Using Wearables to Augment Social Interactions and Teach Social Skills for Adults with Autism

Gillian R. Hayes, Associate Professor, Robert A. and Barbara L. Kleist Chair in Informatics; Director of Technology Research, The Center for Autism and Neurodevelopmental Disorders; 5072 Donald Bren Hall, UCIrvine, Irvine CA 92697-3440, gillianrh@ics.uci.edu

Collaborator within UCI: Donald J. Patterson, Associate Professor, Departments of Informatics and Computer Science

Collaborator outside UCI: Monica Tentori, CICESE, Ensenada Mexico

RESEARCH ABSTRACT AND GOALS

This work will establish the effectiveness of using the Glass platform to teach and provide real-time support for social skills for adults with autism and related disorders. Additionally, a multi-month deployment of a wearable system to support socialization will provide evidence of the underlying mechanism by which improvements are gained as well as an in-depth understanding of the design features that are effective for this population.

TECHNICAL DESCRIPTION

Individuals with autism and other neurodevelopmental disorders (ND) can require substantial assistance from caregivers to successfully work, socialize, and engage in other “adult” activities, thereby jeopardizing their autonomy [Stahmer 1992] and their opportunities to engage with other members of their communities [O’Leary & Dubey 1979]. Although many people with autism crave sociality, autism is characterized by communications and social skills impairments. Individuals with autism exhibit problems when initiating and terminating interactions, learning the interests of others, and joining social groups [Gonzalez-Lopa & Kamps 1997]. Interventions to support communication and socialization for individuals with autism and other related neurodevelopmental disorders often involve the use of visual supports (i.e., those things we see that enhance the communication process [Cohen & Sloan 2008]) that sometimes use words, images, or tangible objects to represent activities that will take place or have taken place) arranged in temporal order. Visual supports contribute to understanding of time, events, and places, and have been shown to reduce the symptoms associated with autism and ND [Cohen & Sloan 2008], and help individuals with autism to manage their schedules [Hirano et al. 2010] and to remediate their speech and language disabilities [Hayes et al. 2010]. A special type of visual support that provides step-by-step guidance for accomplishing daily tasks are “cookbooks,” like a chef uses a cookbook to create a meal [Hogdon 2002]. Cookbooks use visual aids including the exchange or display of a variety of images, drawings or photographs to represent tasks, needs, goals and rewards. Each step is represented with a visual image and text annotation (Figure 1). Caregivers often place these cookbooks throughout homes and schools. However, these tools are not everywhere they are needed, and where they are in place, they may be out of date or uninteresting to their users. Tools to support social skills are often less task-oriented but still involve visual supports as well as social stories (e.g., picture-based descriptions of social situations [Gray 2004]). Interactive technologies have the potential to provide a more appealing and exciting learning experience, provide new therapeutic advances, and enable clinicians and caregivers to monitor progress more closely. In particular, wearable interfaces can cut down on the stigma associated with assistive technologies while providing seamless interaction for users. Finally, by automatically recording surrounding events, the system makes available a wide range of data for diagnosis, monitoring, and self-reflection not currently in existence.

PRELIMINARY WORK: Over the last five years, we developed and evaluated MOSOCO [Escobedo et al. 2012], an Android-based assistive application that uses augmented reality and the visual supports of a validated curriculum, the Social Compass, to help children with ASD practice social skills in real-life situations. MOSOCO was evaluated in both Southern California at a public school and in Tijuana, Mexico at a private autism clinic. Use of these tools appears to provide positive educational and social outcomes for both individuals with ASD and those around them. Additionally, the use of an Android smartphone—rather than custom single use assistive technology device—reduces the stigma associated with use of assistive devices. They still however, require engagement with a screen and a handheld system. For a population trying hard to blend in, learn and practice social skills, and keep track of the steps of various interactions at once, use of a device can still be daunting. Additionally, interacting with a smartphone in the middle of a social interaction, job interview, or other conversation might distract the conversation partner. Thus, Google Glass devices represent a major leap forward and an opportunity to change assistive technologies in dramatic ways.

Based on our past ten years of fieldwork and design of MOSOCO and other smartphone based assistive technologies as well as participatory design sessions...
specifically focused on teaching social skills and language for Glass, we designed and developed a prototype system called WAES (Wearable Augmented & Engaged Socialization) that runs on Glass using support from the Glass Accessibility Program. WAES provides similar educational support for specific social behaviors as MOSOCO. However, the use of the Glass platform has enabled two additional key interventions. First, we detect and provide visual information about the volume of the wearer’s speech. Second, we analyze the incoming speech to evaluate and provide feedback on the speaker’s prosody (see Figure 2). The wearable approach provides a unique opportunity to provide real time support in addition to traditional educational information unavailable on any other platform. Our preliminary work positions us well for the research proposed here in terms of our ability to gain access to the people and settings of interest, our deep understanding of the domain and the potential for technologies within this domain, and our existing prototypes.

**Research Objectives:** There are two specific objectives to our proposed work. First, to understand the effectiveness of a wearables approach, we will deploy our prototype social skills system through a youth transition program. Second, because people with such varying cognitive, motor, and perceptual capabilities will use these technologies, we will understand through our research, what accessibility and design features in the Google Glass API are most useful and important and which should be made available that are not currently.

**Research Plan:** In the next year, we will use the designs developed in collaboration with clinicians, teachers, and families over the last several months to finalize our system development. We will ensure that the system is robust enough for an empirical study and that the design is in keeping with updated Glass design patterns and any recent developments to the Glass API. We will then evaluate the system for real world effectiveness through a deployment study with transition age youth (16 to 25) currently pursuing either post-secondary education or work. We will enroll twenty individuals with ASD in a deployment and allow them to use the technology for approximately three months, which should be sufficient time for novelty to wear off and sustained use to be measured. During this time, they will continue to receive social skills and transition related instruction as part of their training programs, with MOSOCO for Glass incorporated into the intervention curriculum. We will recruit individuals with ASD through existing collaborative relationships with six school districts in the LA and Orange County areas as well as through the PI’s role as Director of Technology Research at the Center for Autism and Neurodevelopmental Disorders of Southern California. The Center currently treats more than 2000 patients each year, enabling us to recruit from a large pool. We will conduct surveys and interviews at the beginning of the deployment to evaluate perceptions related to use of a wearable assistive technology for teaching, practicing, and supporting social skills, concerns about use of the platform, relationship of the technology to other assistive devices, and so on. We will also assess the level of social skills for each participant using the Contextual Assessment of Social Skills (CASS) [White et al. 2014]. We will repeat these measures at the end of the study. The CASS has been used to demonstrate measurable social skills differences from interventions with as few as five participants in the past. Thus, we expect statistically significant improvement in outcomes from the deployment study.

**Timeline:**

- Months 2 and 3: Recruitment of potential users.
- Months 3 to 9: Conduct deployment study. Collect empirical data regarding the effectiveness of MOSOCO for Glass in developing and supporting social skills.
- Months 10 to 12: Analyze empirical data from deployment. Prepare code for open source distribution. Write up results of work.

**EXPECTED OUTCOMES, RESULTS, AND BENEFIT TO THE RESEARCH COMMUNITY**

This work will provide multiple significant outcomes, both in terms of research results and the software systems themselves. First, we will use previously collected interview, observation, and participatory design session data to understand the ways in which Glass technologies might be meaningfully deployed as visual supports for individuals with autism. Specifically, in this work, we are focused on understanding how the Social Compass curriculum—first translated to an augmented reality Android platform and now to Glass—can meaningfully be used to not only teach social skills but also to support their use in real life situations. The ability to view visual supports naturally without having to reference a carried device will make great strides in the ability of people with disabilities to have natural interactions in both their social lives and as part of employment. The empirical data collected from our deployment will demonstrate effectiveness of this approach in real life settings as well as inform design requirements for wearable and assistive technologies to support individuals with autism more broadly. We will publish our design requirements and process as well as the results from the empirical study in relevant human-computer interaction, wearable and ubiquitous computing, and autism-specific venues such as ISWC, Ubicomp, CHI, and IMFAR (International Meeting for Autism Research). Additionally, the software developed will be made available online and released as open source to other researchers, enabling them to design and develop new related systems and to adopt the tools for other purposes.

**POTENTIAL GOOGLE SPONSORS:** Thad Starner, Luping Lin

**ADDITIONAL GOOGLE CONTACTS FAMILIAR WITH WORK:** Judy Chen, Sunny Consolvo

**BUDGET**

This work includes development as well as substantial evaluation work. A highly skilled MS student who has been conducting research in this area for two years and is supported by funds from the PI’s role through the Center for Autism will work on this project alongside the
We released the source code and documentation, including both technical resources and research instruments and data, for this work to graduate student supported on this budget. We already have contacts within the community, and the prototype in this work is based on a large existing set of fieldwork, some existing code (e.g., services to retrieve data from school servers, vision algorithms in support of augmented reality applications, and so on), and work recently completed with support from Google. Thus, work on this project can begin immediately upon funding. The remainder of the budget includes support for the evaluation study, including a request for 15 Glass units and 20 Android phones to be used in the deployment and testing of our final prototype support. We will leverage the 5 Glass devices we already have in this study.

One graduate student for one academic year, including tuition, fees, and benefits: $42,682
Participant compensation for enrolled individuals: 20 * $300 = $6,000
15 Glass devices and 20 Android phones (or in-kind hardware donation) $20,000
Data service for mobile phones 20 * $100/month * 3months = $6000

TOTAL: $74,682

REFERENCES

OUTCOMES FROM PREVIOUS GOOGLE SUPPORT
We are grateful for the support of two projects focused on the use of mobile tools to support high-risk infants and their families:
• 2010 “Supporting Healthy Outcomes for High-Risk Infants Using Mobile Computing and Personal Health Records”
• 2012 “Providing Privacy-Sensitive Social Support for Families of High-Risk Infants Using Mobile Computing”
Additionally, Google recently supported the preliminary work leading up to this proposal:
• 2014 Glass Accessibility Award: “Wearable Visual Supports for People with Autism Spectrum and other Neurodevelopmental Disorders”

Google funded work has resulted in journal and conference papers already with additional articles in preparation or under review.

We released the source code and documentation, including both technical resources and research instruments and data, for this work to the general public under creative commons license. If this proposal is funded, we will also release the source code from this work.
Gillian R. Hayes  
Department of Informatics, Donald Bren School of  
Information and Computer Sciences  
School of Education  
Department of Pediatrics, School of Medicine  
University of California, Irvine 92617-3440  
gillianrh@ics.uci.edu  
http://www.gillianhayes.com  
5072 Donald Bren Hall  
+1.949.824.1483  

EDUCATION  

**Georgia Institute of Technology, Atlanta, GA**  
Ph.D. in Computer Science  
*Documenting and Understanding Everyday Activities Through the Selective Archiving of Live Experiences.* Doctoral Thesis. UMI  
Order Number: AAI3271519  
2007  

**Vanderbilt University, Nashville, TN**  
B.S. in Computer Science and Mathematics, Cum Laude  
1999  

PROFESSIONAL EXPERIENCE  

**University of California, Irvine**  
Robert A. and Barbara L. Kleist Chair in Informatics  
Associate Professor, Department of Informatics, Donald Bren School of Information and Computer Sciences  
Associate Professor, School of Education  
Associate Professor, Department of Pediatrics, School of Medicine  
Vice Chair, Graduate Affairs, Department of Informatics  
Co-Director for the Intel Science and Technology Center for Social Computing (UCI Site)  
Faculty Director of Civic and Community Engagement, Division of Undergraduate Education, UCI  
Director of Technology Research, The Center for Autism and Neurodevelopmental Disorders  
Assistant Professor, Department of Informatics, Donald Bren School of Information and Computer Sciences  
Assistant Professor, School of Education  
March 2014-July 2017  
June 2010-June 2013  
July 2014-Present  

**Georgia Institute of Technology**  
Graduate Research Assistant, College of Computing  
August 2002-May 2007  

**Georgia Institute of Technology**  
Instructor, College of Computing  
May 2005-August 2005  

**Avanade, Inc.**  
Solutions Development Consultant  
February 2001-April 2002  

**Deloitte Consulting**  
Systems Analyst  
June 1999-February 2001  

HONORS AND AWARDS AS FACULTY  

- UCI School of ICS Dean’s Mid-Career Award for Research  
  2014  
- UCI School of ICS Dean's Award for Undergraduate Teaching  
  2013  
- UCI Celebration of Teaching Award for Pedagogical Innovation  
  2009  
- UCI Undergraduate Research Opportunities Program Mentor of the Month  
  June 2009
UCI Chancellor’s Award for Excellence in Undergraduate Research 2008
- Kavli Fellow, National Academy of Sciences 2007-2009

HONORS AND AWARDS AS GRADUATE STUDENT
- IBM PhD Fellowship 2006-2007
- Google Anita Borg Memorial Scholarship 2006-2007
- Georgia Tech Don Bratcher Human Relations Award 2005
- Organization for Autism Research Graduate Research Fellowship 2004-2005
- Georgia Tech President’s Fellowship 2002-2007
- John P. Imlay Dean’s Chair Endowment Fellowship 2002-2006

JOURNAL PUBLICATIONS (PEER-REVIEWED)


Computing, (15)8: 871-885.


BOOK


BOOK CHAPTERS


**PROCEEDINGS**


**CONFERENCE FULL PUBLICATIONS (PEER-REVIEWED)**


CONFERENCE SHORT PAPERS, POSTERS, AND PANELS (PEER-REVIEWED)


CONFERENCE AND WORKSHOP PAPERS WITHOUT PROCEEDINGS (LIGHTLY PEER-REVIEWED)


EDUCATIONAL MATERIALS


OTHER JOURNAL AND MAGAZINE PARTICIPATION


TECHNICAL REPORTS


INVITED PRESENTATIONS


[IP.13] Discovery and Innovation in Health IT. Sponsored by Office of the National Coordinator for Health Information Technology, the National Institute of Standards and Technology, the National Library of Medicine, the Agency for Healthcare Research and Quality, the National Science Foundation, the Computing Community Consortium, and American Medical Informatics Association. October 29-30, 2009.


MEDIA COVERAGE AND INTERVIEWS


“Autism apps: UCI contest put tech on task”. The Orange County Register. Reported by Lauren Steussy. April 27, 2014


“Study identifies patients most willing to use personal health records” Reported by Panela Lewis Dolan. November 12, 2012.


STUDENTS SUPERVISED
- PhD Student Primary Advisor [graduation date] (notes)
  David Nguyen [Spring 2011]
  Jed Brubaker (expected graduation Spring 2015)
  Lynn Dombrowski (co with Melissa Mazmanian, expected graduation Spring 2015)
  Laura Pina (UCSD, co with Bill Griswold)
  Sen Hirano
  Oliver Haimson
  Kathryn Ringland
  LouAnne Boyd
  Erick Custodio
  Mark Baldwin

- PhD Student Committees
  Sara Javanmardi (Advancement)
  Judy Chen (Advancement, PhD Thesis)
  Silvia Lindtner (Advancement)
  Lilly Irani (Advancement)
  Patrick Shih (Advancement)
  Kim Sullivan (Anthropology, Advancement)
  Heeyoung Jeong (Georgia Tech, PhD Thesis)
  Leslie Liu (University of Washington, PhD Thesis)
  Hwajung Hong (Georgia Tech, PhD Thesis)
  Heather Thomas (Anthropology, Advancement)

- Masters Student Primary Advisor
  Sen Hirano [Spring 2011]
  Leslie Liu [Spring 2011]
  Michael Yeganyan [Spring 2011]
  Meg Cramer [Spring 2012]
  Boaz Gurdin [Summer 2012]

- Masters Student Committees
  Kah Liu [Spring 2010]
  Jeff Lee [Summer 2014]

- Undergraduate Student Supervision
  UCI
  Paolo Arrastia (Honors)
  Osama Ahmad
  Alendra Beall
  Aurora Bedford (Honors, UROP)
  Alex Bretana (UROP, SURP)
  Baldwin Chang
  Yuja Chang (Mt. SAC Community College Program)
Chris Combs (SURP)
Erick Custodio (SURP, Honors)
Niraj Desai
David Dinh
Marie Gilbert (SURF-IT)
Jared Haren
Noelia Hernandez (MDP)
Sen Hirano (UROP)
Jeffrey Hong
Nithin Jilla
Yann Jouitteau
Lucas Kam
Sam Kaufman (UROP, SURP)
Justin Krakes
Nafiri Kusumakaulika
Andrea Lau
Chen-Yu Lee
Victor Lelas
Tom Lilleshoff (SURP)
Christina Liang
Leslie Liu (SURP, UROP)
Albert Luk
Alan Ly (Mt. SAC Community College Program)
Gabriela Marcu (Honors, SURP, UROP)
Patrice Mardo
Ian Marrion
Kevin Mori (Honors)
Anthony Nguyen
Katherine Nguyen (UROP)
Van Nguyen
Grace Pai
Nehal Patel
Aaron Pecson
Kathy Pham
Sandy Pham (SURF-IT)
Hugo Polanco (UROP)
Sohrob Raja
Luke Raus
Robert Rodriguez (UROP)
David Schramm
Zubin Singh
Brian Sone
Lee Taber
Katherine Tran
Joseph Trevino (Mt. SAC Community College Program)
Melody Truong
Rachel Rose Ulgado (SURF-IT, UROP)
Minhut Vo (UROP)
Ryan Wallace (SURP)
Aaron Waterhouse (UROP)
Rachel Weiner (UROP)
Mathew Wong
Tiffany Wong
Wendy Yang (SURP, UROP)
Michael Yeganyan (UROP)

Georgia Tech
Ellen Matthews
Jesslyn Beattie
Veronica Peshterianu
Laura Rouse
Priyanka Mihalanabis
Uzo Okafor
Anne Marie Piper

FUNDING

[F.26] Empirical evaluation of Zody, a social skills game for the iPad; donor gift
      $15,000
      5/2014

      $27,485
      2/2014

      $25,872
      11/2013-2/2014

[F.23] NSF Early Career Award Research Experience for Undergraduates: Mobile and Ubiquitous Computing Technologies for Young Children with Chronic Health Conditions (PI Hayes)
      $16,300
      5/2013-2/2014

[F.22] Microsoft SEIF: Empowering Interactive Surfaces with Body-Based Interactions to Provide Step-by-Step Guidance to Children with ASD (PI Hayes)
      $25,000
      5/2013

[F.21] Nokia University Cooperation Funding: Parent Coach: Context-Aware Applications for Neurodevelopmental Disorders (PI Hayes)
      $15,000
      1/2013

[F.20] Intel Science and Technology Center for Social Computing (PIs Dourish & Maurer, Co-PIs Boelstorf, Bowker, Hayes, Mazmanian, Patterson, Philip)
      $6,000,000
      ($2,745,000 UCI)
      6/2012-5/2015

[F.19] NSF ISE Pathways: Repurposing Obsolescence: Teaching DIY Science, Technology and Engineering Practices to Adolescents in Underserved Communities (PI Hertz, Co-PIs Hayes and Black)
      $250,000
      8/2012-8/2014

[F.18] UC Mexus: Enriching interactive visual supports with video modeling for children with autism (Co-PIs, Hayes
      $25,000


[F.15] Google Research Award: Supporting Healthy Outcomes for High-Risk Infants Using Mobile Computing and Personal Health Records (PI Hayes) $64,000 + $10,000 in kind (phones) 2011


[F.13] Donor Gift for Ubicomp Autism Research $20,000 2010


[F.7] Nokia Research Council: Mobile Phones to Encourage Sustainable Transportation Choices (PI Hayes) $9,860 + $15,725 in kind (phones) 2009


[F.5] NCWIT Seed Fund Award: Harnessing Hacking: Encouraging Inclusion through Creativity in IT Education for Latina Youth (Co-PIs, Hayes, Dourish, Richardson) $15,000 2009


[F.3] Nokia Research Equipment Grant, in kind donation of mobile phones and internet tablets (PI Hayes) $30,000 2008


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<th>Semester</th>
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<td>US10: Introduction to Civic and Community Engagement</td>
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<td>Winter 2013</td>
<td>Informatics 242/Computer Science 248B: Ubiquitous Computing and Interaction</td>
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<td>Informatics 162W: Organizational Analysis of Information Systems</td>
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<td>Informatics 295/Computer Science 295: Biomedical Informatics</td>
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<td>Informatics 209s &amp; 208s: Seminar in Informatics</td>
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<td>Fall 2010</td>
<td>University Studies 10: Introduction to Civic and Community Engagement</td>
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<td>Informatics 209s &amp; 208s: Seminar in Informatics</td>
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<td>Informatics 153: Computer Supported Cooperative Work</td>
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<td>Winter 2008</td>
<td>Informatics 295: Surveillance and Recording Technologies</td>
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<td>Informatics 190: Research Projects in Ubiquitous Computing</td>
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<tr>
<td>Summer 2005</td>
<td>CS4750: Introduction to Human-Computer Interaction</td>
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</tbody>
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**SERVICE**

*Professional*

Program Committees and Journal Editing:
- Editorial Board, ACM Transactions on Accessible Computing, 2014-present
- Health Forum Editor, interactions, 2012-present
- Associate Editor, Personal and Ubiquitous Computing, 2011-present
- Editorial Board, Autism News, 2010-present
- iConference, 2015
- AMIA 2011
- CHI 2010, 2011
- Guest Editor, Theme Issue of Personal and Ubiquitous Computing on Technology and Autism, 2011
- CSCW 2008
- Ubicomp 2008
- Pervasive 2008, 2009, 2010
- Ubicomp 2007, Late Breaking Results
- ACM GROUP 2007
- Interact 2007
- Mobiquitous 2007

Conference Committees:
- Steering Committee Member, Ubicomp, 2012-2017
- Panels Co-Chair, CHI 2013, CHI 2014
- Co-Chair, Broadening Participation in Ubiquitous and Wearable Computing, Ubicomp 2014
- Planning and Program Committee, Israeli-American Kavli Frontiers of Science, National Academies of Science, 2013
- Steering Committee Member, WISH 2012
- Program Co-Chair, Ubicomp 2012
- Health Community Co-Chair, CHI 2011
- Notes Co-Chair, GROUP 2010
- Academic Advisory Committee, Grace Hopper Celebration of Women in Computing, 2010
- Doctoral Colloquium Co-Chair, CSCW 2010
- Planning and Program Committee, Chinese-American Kavli Frontiers of Science, National Academies of Science, 2008, 2009
- Publications Chair, CSCW 2008
- Workshops Co-Chair, Pervasive 2007
- Student Volunteer Co-Chair, Ubicomp 2006

Ad Hoc Reviewing:
- International Meeting for Autism Research (2014)
- Action Research (2012)
- BMC Medical Informatics and Decision Making (2012, 2013)
- Journal of Biomedical Informatics (2011)
- Pervasive and Mobile Computing (2010, 2011)
- Portuguese Foundation for Science and Technology (Fundação para a Ciência e a Tecnologia, 2010, 2012)
- National Institutes of Health (2010)
- International Journal of Medical Informatics (2010)
- National Science Foundation (2009)
- CSCW: Computer Supported Cooperative Work (2010, 2014)
- ACM Transactions on Accessible Computing (2008)
- Interacting with Computers (2005)
• Pervasive (2007)

Other Organization and Volunteering:
• Doctoral Colloquium Faculty Panelist: Pervasive 2009, AMIA 2010
• Co-Chair: WISH 2010
• Autism and Technology Online Community Manager (2007-2013)
• Co-Chair: Designing for Children with Special Needs at IDC 2008
• Co-Chair: Ubicomp in the Office Workshop at Ubicomp 2007
• Student Volunteer: UIST 2003, Ubicomp 2003, CHI 2006

University
UC Irvine
• Chair, Graduate Policy Committee, School of ICS (2014-2015)
• Vice-Chair, Graduate Affairs, Department of Informatics (2014-2015)
• Co-Director, Intel Science and Technology Center for Social Computing, UCI (2014-2015)
• Faculty Director for Civic and Community Engagement (2014-2017)
• Minor in Civic and Community Engagement, core program faculty (2009-present)
• University of California Center for Collaborative Research for an Equitable California Governance Council (2012-2013)
• ICS Representative to the Division Assembly of the Academic Senate (2011-2013)
• ICS Undergraduate Policy Committee (2010-2011)
• Informatics Undergraduate Policy Committee (2010-2011)
• Committee for Civic Engagement (2007-2013)
• Informatics Graduate Student Association Faculty Advisor (2007-2013)
• Graduate Student Recruitment and Retention Committee, Chair (2008-2009)
• Women in Information and Computer Sciences, Faculty Co-Advisor (2008-2009)
• Graduate Student Admissions and Recruitment Committee (2007-2008)
• Arts, Computation, and Engineering, program faculty (2007–2011)
• Center for Biomedical Informatics Advisory Board (2007–2010)

Georgia Tech
• Women@CC (College of Computing Women’s Group) Advisory Board Co-Chair (2003-2004)
• Graduate Student Committee (2002-2004, 2005-2006)
• PhD Student Recruiting Committee (2002-2003)
• College of Computing Ergonomics Chair (2003-2004)
- College of Computing Faculty Recruiting Committee (2005-2006)
- Georgia Tech Institutional Review Board, student member (2005-2007)

MEMBERSHIPS

External
- Association for Computing Machinery (ACM)
- ACM Special Interest Group for Human Computer Interaction (SIGCHI)
- Institute of Electrical and Electronics Engineers, Inc. (IEEE)
- IEEE Computer Society
- American Anthropological Association (AAA)
- American Medical Informatics Association (AMIA)
- California Center for Collaborative Research for an Equitable California (CCREC)

UCI
- Intel Science and Technology Center for Social Computing (ISTC)
- Institute for Virtual Environments and Computer Games
- Center for Autism Research and Treatment (CART)
- Institute for Clinical and Translational Science (ICTS)
- Center for Biomedical Informatics (CBMI)
- Center for Research in Information Technology and Organizations (CRITO)
- Center for Ethnography
- California Institute for Telecommunications and Information Technology (Calit2)
- Center for Organizational Research (COR)
GENERAL DATA

Monica Elizabeth Tentori Espinosa
Km. 107 Carretera Tijuana-Ensenada
Pedregal Playitas, Ensenada, BC
+52 (646) 1750500 ext. 23417
mtentori@cicese.mx, mtentori@gmail.com
www.monicatentori.com

EDUCATION

Nov ’08  Ph.D. in Computer Science, Computer Science Department, Center of Scientific Research and Higher Education of Ensenada (CICESE)
Aug ’05  M.Sc. in Computer Science, Computer Science Department, CICESE
Feb ’02  B.Sc. in Computer Science, School of Computer Science, UABC

PROFESSIONAL EXPERIENCE

Mar’12 – Assistant Professor, Computer Science Department, CICESE
Feb ’08 – Mar ’12 Assistant Professor, School of Computer Science, UABC, Ensenada, México
Sep ’02– Aug ‘03 Systems Analyst, Graduate department, CICESE
Aug ’01 – Aug ’02 Undergraduate Systems analyst, Departamento de telemática, CICESE

Honors and Awards

2014  Best paper nominee: Ubicomp 2014
2013  Fellowship: Microsoft Research Fellowship
2011-’14 Award: National System of Researchers (S. N. I.) Level 1
2009-’11, Award: National System of Researchers (S. N. I.) Level 1
2010  Fellowship:: UCMexus Post-doctoral Fellowship
2006  Best paper award: PervasiveHealth 2006
2005-’08 Scholarship: CONACYT Graduate Fellowship
2003-’05 Scholarship: CONACYT Graduate Fellowship

RESEARCH VISITS

Sep ’13  [E3] Visiting scholar, UCLIC, London, UK
Jan ’10 – Dec ’11 [E2] Post-doctoral scholar, Department of Informatics, Donald Bren School of Information and Computer Science, UC Irvine, USA
January 2008 [E1]. Visiting graduate student, School of Business, University of Manchester


**PUBLICATIONS**

**Journal and Scientific Magazine Publications (Peer-reviewed)**

2014


2013


2012


2011


2010


2009


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1 # of citations according to Microsoft Academic Search or ACM Digital Library
2008


2007


2006


Book chapters (peer-reviewed)

2013 [Ch3]. Martínez-García, A. I., Tentori, M., Rodriguez, M. (accepted) "Aplicaciones Interactivas para Saud" Editorial AlfaOmega


Conference full publications (peer-reviewed)


ofUCAMI, Springer-Verlag, Guanacaste, Costa Rica, December 2-6, 2013


2012


2010


[C17]. Damian-Reyes, P., Favela, J., Tentori, M. y Contreras-Castillo, J. "Interactive Reliability: Managing Uncertainty in context-aware computing through user intervention" CEDI’10. Valencia Spain


2009

Pervasive Computing”, CLIHC (2009), Merida, Yucatan, November, 9-11

2008


[C12]. Gasca, E., Favela, J. y Tentori, M. (2008) “Persuasive Virtual Communities to Promote a Healthy Lifestyle among Patients with Chronic Diseases”, CRIWG’08, En Groupware: Design, Implementation, and Use. Lecture Notes in Computer Science 5411. R.O. Briggs et. al. (Eds.) Springer. 73-80pp. ISBN: 978-3-540-92830-0. ISSN 0302-9743, C:1


2007


2006


2005  


Conference workshop papers, demos and posters (lightly peer-reviewed)

2014  


2013  

2012  

[W17]. Ibarra, C. y Tentori, M. “Things that think” for the cognitive skills training of students with autism. A ser presentado el Taller de Evaluación, interfaces and education, de CHI, Autism, Texas, In extended abstracts CHI 2012

2011  


2010  


2009  


2007


2006


2005


2004


<table>
<thead>
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<th>Year</th>
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**INVITED TALKS**

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<tr>
<th>Year</th>
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<tbody>
<tr>
<td>2014</td>
<td>[T21]. Tentori, M. “Experiencias de investigación con impacto en la sociedad: Una plática con una mujer”, Mujeres en la Ciencia, Tijuana, Mexico, October 8</td>
</tr>
<tr>
<td>2014</td>
<td>[T20]. Tentori, M. &quot;Viviendo en un ambient ubicuo para autismo&quot;, UCOL, Colima, Mexico, September 25, 2014</td>
</tr>
<tr>
<td>2013</td>
<td>[T19]. Tentori, M. “Tecnología ubicas aplicadas a la educación especial”, Cetyx Universidad, Mexicali, Mexico, August 21, 2014</td>
</tr>
<tr>
<td>2011</td>
<td>[T16]. Tentori, M. “Cómputo consciente del comportamiento en salud”, UABC, Mexicalí, Baja California, Mexico, Octubre 18</td>
</tr>
<tr>
<td>2010</td>
<td>[T9]. Panel on “Experiences with Interdisciplinary research”, Workshop on Ambient Intelligence on Healthcare and Social Wellness (UACAmI 2011), December, 2011, Rivera Maya, Mexico</td>
</tr>
<tr>
<td>2010</td>
<td>[T8]. Tentori, M. “Computo ubicuo en apoyo a poblaciones vulnerables”. Semana de Ciencias, Ensenada, BC, September 2011</td>
</tr>
<tr>
<td>2010</td>
<td>[T7]. Tentori, M. “Ubiquitous computing for vulnerable populations: three ecosystem domains”. INTEL, Santa Clara, July 13,2010</td>
</tr>
<tr>
<td>2010</td>
<td>[T6]. Tentori, M. “Supporting the needs of vulnerable populations to make activity-aware computing matter”. Irvine, CA. Department of informatics Seminar, University of California, Irvine. April 16,2010</td>
</tr>
</tbody>
</table>
2009 [T5]. Mesa redonda de egresados de la Celebración de los XV años del Posgrado en Ciencias de la Computación, September 2009
[T4]. “Computo ubicuo en la vida diaria”, Sciences fair, UABC, May, 2009

2008 [T3]. Panel on “Experiencias de estudios de posgrado en Mexico y en el extranjero”, ENC 2008, Mexicali, Mexico

[T1]. Tentori, M. “Computo consciente de la actividad para el diseño de aplicaciones médicas ubicas”. UABC, Ensenada, B.C., Marzo, 2007, Ambient intelligent seminar

SUPERVISED GRADUATE STUDENTS (ALUMNI)

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Degree</th>
<th>Title</th>
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<tbody>
<tr>
<td>2014</td>
<td>Lizbeth Olivia Escobedo Bravo</td>
<td>Ph.D.</td>
<td>Tecnologías asistidas cognitivas ubicuas para apoyar los problemas de atención y manierismos de niños con autismo en terapias supervisadas y no supervisadas</td>
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<tr>
<td>2013</td>
<td>Raymundo García Cornejo</td>
<td>M.Sc.</td>
<td>Red social ambiental para fortalecer las redes sociales de adultos mayores</td>
</tr>
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<th>Year</th>
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<tr>
<td>2012</td>
<td>Franceli L. Cibrian</td>
<td>M.Sc.</td>
<td>Videojuegos en pisos interactivos para promover ejercicio colaborativo</td>
</tr>
<tr>
<td>2012</td>
<td>Miguel Ylizarritu</td>
<td>M.Sc.</td>
<td>Sensado participativo para movilidad urbana</td>
</tr>
<tr>
<td>2012</td>
<td>Rodrigo Zalapa</td>
<td>M.Sc.</td>
<td>Cómputo tangible en apoyo a las terapias sensoriales para niños con autismo</td>
</tr>
<tr>
<td>2011</td>
<td>Efrain Rincón</td>
<td>M.Sc.</td>
<td>Cómputo consciente del contexto para el análisis selectivo de llanto infantil</td>
</tr>
<tr>
<td>2011</td>
<td>Claudia Margarita Rangel López</td>
<td>M.Sc.</td>
<td>Cómputo consciente de la actividad en apoyo a la ejecución paso a paso de actividades de la vida diaria de niños con autismo: El caso del lavado de manos</td>
</tr>
<tr>
<td>2011</td>
<td>Catalina Ibarra Enríquez</td>
<td>M.Sc.</td>
<td>Objetos aumentados en apoyo a las terapias cognitivas de niños con autismo</td>
</tr>
<tr>
<td>2009</td>
<td>Raymundo García Cornejo</td>
<td>M.Sc.</td>
<td>Pantallas ambientales afectivas para mantener los lazos afectivos entre adultos mayores y sus familiares</td>
</tr>
<tr>
<td>2009</td>
<td>Raúl Gerardo Fernández Escobosa</td>
<td>M.Sc.</td>
<td>Cómputo ubicuo para la captura y acceso de video en apoyo al monitoreo de adultos mayores con problemas cognoscitivos</td>
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CURRENT STUDENTS

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Degree</th>
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<tbody>
<tr>
<td>2012</td>
<td>Karina Caro Corrales</td>
<td>Ph.D.</td>
<td>Juegos ubicuos basados en movimiento en apoyo a niños con problemas de motricidad</td>
</tr>
<tr>
<td>2014</td>
<td>Deysi Ortega</td>
<td>M.Sc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oscar Peña</td>
<td>M.Sc.</td>
<td></td>
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<tr>
<td></td>
<td>Alejandro Rangel</td>
<td>M.Sc.</td>
<td></td>
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</table>
[2013-to date] **Carlos Refugio**, DCC, CICESE

### Student committees

**Ph. D.**
- [MC5]. **Sandra Nava**, MyDCI, School of Computer Science, UABC
- [MC4]. **Juan Pablo Velázquez**, MyDCI, School of Computer Science, UABC
- [MC3]. **Jorge Álvarez**, Computer Science Department, CICESE, CICESE

**M. Sc.**
- [MC2]. **Viridiana Silva**, MyDCI, School of Computer Science, UABC
- [MC1]. **Ivan Ubaldo**, Computer Science Department, CICESE

### Undergraduate supervision

- **2010-2011**
  - [U6]. **Daniel García Rosas**
  - [U5]. **Alejandro Rangel**

- **2009**
  - [U4]. **Javier Alejandro González Ibarra**

- **2008**
  - [U3]. **Jaime Alberto Morillón Ritchie**
  - [U2]. **Javier Alejandro González Ibarra**
  - [U1]. **Saúl Maldonado Cruz**

### Funding

#### Principal investigator

<table>
<thead>
<tr>
<th>Year</th>
<th>Project Title</th>
<th>Description</th>
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<tr>
<td>2012</td>
<td>Atención oportuna al adulto mayor con deterioro cognitivo mediante aplicaciones de cómputo ubicuo en residencias geriátricas, 15va. Convocatoria Interna de Apoyo a Proyectos de Investigación</td>
<td>45000 MN</td>
<td></td>
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<tr>
<td>2011</td>
<td>Extensión proyecto PROMEP, (2010-2011)</td>
<td>312000 MN</td>
<td></td>
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<td></td>
<td>Cómputo ubicuo en apoyo a los cuidadores de adultos mayores con problemas cognoscitivos, Interna (2011-2012)</td>
<td>45000 MN</td>
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<tr>
<td>2010</td>
<td>&quot;Cómputo consciente de la actividad, Autismo y Alzheimer: Mejorando las aplicaciones de acceso y captura en apoyo al cuidado de personas con discapacidades intelectuales&quot;, PROMEP, (2009-2010)</td>
<td>392002 MN</td>
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#### Co-principal investigator

<table>
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<tr>
<th>Year</th>
<th>Project Title</th>
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<tr>
<td>2014</td>
<td>Juegos interactive en dispositivos móviles para facilitar las terapias cognitivas de niños con autismo, FINNOVA</td>
<td>4000 000 MN (~305 000 US)</td>
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**Co-investigador:** Lourdes Ibáñez (ClubLIA), Eduardo Ibáñez (BajaInnova)

<table>
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<th>Year</th>
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<tr>
<td>2014</td>
<td>Mobile and Tangible Computing for the remote monitoring of emotional states in palliative care caregivers, MSR-LACCIR</td>
<td>611 000 MN (~47 000 US)</td>
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**Co-investigador:** Valeria Herskovic (Pontificia Universidad Católica de Chile)

<table>
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<th>Year</th>
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<tr>
<td>2013</td>
<td>Enriching interactive visual supports with video modeling for children with autism, UC Mexus</td>
<td>387 372 MN (~25 000 US)</td>
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<tr>
<td>2013</td>
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2011  
[P3]. Red Contextual, RedTIC CONACYT  
Co-investigador: Alfredo Sanchez (UDLA), Cuauhtémoc Rivera (U. Mich.), Mario Moreno (U. Mixteca)  
70000 MN

[P2]. NSF International Research and Education: Planning Visits and Workshops, WORKSHOP: US-Mexico Workshop on Interactive and Ubiquitous Computing uniting the Californias (WIUC)  
Co-investigador: Gillian R. Hayes (UCI)  
219479 MN (~16883 US)

2010  
[P1]. "Evaluación Remota de Sistemas Móviles y Ubicuos para el Cuidado de la Salud" CUDI-CONACYT (2010-2011)  
Co-investigador: Jesús Favela (CICESE), Víctor M. González (ITAM), Eduardo Calvillo (USLP)  
173000 MN

TEACHING

Principal/Titular

Graduate level  
2012-2, 2013-2  
[C11]. Object-oriented analysis and design, Computer Science Department, CICESE

2010-2011  
2009-2, 2010-1, 2012-1, 2013-1  
[C10]. Research activities 2-4, MyDCI, School of Engineering, UABC

2009-1  
[C9]. Interaction design, School of Computer Science, UABC, and Computer Science Department, CICESE

Ungraduate level  
2011  
[C17]. Assisted cognition, School of Computer Science, UABC

2008-2011-1  
[C16]. Programming methodologies, School of Computer Science, UABC

2009, 2011-2  
[C15]. Mobile and Ubiquitous Computing, School of Computer Science, UABC

2008  
[C14]. Process re-engineering, School of Computer Science, UABC

[C13]. Research seminar, School of Computer Science, UABC

Teacher assistant

Graduate level  
August 2006  
[C12]. Object-oriented analysis and design, Computer Science Department, CICESE

August 2005  
[C11]. Análisis y diseño orientado a objetos, Computer Science Department, CICESE

SERVICE
### Steering committee

2012  
[SC1]. Ubihealth Network sponsored by the MarieCurie Program of the European Community

### Institutional Activities

<table>
<thead>
<tr>
<th>Year</th>
<th>Activity</th>
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<tbody>
<tr>
<td>2013</td>
<td>[CA5]. Member of the graduate committee of the Computer Science Department, CICESE</td>
</tr>
<tr>
<td>2012</td>
<td>[CA4]. Incentives program reviewer, UABC</td>
</tr>
<tr>
<td>2011</td>
<td>[CA3]. Head of Graduate Studies of the Computer Science Program, School of computer science, UABC</td>
</tr>
<tr>
<td>2010</td>
<td>[CA2]. Member of the faculty advisory board, School of computer science, UABC</td>
</tr>
<tr>
<td>2009</td>
<td>[CA1]. Member of the graduate committee board, School of Computer Science, UABC</td>
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### Journals, projects and conference management

**Editorial advisory board/Review Editor**

- [E1] Book on “Pervasive Health: State-of-the-Art and Beyond”
- [E2] Frontiers

**Program chair**

- [G6]. General chair “Workshop on Ubiquitous games and gamification for promoting behaviour change and wellbeing”, CHI Italy, Trento, Italy (2013)
- [G3]. Program chair of the doctoral colloquim, MexIHC (2010)

**General chair**


**Program committee**

- [PC12]. ENC (2013)
- [PC11]. CHI Chile (2013)
- [PC10]. CLIHC (2013)
- [PC9]. IWAAL (2013)
- [PC8]. PervasiveHealth (2012)
- [PC7]. UCAMI&WAAAL (2012)
- [PC6]. WishWell (2012)
- [PC4]. WiP CHI (2012-2013)
- [PC3]. UCAMI (2011, 2014)
- [PC2]. MexIHC (2010, 2014)
Funding reviewer
[R24]. Funding for innovative projects, CONACYT (2010, 2012)
[R23]. Basic Research, CONACYT (2010)
[R22]. MoPROSOFT (2009)

Journal reviewer
[R21]. Communications of ACM (2014)
[R21]. IEEE Journal of Biomedical and Health Informatics (2013)
[R20]. Methods of Information in Biomedicine (2013)
[R19]. Interacting with computers (2013)
[R19]. ACM Transactions on Accessible Computing (TACCESS) (2013)
[R18]. IEEE Journal of Biomedical and Health Informatics (2012)
[R17]. JAISE (2012)
[R16]. Personal and Ubiquitous Computing (2010)

Conference reviewer
[R7]. Interaction (2006)
[R6]. AMCIS (2007)
[R5]. HICSS (2006)
[R2]. UCAMI: Ubiquitous Computing and Ambient Intelligence (2005,2007)

Other organization and volunteering

Student volunteer

MEDIA COVERAGE AND INTERVIEWS

2013
[M18] Desarrolla CICESE tecnología para niños autistas Software especializado, videojuegos, sistemas especiales
  • Gaceta CICESE  
  • Ensenada.net http://www.ensenada.net/noticias/nota.php?id=29204t
[M17] Entrevista de Radio, Voces, 3 de Abril 2013, Ensenada, BC, México
2012


2011


[M7]. “Crean un Facebook para los abuelitos – A facebook for the elderly”. La-Ch.com, September 6, 2011.

[M6]. A mobile Social Compass in Autism, Vaerttilletelægger P1, Copenhagen Denmark, 8 de February de 2011, Entrevista por radio, por Marie Hougaard

2010

[M5]. Colaboración con clínica especializada en atención de niños con autism, Gaceta Universitaria, 27 de November de 2010, No. 260, UABC, por Inés García

[M4]. UCSD, UCI, UABC y CICESE estrechan lazos de colaboración en el área de cómputo ubico, Gaceta electronica, 14 de Octubre de 2010, No. 147, CICESE, por Diana Venegas

[M3]. Ambientes inteligentes en UABC, Entrevista por televisión, La Salud y Usted, por Dr. Zeferino Zamudio

2008


[M1]. La utilidad de la computación, 22 de October 2008, El vigia, Ensenada, B.C. por Ruth Dena
RESEARCH INTERESTS
Ubiquitous Computing, Collapse Informatics, Human Computer Interaction, Artificial Intelligence

EMPLOYMENT AND EDUCATION

UNIVERSITY OF CALIFORNIA, IRVINE
Associate Professor, Informatics / Computer Science Departments 2011/12 - present
Assistant Professor, Informatics Department 2005-2011

OPEN PRESENCE, INC.

UNIVERSITY OF WASHINGTON, SEATTLE 1999-2005
Ph.D., Computer Science & Engineering
Advisors: Professor Henry Kautz, Assistant Professor Dieter Fox

M.S., Computer Science

U.S. NAVY
Operations Officer, La Maddalena, Italy, USS SIMON LAKE (AS-33), 1997 - 1999
Strike Officer, Yokosuka, Japan, USS CURTIS WILBUR (DDG-54), 1995 - 1997

CORNELL UNIVERSITY  Ithaca, NY 1990-1995
M.Eng., Electrical Engineering
Thesis: “Automatic ECG Monitoring using Neural Networks”

B.S., Computer Science, with Distinction

HONORS & AWARDS

Best Paper Nominee: ICT for Sustainability Summer 2014
Research Award: Chancellor’s Award for Excellence in Fostering Undergraduate Research Spring 2014
Impact Award: Ten Year Impact Award (UBICOMP) Fall 2013
Teaching Award: UCI Celebration of Teaching Award Spring 2013
Best Paper Award: AI Journal Prominent Paper Award (5 year) Summer 2012
Best Paper Award: Computing Community Consortium Sustainability Award (CHI 2012) Spring 2012
Teaching Award: Dean’s Award for Undergraduate Teaching Spring 2008
Best Paper Award: Ninth IEEE International Symposium on Wearable Computers Fall 2005
Fellowship: UW CSE Educators Fellowship 2004-2005
Scholarship: Association of Naval Engineering Scholarship 1994-1995
Scholarship: Naval Reserve Officer Training Corps Scholarship (NROTC) 1990-1994
Award: Eagle Scout Award 1989
Donald J. Patterson

PUBLICATIONS

BOOK CHAPTERS

BCN-2  Sensor Data Streams
S. Voida, S. Patel, Donald J. Patterson in J.S. Olson, W. Kellogg (Eds.), Ways of Knowing in HCI, pp. 291-322, May 2014. (Role: Equal Author/ Researcher)

BCN-1  Pervasive Computing in the Home and Community
Donald J. Patterson, H. Kautz, D. Fox, L. Liao in Pervasive Computing in Healthcare, pp. 79-103, November 2006. (Role: Primary Author/ Primary Researcher)

CONFERENCE PROCEEDINGS

CPR-2  Proceedings of the 13th International Conference on Ubiquitous Computing
J. Landay, Y. Shi, Donald J. Patterson, Y. Rogers, X. Xie (Beijing, China) The 2011 ACM Conference on Ubiquitous Computing, 640 pages, ACM. (Role: Technical Program Committee Co-Chair)

CPR-1  Proceedings of the 6th International Conference on Pervasive Computing
J. Indulska, Donald J. Patterson, T. Rodden, M. Ott (Sydney, Australia) Lecture Notes in Computer Science 5013, 315 pages, Springer. (Role: Technical Program Committee Chair)

JOURNAL ARTICLES, PEER REVIEWED

JR-11  Collapse Informatics and Practice: Theory, Method, and Design

JR-10  Efficiently Scaling Up Crowdsourced Video Annotation: A Set of Best Practices for High Quality, Economical Video Labeling
C. Vondrick, Donald J. Patterson, D. Ramanan in International Journal of Computer Vision, 101(1): 184-204 (September 2013). (Role: 50% Advisor)

JR-9  Informing and Performing: Investigating How Mediated Sociality Becomes Visible
X. Ding, T. Erickson, W. Kellogg, Donald J. Patterson in Personal and Ubiquitous Computing, 16(8): 1095-1117, Dec 2012 (Role: Co-Author/Co-Advisor)

JR-8  Supporting the Transition from Hospital to Home for Premature Infants Using Integrated Mobile Computing and Sensor Support

JR-7  Assessment of Infant Movement with a Compact Wireless Accelerometer System

JR-6  Overcoming Blind Spots in Interaction Design: A Case Study in Designing for African AIDS Orphan Care Communities
Donald J. Patterson, S. Sim, T. Aiyelokun in Information Technologies and International Development, 5(4): 75-88, Dec 2009. (Role: Primary Author/ Primary Researcher)

JR-5  An Ecosystem For Learning and Using Sensor-Driven IM Messages
Donald J. Patterson, X. Ding, S. J. Kaufman, K. Liu, A. Zaldivar. IEEE Pervasive Computing Magazine, Jan-Mar 2009. (Role: Primary Author/Primary Researcher)

JR-4  Building Personal Maps from GPS Data
L. Liao, Donald J. Patterson, D. Fox, and H. Kautz in Annals of New York Academy of Sciences, 1093: 249-265, February 2007. (Special Journal Issue from Invited Conference Papers) (Role: 50% Author/ 50% Researcher)

JR-3  Learning and Inferring Transportation Routines
L. Liao, Donald J. Patterson, D. Fox, and H. Kautz in Artificial Intelligence Journal, 171: 311-331, January 2007. (Role: 50% Author/ 50% Researcher)
PUBLICATIONS (CONTINUED)

JR-2  Serum Phosphate Levels and Mortality Risk Among People with Chronic Kidney Disease
B. Kestenbaum, J. N. Sampson, K. D. Rudser, Donald J. Patterson, S. L. Seliger, B. Young, D. J. Sherrard, D. L. Andress in the Journal of the American Society of Nephrology, 16: 520-528, 2005. (Role: Contributing Author / 100% Data Mining/Analysis)

JR-1  Inferring Activities from Interactions with Objects
M. Philipose, K. P. Fishkin, M. Perkowitz, Donald J. Patterson, D. Hahnel, D. Fox, H. Kautz. 3(4): 50-57, Oct-Dec 2004 IEEE Pervasive Computing Magazine. (Role: Contributing Author / 50% Researcher)

CONFERENCE PAPERS, PEER REVIEWED

CR-24  ICT4S 2029: What will be the systems supporting sustainability in 15 years?
* BEST PAPER NOMINEE

CR-23  CHI 2039: Speculative Research Visions

CR-22  Detecting Cooking State with Gas Sensors During Dry Cooking

CR-21  Interchange: Bidding for Green Lights
N. Shantharam, T. Strang, Donald J. Patterson. Published in the Proceedings of 2013 IEEE Int’l Conference on Pervasive Computing and Communications Workshops (Percom 2013) (Role: Research Supervisor / 50% Researcher) (Acceptance Rate: 54%).

CR-20  Augmenting Gesture Recognition with Erlang-Cox Models To Identify Neurological Disorders in Premature Babies
M. Fan, D. Gravem, D. Cooper, Donald J. Patterson. Published in the proceedings of 2012 ACM Conference on Ubiquitous Computing (UBICOMP 2012) September 2012 (Role: Primary Author / 50% Researcher) (Acceptance Rate: 19.3%).

CR-19  Massively Distributed Authorship of Academic Papers

CR-18  Collapse informatics: Augmenting the Sustainability & ICT4D Discourse in HCI
* CCC SUSTAINABILITY AWARD & BEST PAPER NOMINEE

CR-17  Involuntary Gesture Recognition for Predicting Cerebral Palsy in High-Risk Infants
M. Singh, Donald J. Patterson. Published in the proceedings of International Symposium on Wearable Computing (ISWC 2010), October 2010. (Role: Primary Author / 50% Researcher) (Acceptance Rate: 21%).
PUBLICATIONS (CONTINUED)

CR-16 Efficiently Scaling Up Video Annotation with Crowdsourced Marketplaces
Donald J. Patterson, C. Vondrick, D. Ramanan. Published in the proceedings of European Conference on Computer Vision (ECCV 2010), September 2010. (Role: 50% Author/ 50% Advisor) (Acceptance Rate: 27%).

CR-15 Twitter, Sensors and UI: Robust Context Modeling for Interruption Management

CR-14 Getting Places: Collaborative Predictions from Status
M. Monibi, Donald J. Patterson. Published in the proceedings of the 2009 Ambient Intelligence Conference (AmI 2009), November, 2009. (Role: Author/ Advisor/ 25% Researcher) (Acceptance Rate: 30%).

CR-13 Constructing Topological Maps of Displays with 3-D Positioning Information
Donald J. Patterson. Published in the proceedings of the 2009 Ambient Intelligence Conference (AmI 2009), pp. 49–54, November, 2009. (Acceptance Rate: 30%).

CR-12 Status on Display: a Field Trial of Nomatic*Viz
X. Ding, Donald J. Patterson. Published in the proceedings of the 2009 European Conference on Computer Supported Cooperative Work (ECSCW 2009), pp. 303–322, September 7, 2009. (Role: Contributing Author/ Advisor/ 25% Researcher) (Acceptance Rate: 19%).

CR-11 Global Priors of Place and Activity Tags

CR-10 Online Everywhere: Evolving Mobile Instant Messaging Practices
Donald J. Patterson, C. Baker, X. Ding, S. Kaufman, K. Liu, A. Zaldivar. Published in the proceedings of the 10th International Conference on Ubiquitous Computing (UbiComp 2008), pp. 64-73, September 2008. (Role: Primary Author/ Primary Researcher) (Acceptance Rate: 18%).

CR-9 Interactive and Intelligent Visual Communication Systems
G. Hayes, Donald J. Patterson, M. Monibi, S. Kaufman. Published in the proceedings of the 7th International Conference on Interaction Design and Children (IDC 2008), June 11, 2008. (Role: 50% Advisor) (Acceptance Rate: Not Available).

CR-8 Involving Intelligent Assistants in Active Human Communication

CR-7 Nomatic: Location by, for, and of crowds
Donald J. Patterson, X. Ding, N. Noack. Published in the proceedings of the Second International Workshop on Location and Context-Awareness (LoCA 2006), pp. 186-203, May 2006. (Role: Primary Author/ 50% Researcher) (Acceptance Rate: 23%).

CR-6 Fine-Grained Activity Recognition by Aggregating Abstract Object Usage.
* BEST PAPER AWARD
Donald J. Patterson, D. Fox, H. Kautz, M. Philipose. Published in the proceedings of the Ninth IEEE International Symposium on Wearable Computers (ISWC 2005), pp. 44-51, October 2005. (Role: Primary Author/ Primary Researcher) (Acceptance Rate: 25%).

Donald J. Patterson, L. Liao, K. Gajos, M. Collier, N. Livic, K. Olson, S. Wang, D. Fox, H. Kautz. Published in the proceedings of the Sixth International Conference on Ubiquitous Computing (UbiComp 2004), pp. 433-450, September 2004. (Role: Primary Author/ Primary Researcher) (Acceptance Rate: 18%).

CR-4 Mining Models of Human Activities from the Web
M. Perkowitz, M. Philipose, Donald J. Patterson, K. Fishkin. Published in the proceedings of The Thirteenth International World Wide Web Conference (WWW 2004), pp. 573-582, May 2004. (Role: Contributing Author/ 50% Researcher) (Acceptance Rate: 14.6%).
PUBLICATIONS (CONTINUED)

CR-3 Contextual Computer Support for Human Activity

CR-2 Inferring High-Level Behavior from Low-Level Sensors
Donald J. Patterson, L. Liao, D. Fox, H. Kautz. Published in the proceedings of the Fifth International Conference on Ubiquitous Computing (UbiComp 2003), pp. 73-89, October 2003. (Role: Primary Author/ Primary Researcher) (Acceptance Rate: 14%).

CR-1 pre-mRNA Secondary Structure Prediction Aids Splice Site Prediction

PROFESSIONAL MAGAZINES/ONLINE ARTICLES

M-2 What if Sustainability Doesn’t Work Out?

M-1 Micro-presence: changing the 'status' quo

CONFERENCE WORKSHOP PAPERS, PEER REVIEWED

WR-9 Informatics at UC Irvine

WR-8 NomaticBubbles: Visualizing Communal Whereabouts
X. Ding, Donald J. Patterson. Published in the proceedings of CHI 2008 Student Research Competition, pp. 3765-3770, April 2008. (Role: Contributing Author/ Advisor/ 50% Researcher) (Acceptance Rate: Not Available).

WR-7 Building Personal Maps from GPS Data
L. Liao, Donald J. Patterson, D. Fox, and H. Kautz. Published in the proceedings of Modeling Others from Observations (MOO 2005), 7 pages, July 2005. (Role: Contributing Author/ Research Team Member) (Acceptance Rate: Not Available).


WR-5 Expressive, Tractable and Scalable Techniques for Modeling Activities of Daily Living
Donald J. Patterson, D. Fox, H. Kautz, M. Philipose. Published in the proceedings of the UbiHealth 2003: The 2nd International Workshop on Ubiquitous Computing for Pervasive Healthcare Applications, 4 pages, October 2003. (Role: Primary Author/ Primary Researcher) (Acceptance Rate: Not Available).

WR-4 Research on Statistical Relational Learning at the University of Washington
Donald J. Patterson

PUBLICATIONS (CONTINUED)

WR-3 Intelligent Ubiquitous Computing to Support Alzheimer’s Patients: Enabling the Cognitively Disabled
Donald J. Patterson, O. Etzioni, D. Fox, H. Kautz. Published in the proceedings of UbiCog ’02: First International Workshop on Ubiquitous Computing for Cognitive Aids, 2 pages, September 2002. (Role: Primary Author/ Primary Researcher) (Acceptance Rate: Not Available).

WR-2 The Activity Compass
Donald J. Patterson, O. Etzioni, D. Fox, H. Kautz. Published in the proceedings of UbiCog ’02: First International Workshop on Ubiquitous Computing for Cognitive Aids September 2002. (Role: Primary Author/ Primary Researcher) (Acceptance Rate: Not Available).

WR-1 Auto-Walksat: A Self-Tuning Implementation of Walksat
Donald J. Patterson, H. Kautz. Published in the proceedings of SAT2001: Workshop on Theory and Application of Satisfiability Testing, 8 pages, June 2001. (Role: Primary Author/ Primary Researcher) (Acceptance Rate: Not Available).

CONFERENCE WORKSHOP PAPERS, INVITED

WI-3 Supporting Individuals with Special Needs through Intelligent Visual Schedules
G. Hayes, Donald J. Patterson presented at the 2007 Workshop on Intelligent Systems for Assisted Cognition Oct. 12, University of Rochester. (Role: 50% Author) (Invited)

WI-2 Behavior Recognition in Assisted Cognition
L. Liao, Donald J. Patterson, D. Fox, H. Kautz. Published in the proceedings of the 2004 AAAI Workshop on Supervisory Control of Learning and Adaptive Systems, July 2004. (Role: Member of Research Team) (Invited)

WI-1 Bayesian Techniques for Location Estimation
D. Fox, J. Hightower, H. Kautz, L. Liao, Donald J. Patterson. Published in the proceedings of the 2003 Workshop on Location-Aware Computing (LoCA 2003). (Role: Member of Research Team) (Invited)

TECHNICAL REPORTS

TN-7 LUCI Lab Annual Report 2008-2009
LUCI Lab 2009-003. Donald J. Patterson.

TN-6 Measuring Display Interaction in the Presence of Context Information
LUCI Lab 2009-002. K. Liu, Donald J. Patterson (Role: Advisor).

TN-5 Status on Display: A Field Trial of Nomatic*Viz
LUCI Lab 2009-001. X. Ding, Donald J. Patterson (Role: Advisor).

TN-4 Understanding the Digital Divide in Southern Africa
LUCI Lab 2008-002. T. Aiyelokun, Donald J. Patterson (Role: Advisor).

TN-3 Sporadic State Estimation for General Activity Inference
Intel Research Seattle 04-003. Donald J. Patterson, D. Fox, H. Kautz, M. Philipose. (Role: Primary Author/ Primary Researcher).

TN-2 Modeling Details of the Activity Tracker
Intel Research Seattle 04-003A. Donald J. Patterson.

TN-1 The Probabilistic Activity Toolkit: Towards Enabling Activity-Aware Computer Interfaces
Intel Research Seattle 03-013. M. Philipose, K. Fishkin, M. Perkowitz, Donald J. Patterson, D. Hahnle (Role: Contributing Author/ Research Team Member) (Acceptance Rate: Not Available).

10/22/2014 6 of 15
PUBLICATIONS (CONTINUED)

SOFTWARE

**CODE-4**  cacophony  
v0.0.1 a machine learning layer for the Internet of Things  
9/1/2014

**CODE-3**  p2p4android  
v0.0.1 a peer-to-peer collapse-resistant communication system for Android  
9/1/2014

**CODE-2**  p2p4java  
v0.1.7 a peer-to-peer collapse-resistant communication system  
9/1/2014

**CODE-1**  luci-utilities  
v0.0.9 tools for LUCI lab software  
9/1/2014

**WEB-3**  RISCIT: The Center for Research in Sustainability, Collapse-Preparedness and Information Technology.  

**WEB-2**  Collapse-o-matic: The study, design, and development of sociotechnical systems in the abundant present for use in a future of scarcity.  

**WEB-1**  The Laboratory for Ubiquitous Computing and Interaction  
http://luci.ics.uci.edu/blog Donald J. Patterson.

ARTISTIC/MUSEUM EXHIBITS

**A-2**  “Bitcoins”, Gold To Gigabytes, The British Museum/UCI Dept. of Anthropology  
Academic, Local, Refereed Exhibit of money through the years.  
3-D printed physical research bitcoins were displayed

**A-1**  Optical Society of Southern California  
First Place, 2009 Competitive Exhibition of Art in Science.
**GRANTS & GIFTS**

| G-27 | NSF (PI): CyberSEES: Fostering Non-Expert Creation of Sustainable Polycultures through Crowdsourced Data Synthesis | $399,000 | 1/1/2015 |
| G-26 | UC ILTI (Co-PI): Global Disruption and IT | $110,000 | 3/27/2014 |
| G-24 | UCI COR (Co-PI): U/I Research in Context Queries | $1,000 | 5/1/2014 |
| G-22 | UCI UROP (PI): Shared Point Clouds and 3D Models for AR | $500 | 7/1/2013 |
| G-21 | UCI CORCL (CoPI): Permaculture for Climate Disruption | $15,000 | 6/1/2013 |
| G-20 | UCI MDP (PI): Ugrad Workshop in Design, Art & Technology | $1,182 | 7/1/2013 |
| G-19 | UCI UROP (PI): Depth Sensor Based Augmented Reality | $350 | 1/15/2013 |
| G-18 | CalIT2 MDP (PI): Bootstrapping a Hackerspace | $1,450 | 12/1/2013 |
| G-17 | UCI OTA Tech Dev Fund (Co-PI): Accelerometer Funding | $5,000/$50,000 | 8/31/2011 |
| G-16 | CalIT2 MDP (PI): Bootstrapping a Hackerspace | $1,450 | 12/1/2011 |
| G-15 | NIH R01 (Sub-PI): Accelerometer Funding | $5,000/$3,800,000 | 10/25/2010 |
| G-14 | UCI CORCLR (PI): Graduate Student Travel: UMAP 2010 | $1,850 | 6/19/2010 |
| G-13 | Amazon.com (PI): Information Retrieval Class Grant | $3,500 | 12/17/2009 |
| G-10 | Qualcomm (PI): Gift to support research workshop | $500 | 12/7/2007 |
| G-6 | MTS Sensors (PI): Gift to support mapping research | $250 | 2/12/2007 |
| G-5 | FDCI (PI): School grant for lab equipment | $2,700 | 2/7/2007 |
| G-4 | Nokia (PI): Equipment Gift (10 phones and 10 GPS’s) | $4,500 | 9/7/2006 |
| G-3 | UCI CORCLR (PI): User Study Funding Grant | $1,600 | 12/30/2006 |
| G-2 | UCI CORCLR (PI): Africa Field Work Funding Grant | $3,500 | 6/30/2006 |
| G-1 | ICS Smith Seed Fund (PI): Wi-Fi Research Grant | $5,000 | 11/7/2005 |
## PRESENTATIONS

### PEER-REVIEWED

<table>
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<tr>
<th>PR-12</th>
<th>Collaborative Geometry-Aware Augmented Reality</th>
<th>9/13/2014</th>
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<tr>
<td></td>
<td>2012 MobileHCI</td>
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<td>PR-11</td>
<td>When Camera meets Accelerometer: A Way for 3D Int. of Mobile Phone</td>
<td>5/21/2012</td>
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<td>2010 Pediatric Academic Societies' Annual Meeting</td>
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<td>PR-9</td>
<td>Design of Interactive Visual Scheduling Systems</td>
<td>5/17/2008</td>
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<td>IMFAR 2008: International Meeting for Autism Research</td>
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<td>PR-8</td>
<td>Nomatic: Context Aware Instant Messaging</td>
<td>9/16/2007</td>
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<td>UbiComp 2007: 9th Intl. Conf. on Ubiq. Computing</td>
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<td>21st National Conference on Undergraduate Research</td>
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<td>PR-6</td>
<td>Involving Intelligent Assistants in Active Human Communication</td>
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<td>AAAI Spring Symposium 2007: Interaction Challenges for Intelligent Assistants</td>
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<td>UbiComp 2006: 8th Intl. Conf. on Ubiq. Computing</td>
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<td>Nomatic*Aid: Parasitic Data Transport for Crisis Response</td>
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<td>Pervasive 2006: 4th Intl. Conf. on Pervasive Computing</td>
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<td>PR-2</td>
<td>Fast, Detailed Inference of Diverse Daily Human Activities</td>
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<td>UIST 2004: Demonstration</td>
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<td>PR-1</td>
<td>Fast, Detailed Inference of Diverse Daily Human Activities</td>
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<td>UbiComp 2004: Demonstration</td>
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### PRESENTATIONS (CONTINUED)

### INVITED - EXTERNAL

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<td>PI-23</td>
<td>Collapse Computing</td>
<td>11/12/2011</td>
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<td>2011 Workshop Uniting the Californias, UCMEXUS</td>
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<td>Distinguishing Trans. and Rotation for Real-time Phone Gesture Interaction</td>
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<td>2011 Workshop Uniting the Californias, UCMEXUS</td>
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<td>PI-21</td>
<td>Efficiently Scaling Up Video Annotation with Crowdsourced Marketplaces</td>
<td>5/6/2010</td>
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<td>California Institute of Technology, CalVision Workshop</td>
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<td>PI-20</td>
<td>Social Media for the Church: Opportunities and Challenges</td>
<td>2/26/2010</td>
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<td>Vanguard University, National Leadership of Assemblies of God</td>
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<td>UCLA CENS Technical Seminar Series</td>
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<td>PI-18</td>
<td>Ambient Intelligence is Not Sustainable</td>
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<td>University of Salzburg, Panel for Ambient Intelligence 2009</td>
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<td>PI-17</td>
<td>Intelligent Context for Situated Computing</td>
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<td>Ubiquity Research Strategy Forum, CALIT2 - UCSD</td>
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<td>PI-16</td>
<td>Status Quo: Micro-presence in an always online world</td>
<td>9/2/2009</td>
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<td>University of Washington, CSE, DesignUseBuild Seminar</td>
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<td>PI-15</td>
<td>Software Engineering for Ubiquitous Computing</td>
<td>8/2/2009</td>
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<td>Korean Research Institute for Human Settlements</td>
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<td>US Army Scientific Advisory Board</td>
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<td>Association for the Advancement of Artificial Intelligence Symposium Panel</td>
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PRESENTATIONS (CONTINUED)

      Microsoft Research Redmond
PI-6  Nomatic: Location {by, for, of} Crowds  2/1/2006
      SIGCHI: O.C. Local Chapter
      AAAI Fall Symposium on Caring Machines: AI in Eldercare
PI-3  Fine-grained Model-based Activity Recognition from RFIDs  12/17/2004
      NIPS 2004: Workshop on Activity Recognition and Discovery
      Intel Research Cambridge
PI-1  Future Technology for the Aging  3/16/2004
      Two presentations made to congressional staff and policy makers at Senate offices in
      Washington D.C. in conjunction with the CAST Conference

INVITED - INTERNAL

       Department of Epidemiology, UCI
PI-29  A Novel Depth Sensor Based Approach to Augmented Reality  5/18/2013
       Undergraduate Research Opportunities Program, UCI
PI-28  In The Cloud Computing Trenches: Obs., Reflections and Experiences  7/24/2012
       UCI Extension
PI-27  Status Quo: Micro-Presence in an Always Online World  7/24/2012
       UCI Extension
PI-26  In The Cloud Computing Trenches: Obs., Reflections and Experiences  2/7/2012
       UCI Extension
PI-24  Involuntary Gesture Rec. for Predicting Cerebral Palsy in High-Risk Infants  11/14/2011
       NIH Grant Workshop
       U.C. Humanities Research Institute
PI-11  Nomatic*IM  5/31/2008
       Undergraduate Research Symposium
PI-10  From Sensors to Semantics: Intelligent Context for Situated Computing  3/19/2008
       Center for Research on Information Technology and Organizations
PI-9  Storms in Africa: Exploring the potential for presence in Africa  10/5/2007
       UCI ICS Informatics Department Presentation
PI-7  Context-Aware Messaging: Nomatic*Gaim and Nomatic*Aid  8/21/2007
       CALIT2 SURF-IT Lecture
PI-5  Nomatic: Location {by, for, of} Crowds  1/20/2006
       UCI ICS Informatics Department Presentation
## TEACHING EXPERIENCE

### UNIVERSITY OF CALIFORNIA, IRVINE

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<td>INF 12/SOCSCI 11A: From Barter to Bitcoin</td>
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<td>Summer 2014</td>
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<td>ICS 163: Mobile and Ubiquitous Games</td>
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<td>UNISTU 3: How to Lie with Infographics</td>
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<td>INF 133: User Interaction Software</td>
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<td>INF 134: Project in User Interaction Software</td>
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<td>INF 241/CS 248a: Intro to Ubiquitous Computing and Interaction</td>
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<td>CS 221: Information Retrieval</td>
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<td>INF 132: Project in HCI and UI</td>
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<td>ICS 280: Special Topics in Ubiquitous Computing</td>
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### UNIVERSITY OF WASHINGTON

- **Guest Lecturer**: CSE 573: Artificial Intelligence.  
  Fall 2004
- **Research Lead**: Led a research team of six graduate students  
  Fall 2004
- **Teaching Assistant**: CSE 590HK: Technology for Alzheimer’s Disease.  
  Spring 2002 (10 graduate)
- **Teaching Assistant**: CSE 573: Artificial Intelligence.  
  Fall 2001 (25 graduate)
- **Head Teaching Assistant**: CSE 143: Computer Programming II.  
  Fall 2000
- **BOB BANDES AWARD**: Led 6 TA’s and a 35 undergraduate students
TEACHING EXPERIENCE (CONTINUED)

UNIVERSITY OF MARYLAND EXTENSION CAMPUS

**Instructor:** Math 100: Transitional Mathematics. **Winter 1998**
(15 undergraduate)

**ADVISING EXPERIENCE**

**GRADUATE STUDENTS, Ph.D. Chair**
Xianghua Ding
Ph.D. 4/30/2010

**GRADUATE STUDENTS, Ph.D. Committee**

<table>
<thead>
<tr>
<th>Name</th>
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<tr>
<td>John Brock</td>
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<tr>
<td>Bart Knijnenburg</td>
<td>in progress</td>
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<tr>
<td>Elizabeth Bales</td>
<td>Ph.D. 11/21/2013</td>
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<td>Xinru Page</td>
<td>Ph.D. 12/9/2013</td>
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<td>Sara Javanmardi</td>
<td>Ph.D. 8/26/2011</td>
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<td>Yasser Ganjisaffar</td>
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<td>Eric Kabiesh</td>
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<td>David Nguyen</td>
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<td>Eric Kabisch</td>
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<td>Daniel Massaguer</td>
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<td>Amanda Williams</td>
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<td>Johanna Brewer</td>
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**GRADUATE STUDENTS, Ph.D. Advancement Committee**

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<tr>
<td>Nithya Sambasivan</td>
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<td>Judy Chen</td>
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<tr>
<td>Alex Behm</td>
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<td>Eric Baumer</td>
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<td>Erik Linstead</td>
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Yongjie Zheng
advanced 10/15/2009

Pinaki Sinha
advanced 6/01/2007

Joshua O’Madadhain
advanced 9/12/2006

Nodari Sitchinava
advanced 12/9/2005

Srikanth K. Agaram

Bo Gong
GRADUATE STUDENTS, M.S. Chair
Jeff Lee M.S. 9/10/2014
Vrishti Gulati M.S. 9/2012
Nitin Shantharam M.S. 6/2012
Justin Tang M.S. 12/4/2009
Jahnavi Kondragunta M.S. 6/3/2009
Kah Liu M.S. 3/20/2009
Nicholas Noack M.S. 9/2008
Tosin Aiyelokun M.S. 9/2008

UNDERGRADUATE STUDENTS
Mona Man, Ray Park 2012-2014
Jason Parsons 2013-present
Phil Ma, Kevin Jonaitis, Kyle Boos, Joshua Ferguson 2013-present
Ryan Indrogo-Lam, Vahan Hartooni, Nick LaJeunesse 2012
Ryan Indrogo-Lam, Vatsal Shah, Muhammad Zaman, Vahan Hartooni, Nick LaJeunesse, Hiroe Ono, Garret Kim, Azia Foster 2011
Jared Haren, Sabel Braganza, Adrian Guzman Google Juicy Idea Team, 2010
Samuel J. Kaufman Grad. School University of Washington, Seattle, 2010
Andrew Zaldivar
Daniel Hwang IBM, 2006
Kah Liu FileNet, 2006
Nathaniel Marrocco
Alan Morton graduated, 2006

SERVICE

Conference Program Committee Chair
UbiComp 13th Intl. Conf. on Ubiquitous Computing 2011
Pervasive 6th Intl. Conf. on Pervasive Computing 2008

Conference Local Arrangements Chair
UbiComp 8th Intl. Conf. on Ubiqu. Computing 2006

Program Committee
UbiComp ACM Int'l Joint Cnf. on Pervasiv and Ubiquitous Computing 2014
CHI (AC) Human Factors in Computing Systems 2012
AAAI Spring Symposium Human Behavior Modeling 2009
Pervasive 5th Intl. Conf. on Pervasive Computing 2007
AAAI Spring Symposium Interaction Challenges for Intelligent Agents 2007
Pervasive 4th Intl. Conf. on Pervasive Computing 2006
LoCA 2nd Intl. Wkshp. on Location/Context-Awareness 2006

Government Agency Participation
NSF Extramural Funding Reviewer 2013
NSF Extramural Funding Reviewer 2012
DARPA Advancing Assisted Cognition for TBI (BAA Dev.) 2005
### SERVICE (CONTINUED)

**External Reviewer**

<table>
<thead>
<tr>
<th>Publication</th>
<th>Event Title</th>
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<tr>
<td>UIIST</td>
<td>27th ACM U/I Software and Technology Symposium</td>
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<td>CHI</td>
<td>Human Factors in Computing Systems</td>
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<td>UbiComp</td>
<td>14th Intl. Conf. on Ubiquitous Computing</td>
<td>2012</td>
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<td>ISWC</td>
<td>16th IEEE Intl. Symposium on Wearable Computers</td>
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<td>Pervasive</td>
<td>10th Intl. Conf. on Pervasive Computing</td>
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<td>Nokia</td>
<td>Mobile Data Challenge Reviewer</td>
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<tr>
<td>IJCAI</td>
<td>International Joint Conf. on Artificial Intelligence</td>
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<td>UbiComp</td>
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<td>Pervasive Health</td>
<td>Pervasive Computing Technologies for Healthcare</td>
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<td>IEEE</td>
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<td>PUC</td>
<td>Journal of Personal and Ubiquitous Computing</td>
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<td>UbiComp</td>
<td>11th Intl. Conf. on Ubiquitous Computing</td>
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<td>PMC</td>
<td>Journal of Pervasive and Mobile Computing</td>
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<td>IUI</td>
<td>International Conference on Intelligent User Interfaces</td>
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<td>IEEE</td>
<td>IEEE Transactions on Software Engineering</td>
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<td>CSCW</td>
<td>ACM Conference on Computer Supported Cooperative Work</td>
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<td>UIIST</td>
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<td>NSF</td>
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<td>CAL MICRO</td>
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<td>20th National Conf. on Artificial Intelligence</td>
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<td>IEEE</td>
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<td>Pervasive</td>
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<td>UbiComp</td>
<td>6th Intl. Conf. on Ubiquitous Computing</td>
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</tbody>
</table>
Donald J. Patterson

SERVICE (CONTINUED)

Lab Director
LUCI
Lab Ubiquitous Computing and Interaction 2008-present

University Committees
Vice-Chair
UCI Faculty Executive Committee 2014-2015
Chair
UCI Faculty Executive Committee 2013-2014
Member
UCI Faculty Executive Committee 2012-2013
Member
UCI Dir. of Communications Search Committee 2010
Member
UCI ICS Student, Access, Outreach & Retention 2008-2010
Member
UCI Informatics Chair Recommendation 2010
Member
UCI ICS Informatics Undergrad Recruiting 2006-2007
Member
UCI ICS Computing and Networking 2005-2006
Chair
UW CSE Graduate Student Recruiting Chair 2002-2003

Community Service
H.S. Outreach
Brea-Olinda Global Academy Microcamp 8/2012
H.S. Outreach
Brea-Olinda Global Academy Microcamp 8/2011
H.S. Outreach
Brea-Olinda Global Academy Microcamp 6/14 - 6/16/2010
H.S. Outreach
Brea-Olinda Global Academy Microcamp 6/22 - 6/25/2009
Demo
NSF China Delgation at UCI 7/2/2008
H.S. Outreach
Brea-Olinda Global Academy Microcamp 6/24 - 6/26/2008
Demo
Northrupp Grumman at UCI 6/10/2008
Demo
Irvine Company at UCI 5/4/2008
Demo
McPherson Magnet School at UCI 7/11/2007
Lecture
American Indian Summer Program at UCI 7/2/2007
Faculty Forum
ICS H.S. Scholars Day at UCI 3/24/2007
Career Day
McPherson Magnet School in Orange 1/17/2007
Faculty Forum
Arroyo Vista - Kappa Sigma House Program Fall 2005

PROFESSIONAL AFFILIATIONS

AAAI Member
Association for the Advancement of Artificial Intelligence
ACM Member
Association for Computing Machinery
IEEE Member
IEEE Computer Society
ISTC Social Member
Intel Science & Technology Center for Social Computing

INTELLECTUAL PROPERTY

Provisional Patent
Infant Movement Diagnostics approved 8/8/2014
App. Serial No. 61/377,207
Provisional Patent
System for Evaluating Infant Movement filed 10/1/2013
Using Gesture Recognition App. Serial No. 14/012,466
Provisional Patent
Updates for Retailers App. Serial No. 61/256,188
Patent
System and Methods for Reducing Disruptions to a Call Recipient filed 3/27/2009
App. Serial No. 61/163,827
Innovation News Daily
“After 30 Years, Computer Mouse Still Prevails”
April 28, 2011

Pervasive Computing
“The Latest in Wearable Computing Research”
January 1, 2011

TechNewsDaily
“In the Future, Computing is (Cunningly) Constant”
December 13, 2010

Government Technology
“Social Networks Complicate Relations Between Bosses and Employees”
July 7, 2009

Mashable
“Quub: The Status Update Reinvented”
April 28, 2009

TechNewsWorld
“Twitter and the Future of Discourse”
April 13, 2009

MIT Technology Review
“Wireless Detectors for Dementia”
February 2, 2009

O.C. Register
“1 videoconference. 37 people. 122.7 tons of C02 saved”
December 18, 2007

O.C. Register
“UCI researchers circled globe in name of science”
December 10, 2007

TJ Today
“Alumni Spotlight”
December 2005

MIT Technology Review
“Portable Pathfinder”
October 2004

The Futurist
“AI Helps Keep Seniors Mobile”
September/October 2004

IEEE Computer
“Inventing Wellness Systems for Aging in Place”
April 2004

Wired Online
“RFID Keeps Track of Seniors”
March 19, 2004

New Scientist Online
“RFID Chips Watch Grandma Brush Teeth”
March 17, 2004

USA Today
“Parents, Athletes Put GPS to Work”
December 4, 2002

Newsweek
“Gray Market for Gadgets”
September 23, 2002

Focus
“Digitaler Betreuer fur Alzheimer-Patienten”
September 2002

University Week
“Prompted to Live”
July 25, 2002

Minnesota Public Radio
“Artificial Intelligence and Alzheimer’s”
July 24, 2002

USA Today
“Surveillance casts an eye to the future”
July 23, 2002

Wired Online
“AI to Assist Alzheimer’s Patients”
June 24, 2002

MISCELLANEOUS

CITIZENSHIP
United States of America

INTERESTS
Micro-roast coffee, cross-country running, gourmet cooking, children’s literature, organic gardening.

CERTIFICATIONS
IRB, HIPAA, CPR, Water Safety.

1 After 4/28/2011, I stopped tracking all but the most important press mentions because social media enabled both trivial and important things to all be in “the press” and many major media outlets had affiliated blogs that were syndicating content that originated from our lab press releases.