Computer Interaction*, published by Prentice-Hall in 1993. Second edition published in November 1997. Third edition published in 2004. This text is one of the most popular HCI textbooks in the world, and has currently been translated into German, Chinese, Italian and Greek. A complete companion Web site has been developed for the book at http://www.hcibook.com, including answers to all

exercises, overhead slides for every chapter, additional case studies, and project suggestions.

I have designed a course on Mobile and Ubiquitous Computing jointly with Thad Starner. The first instance of this course was given in the Spring Quarter of 1999 and it is now part of the regular undergraduate/graduate curriculum as CS 4605/7470. In Spring 2003, I taught this course jointly with Kishore Ramachandran, bringing in much more influence from the systems perspective. I have also been involved over the past year with efforts within the Ubiquitous and Pervasive Computing research communities to assemble and understand best practices for teaching these topics to undergraduates and graduates. This effort has resulted in the book *Foundations of Ubiquitous Computing*.

In Spring 2007, I designed a new course on the topic of technology and autism. This course was sponsored by the Cure Autism Now Foundation. The course has been offered twice, and is now merging into a more Atlanta-wide teaching and practicum experience.

In collaboration with Prof. Betsy DiSalvo in the School of Interactive Computing at Georgia Tech as part of a NSF-funded project, I have begun to redesign senior undergraduate computing classes to include more active learning materials through hands-on studio-style lectures. I have applied this model of learning to three different courses in the School of Interactive Computing CS 6452 (*Prototyping Interactive Systems*), CS 4605 (*Mobile and Ubiquitous Computing*) and CS 3750 (*User Interface Design*).

VI. SERVICE

A. PROFESSIONAL CONTRIBUTIONS

List all national and international contributions of service and positions of leadership in the profession.

Professoinal society membership

Member, IEEE Computer Society, 1992-present.
Member, ACM SIGSOFT, 1993-present.
Member, ACM SIGCHI, 1994-present.
Member, IFIP Working Group 2.7 (User Interface Engineering), 1990-1998, elected position.
Member, Phi Beta Kappa, 1985-present, elected position.

Conference committee activities

Chair, CHI'94 Basic Research Symposium, 1994
Panels review committee, CHI'94, 1994.
Program committee, IFIP 2.7 Working Conference on Engineering for Human-Computer Interaction, 1992, 1995.

External reviewer, Design, Specification and Verification of Interactive Systems—DSV-IS'95.
External reviewer CSEE'96.
Workshop organizer, CHI'96 workshop on formal methods for interactive systems.
Program committee, BCS Formal Aspects of Human–Computer Interaction, BCS-FAHCI, 1996.
Program committee, Design, Specification and Verification of Interactive Systems—DSV-IS'96.
SIGSOFT'96 Symposium on Foundations of Software Engineering (FSE-4), Tutorials and Panels Chair.
ICSE'97 International Conference on Software Engineering, Student Volunteers co-chair.
1st International Symposium for Wearable Computing, program committee, 1997.
CHI'97 Workshop on Ubiquitous Computing, co-organizer, 1997.
NSF Program on Experimental Systems, grant reviewer, 1997.
SIGGRAPH'98 paper reviewer.
UIST'98 and UIST'99 panels committee.
AAAI 1998 Spring Symposium on Intelligent Environments, program committee.
British HCI'98 conference, paper reviewer.
Foundations of Software Engineering, FSE'98, program committee.
ICSE'99, program committee and doctoral consortium committee.
DARPA/NSF/NIST Inter-Agency Workshop on Smart Environments. Atlanta, GA July 25-26, 1999. Local organizer.
CHI'2000, papers and panels reviewer.
Program chair for First International Workshop on Software Engineering Issues for Wearable and Pervasive Computing, held in conjunction with ICSE'2000 in Limerick, Ireland, June 2000.
Handheld and Ubiquitous Computing Symposium (HUC'2000) program committee, September 2000.
IEEE Workshop on Mobile Computing Systems and Applications (WMCSA 2000), program committee, December 2000.
Ubicomp 2001 (formerly HUC conference series), General Chair, September 2001.
CHI 2002 Associate Papers chair, Doctoral Consortium faculty panel, 2002.
IEEE Workshop on Perceptive User Interfaces (PUI 2001), program committee, November 2001
IEEE Workshop on Mobile Computing Systems and Applications (WMCSA 2002), program committee, 2002.
AAAI 2002 conference, program committee, 2002.
UIST 2003, Program Chair (joint with Blair MacIntyre)
Workshop on Mobile Computing Systems and Applications (WMCSA '03) program committee, 2003.
Pervasive Computing 2004 conference program committee.
MobiSys 2004 program committee
Ubicomp conference series, Chair and Founding member of Executive Steering Committee, October 2003-present.
Ubicomp 2005 conference program committee.

Pervasive Computing 2006 conference program committee.
Ubicomp 2006 conference program committee, Doctoral Consortium Chair, Open Session Chair.
CHI 2007 Associate Papers chair.
Ubicomp 2007 co-Program Chair.
Pervasive Computing 2007 program committee
Ubicomp 2008 program committee
Pervasive Computing 2008 Doctoral Colloquium co-Chair.
CHI 2009 Subcommittee program chair

Editorial positions

ACM SIGCHI Bulletin editor for Beyond the Desktop column on challenges of future computing technologies, 2001-present. Write a column for bi-monthly publication.
HCI Journal, Associate Editor 2001-present
IEEE Pervasive Computing Magazine, founding editorial board member and Associate Editor, 2001-2005.
Foundations and Trends in HCI, founding editor in chief, 2005-2009.

B. PUBLIC SERVICE

List all public service activities that are professionally related.

C. COMMUNITY SERVICE

List all community contributions that are professionally related.

Presentation on GVU Center for Parents Weekend, Fall 1996.
FOCUS program speaker, January 16, 1997.
Co-organizer of Georgia Tech College of Computing weekly Hack Fest, Fall 1996 to present.
Georgia Tech Battle of the Bands judge, October 1997.
Rhodes Foundation, Georgia State Selection Committee, 1998-2000
Autism Society of America, Greater Georgia Chapter. Elected board of directors May 2006.
Founding President, Atlanta Autism Consortium, 2008-present
Marcus Autism Center, Board of Trustees, 2013-present
Emory Autism Center, Board of Advisors, 2014-present
State of Georgia Autism Advisory Council, 2014-present

D. INSTITUTE CONTRIBUTIONS

List all committee involvement and leadership, and other activities within Georgia Tech. Internal contributions to other organizations for which you were previously employed, if

any, may be included. Do not list service on thesis or dissertation committees (should be listed under IV.B5).

College of Computing, Ph.D. Review Committee, 1994–5.
College of Computing, Ph.D. Admissions Committee, 1995–6.
College of Computing, Undergraduate advising Committee, 1996–7.
GVU Center, Associate Director for External Affairs, 1996–8.
Broadband Telecommunications Center, Applications Area co-leader, 1996–present.
Georgia Tech, Selection committee for Research Author Award, 1997.
College of Computing Faculty Hiring Committee, 1998.
Georgia Tech, Selection committee for Sigma Xi Junior Faculty Research award, March 1998.
College of Computing, Dean's Advisory Council, 1998-99.
Georgia Tech Student Computer Ownership Committee, January 1999-2002. Chair in 2001-2002 academic year.
College of Computing, Faculty recruiting committee, 1999-2003. Acted as co-chair in 2002 and vice-chair in 2003.
College of Computing HCI Area advisory, 2000-1 academic year.
Georgia Tech Prestigious Scholarships committee, September 2001-present.
Georgia Tech, Student Activities Committee, elected to 3-year term 2002-2005.
Executive RPT committee, Fall 2002-2005.
College of Computing, Human-Centered Computing Ph.D. program 2003. Member of sub-committee for HCC PhD in charge of defining core computing competency requirements for candidates.
College of Computing Interactive Computing Division (ICD), faculty recruiting committee.
Georgia Tech Honors Committee, August 2005-present.
Georgia Tech Provost special committee on Undergraduate Experience, 2007-08.
School of Interactive Computing Graduate Coordinator, 2014-2016
Georgia Tech Service Learning Associate Director Search Committee, 2016
Georgia Tech School of Computer Science Chair 5-year review committee (chair), 2016
Georgia Tech College of Computing Steering Committee for Strategic Planning (co-chair) 2016-2017.
Georgia Tech MS HCI Associate Director representative for School of Interactive Computing, 2016-present.
Georgia Tech College of Computing PhD Seminar coordinator, 2014-present.