

EDUCATION

- Ph.D. in Donald Bren Information and Computer Sciences** 2016
Donald Bren School of Information and Computer Sciences
University of California, Irvine
Advisor: Gillian R. Hayes
Dissertation: *Designing and Evaluating Novel Interactive Technologies Using Gas Sensors to Support Novice Cooks*
Committee: Gillian R. Hayes, Bill Tomlinson, Donald J. Patterson, Judith S. Olson
- M.S. in Donald Bren Information and Computer Sciences** 2011
Donald Bren School of Information and Computer Sciences
Concentration in Informatics
University of California, Irvine
Advisor: Gillian R. Hayes
Thesis: *Estrellita: A Tool to Support the Care of Premature Infants at Home*. UMI# 1494088
- B.S. in Informatics** 2009
Donald Bren School of Information and Computer Sciences
University of California, Irvine
Advisor: Gillian R. Hayes

CONFERENCE PUBLICATIONS

- [C1] Hirano, S., Brubaker, J., Patterson, D., and Hayes, G.R., (2013) Detecting food type and cooking state with gas sensors during dry cooking. In Proceedings of the 15th International Conference on Ubiquitous Computing (UbiComp '13). Zurich, Switzerland. September 8-12, 2013.
- [C2] Dombrowski, L., Brubaker, J., Hirano, S., Mazmanian, M., and Hayes, G.R., (2013). It takes a network to get dinner: Designing location-based systems to address local food needs. In Proceedings of the 15th International Conference on Ubiquitous Computing (UbiComp '13). Zurich, Switzerland. September 8-12, 2013. **[Best Paper Award]**
- [C3] Tang, K.P., Hirano, S., Cheng, K., and Hayes, G. (2012). Balancing Caregiver and Clinician Needs in a Mobile Health Informatics Tool for Preterm Infants. In Proceedings of Pervasive Health 2012, IEEE, 1-8.
- [C4] Escobedo, L., Nguyen, D.H., Boyd, L., Hirano, S.H., Rangel, A., Garcia, D., Tentori, M., & Hayes, G.R. (2012). MOSOCO: A Mobile Assistive Tool to Support Children with Autism Practicing Social Skills in Real-Life Situations. In Proceedings of CHI 2012. Austin, Texas (May 5-10, 2012). New York: ACM Press.

- [C5] Cramer, M., Hirano, S.H., Tentori, M., Yeganyan, M.T., and Hayes, G.R. Classroom-Based Assistive Technology: Collective Use of Interactive Visual Schedules by Students with Autism. In Proceedings of CHI 2011. 1-10.
- [C6] Liu, L.S., Hirano, S.H., Tentori, M, Cheng, K.G., George, S, Park, S, and Hayes, G.R. Improving Communication and Social Support for Caregivers of High-Risk Infants through Mobile Technologies. In Proceedings of CSCW 2011. 475-484. **[Best Paper Nomination]**
- [C7] Hirano, S.H., Yeganyan, M., Marcu, G., Nguyen, D.H., Boyd, L.A., and Hayes, G.R. vSked: Evaluation of a System to Support Classroom Activities for Children with Autism. In Proceedings of CHI 2010. 1633-1642
- [C8] Shih, P.C., Nguyen, D.H., Hirano, S.H., Redmiles, D., and Hayes, G.R. *GroupMind: Supporting Brainstorming through a Collaborative Mind-mapping Tool*. In Proceedings of ACM GROUP'09, May 10-13 2009, Sanibel Island, FL USA, 139-148.

JOURNAL PAPERS

- [J1] Hayes, G. R., Cheng, K. G., Hirano, S. H., Tang, K. P., Nagel, M. S., & Baker, D. E. (2014). Estrellita: A Mobile Capture and Access Tool for the Support of Preterm Infants and Their Caregivers. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 21(3), 19.
- [J2] Cheng, K.G., Hayes, G.R., Hirano, S.H., Nagel, M.S. & Baker, D. (In Press). Challenges of Integrating Patient-Centered Data in Clinical Workflow for Care of High-Risk Infants. *Personal and Ubiquitous Computing* (2014).
- [J3] Hirano, S., Hayes, G., and Truong, K. uSmell: exploring the potential for gas sensors to classify odors in ubicomp applications relative to airflow and distance. *Personal and Ubiquitous Computing* (March 2014), 14 pages.
- [J4] Gillian R. Hayes, Karen G. Cheng, Sen H. Hirano, Karen P. Tang, Marni S. Nagel, and Dianne E. Baker. 2014. Estrellita: A Mobile Capture and Access Tool for the Support of Preterm Infants and Their Caregivers. *ACM Trans. Comput.-Hum. Interact.* 21, 3, Article 19 (June 2014), 28 pages.
- [J5] Hayes, G.R, Hirano, S.H., Marcu, G., Monibi, M., Nguyen, D.H., and Yeganyan, Y.T. 2010. Interactive visual supports for children with autism. *Personal Ubiquitous Computing*. 14, 7 (October 2010), 663-680.

WORKSHOP PAPERS

- [W1] Sen H. Hirano, Gillian R. Hayes. Challenges and Opportunities of Using Gas Sensors for Everyday Activities. Proceedings of the Touch, Taste, & Smell User Interfaces: The Future of Multisensory HCI Workshop. May 2016, San Jose, California.
- [W2] Tang, K.P., Cheng, K.G., Hirano, S.H., Nagel, M., Baker, D., and Hayes, G.R. Addressing the Design Challenges for a Clinically-Informed Data Capture Tool Targeted for Caregivers of Premature Infants. In the Proceedings of the Workshop on Interactive Systems in Healthcare. 2011.

- [W3] Brubaker, J. R., Hirano, S. H., and Hayes, G. R. (2011). Lost in Translation: Three challenges for the collection and use of data in personal informatics. Presented at the CHI 2011 Workshop on Personal Informatics & HCI: Design, Theory, & Social Implications, Vancouver, BC, Canada.
- [W4] Hayes, G.R., Cheng, K., Hirano, S.H., Park, S., Gravem, D., Rich, J., and Cooper, D. FitBaby: Using Observations of Daily Living to Improve the Health of Preterm Infants and Their Caregivers. In the Proceedings of the Workshop on Interactive Systems in Healthcare. 2010. 73-76.

TECHNICAL REPORTS, POSTERS & DEMONSTRATIONS

- [R1] Hirano, S.H., Farrell, R.G., Danis, C.M., and Kellogg, W.A. 2013. WalkMinder: encouraging an active lifestyle using mobile phone interruptions. In CHI '13 Extended Abstracts on Human Factors in Computing Systems (CHI EA '13). ACM, New York, NY, USA, 1431-1436.
- [R2] Truong, K.N., Hirano, S., Hayes, G.R., Moffatt, K., 2-Thumb Gesture: The Design & Evaluation of a Non-Sequential Bi-manual Gesture Based Text Input for Touch Tablets. University of Toronto, Knowledge Media Design Institute. Technical Report KMD-13-2. April 2013
- [R3] Hirano, S. H., Truong, K. N., Hayes, G. R. (2012). uSmell: A Gas Sensor System to Classify Odors in Natural, Uncontrolled Environments. Poster presented at Ubicomp 12. Pittsburgh, PA. Sept 5-8, 2012.
- [R4] Hirano, S.H., Tang, K.P., Cheng, K.G., Hayes, G.R. (2012). The Estrellita System: A Health Informatics Tool to Support Caregivers of Preterm Infants. Proc Pervasive Health 2012, IEEE, 195-196.
- [R5] Tang, K.P., Cheng, K.G., Hirano, S.H., Nagel, M., Baker, D., and Hayes, G.R. (2011). Addressing the Design Challenges for a Clinically-Informed Data Capture Tool Targeted for Caregivers of Premature Infants. Workshop on Interactive Systems in Healthcare at American Medical Informatics Association's (AMIA) 2011 Annual Symposium. Washington, DC. (October 22-26, 2011).
- [R6] Hirano, S.H., Yeganyan, M.T., Marcu, G., Nguyen, D.H., Boyd, L., Hayes, G.R. vSked: Evaluation of a System to Support Classroom Activities for Children with Autism. CHI 2010 (Atlanta, GA, 2010). 1633-1642.
- [R7] Yeganyan, M., Hirano, S.H., Nguyen, D.H., and Hayes, G.R. Interactive and Collaborative Classroom Visual Schedules. Presented at the 8th Annual International Meeting for Autism Research (IMFAR 2009) Chicago, IL. May 2009. 250.

HONORS AND AWARDS

Roberta E. Lamb Fellowship	2015
Best Paper Award at Ubiquitous Computing	2013
National Science Foundation Graduate Research Fellowship	2011
UAL/UABT Scholarship	2009
UCI Undergraduate Research Opportunities Program Fellowship	2008-2009

ACADEMIC EXPERIENCE

UC Irvine, Department of Informatics Graduate Student Researcher Social and Technological Action Research (STAR) Group Advisor: Gillian R. Hayes	2009-2016
Microsoft Research – Redmond Research Intern Visualization and Interaction (VIBE) Research Group. Manager: Mary Czerwinski	Summer 2013
IBM T.J. Watson Research Center – Hawthorne Research Intern Social Computing Research Group Hosts: Robert G. Farrell and Catalina Danis Manager: Wendy A. Kellogg	Summer 2012
University of Toronto, Department of Computer Science Visiting Researcher Toronto UbiComp Research Group (ToURG) Advisor: Khai N. Truong	Fall 2011
UC Irvine, Department of Informatics Undergraduate Research Assistant Interactive Collaborative Technologies (ICT) Research Group Advisor: Gloria Mark	Spring 2008 – Summer 2009

TEACHING

ICS 32 / CSE 42: Programming with Software Libraries Lecturer/Teaching Associate	Summer 2015
ICS 31 / CSE 41: Introduction to Programming using Python Teaching Assistant	Fall 2012 & Winter 2013
Informatics 131: Introduction to Human-Computer Interaction Guest Lecturer	Spring 2013

PROFESSIONAL EXPERIENCE

University of California, Irvine

2009-2010

Web Developer
Office of Admissions and Relations with Students
Manager: Linda Snyder

7 Studios (Independent game development studio)

Summers 2007 & 2008

IT and Web Development Intern
IT Department
Manager: Earth Warren

OTHER RESEARCH ACTIVITIES

DOCTORAL CONSORTIUM:

Workshop of the Californias 2013
UbiComp 2013
iConference 2015

WORKSHOPS AND RETREATS:

Workshop on Interactive Systems in Healthcare, 2010. Atlanta, GA
Workshop of the Californias 2011, Ensenada, BC, MX
Health 2.0 2013, San Francisco, CA, USA
Workshop of the Californias 2013, USA
HCIC 2014, Watsonville, CA, USA
Workshop of the Californias 2014, USA
Collaborative Research Training Institute for Grad Students & Early Career Scholars 2014, Santa Cruz, CA, USA

MENTORING

Kathryn Benight, B.S., Electrical Engineering
Yuja Chang, B.S., Computer Science
Van Eric Custodio, M.S., Information and Computer Sciences
Sunakshi Gupta, M.S., Informatics
Jeffery Hong, B.S., Business Information Management
Nafiri Kusumakulika, B.S., Informatics
Andrea Lau, B.S., Informatics
Van Nguyen, B.S., Informatics
Simion Padurean, B.S., Computer Science
Luke Raus, B.S., Informatics
Melody Truong, B.S., Informatics
Ching-Wen Wendy Yang, B.S., Public Health Sciences
Tiffany Wong, B.S., Computer Science

LEADERSHIP AND SERVICE

Workshop for Uniting the Californias (WUC4)

Co-organizer

2014

Informatics Graduate Student Association

President

2012-2013

Informatics Graduate Student Association

Co-President

2011-2012

Undergraduate Curriculum and Policy

Committee member

2010-2011

REVIEWING:

CHI, Pervasive Health, PUC, Research in Developmental Disabilities, UBICOMP, Zoo Biology

ASSOCIATE CHAIR:

Pervasive Health, CHI WIP

STUDENT VOLUNTEERING:

UBICOMP 2013, Wireless Health 2014