

MARK S BALDWIN

Donald Bren School of Information and Computer Sciences
Department of Informatics
University of California, Irvine
5224 Donald Bren Hall
Irvine, CA 92697

baldwinm@uci.edu
<https://markbaldw.in>

PROFESSIONAL EXPERIENCE (ACADEMIC)

<i>University of California, Irvine, CA</i> Lecturer, Department of Informatics, Donald Bren School of Information and Computer Sciences	2020 - Present
<i>University of California, Irvine, CA</i> Graduate Research Assistant, Department of Informatics, Donald Bren School of Information and Computer Sciences	2014 - 2020
<i>Carnegie Mellon University, Pittsburgh, PA</i> Graduate Student Research Assistant	Summer 2013

PROFESSIONAL EXPERIENCE (INDUSTRY)

<i>Belkin, Playa Vista, CA</i> Research Intern, Eco Water Research Group	Summer 2015
<i>Extron Electronics, Anaheim, CA</i> Software Interaction Designer	2013 - 2014
<i>Baldwin Technology Consulting, Chicago, IL</i> Founder, President	2002-2012
<i>Bender, Browning, Dolby & Sanderson, Chicago, IL</i> Manager of Interactive Services	1998-2001
<i>Static Multimedia, Chicago, IL</i> Co-founder, Lead Software Engineer	1997-2000
<i>Cyberdyne Technologies, Chicago, IL</i> Web Developer	1997-1998

CONFERENCE PAPERS and JOURNAL ARTICLES

- [C.4] **Baldwin, M. S.**, Mankoff, J., Nardi, B., Hayes, G. (2020) "An Activity Centered Approach to Nonvisual Computer Interaction". *ACM Transactions on Computer-Human Interaction (TOCHI)*, 27(2), 1-27.
- [C.3] **Baldwin, M. S.**, Hirano, S. H., Mankoff, J., Hayes, G. R. (2019). "Design in the Public Square: Supporting Cooperative Assistive Technology Design Through Public Mixed-Ability Collaboration." *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW), 155.
- [C.2] **Baldwin, M. S.**, Mankoff, J., Hayes, G. R., Haimson, O., Hudson, S. (2017). "The Tangible Desktop:

A Multimodal Approach to Nonvisual Computing.” ACM Transactions on Accessible Computing (TACCESS), 10(3), 9.

[C.1] Ringland, K. E., Wolf, C. T., Boyd, L. E., **Baldwin, M. S.**, and Hayes, G. R. (2016). “Would you be mine: Appropriating minecraft as an assistive technology for youth with autism.” In Proceedings of the 18th International ACM SIGACCESS Conference on Computers and Accessibility (pp. 33-41). ACM. ***Best Paper.**

BOOK CHAPTERS

[B.1] **Baldwin, M.**, Khurana, R., McIsaac, D., Sun, Y., Tran, T., Zhang, X., Fogarty, J., Hayes, G.R., and Mankoff, J. (2019) Tangible Interfaces. In Harper, S., & Yesilada, Y. (Eds.) *Web Accessibility: A Foundation for Research*. Springer Science & Business Media.

POSTERS and WORKSHOPS

[P.4] **Mark Baldwin**, Sen Hirano, RJ DeRama, Jennifer Mankoff and Gillian Hayes (2019). “Blind Navigation on the Water through Shared Assistive Technology.” Workshop: Hacking Blind Navigation. ACM SIGCHI Conference on Human Factors in Computing Systems. Glasgow, Scotland.

[P.3] **Mark Baldwin**, LouAnne Boyd, Jennifer Mankoff and Gillian Hayes (2018). “Sensory Inclusive Design for Voice Interfaces.” Workshop: Accessible Voice Interfaces. ACM SIGCHI Conference on Computer Supported Cooperative Work. Jersey City, NJ.

[P.2] **Mark Baldwin**, Jennifer Mankoff, Gillian Hayes, Scott Hudson and Jeff Bigham (2016). “Reappropriating Desktop Computing Metaphors for Nonvisual Tactile Interaction.” Workshop: Touch, Taste, & Smell User Interfaces: The Future of Multisensory HCI. ACM SIGCHI Conference on Human Factors in Computing Systems. San Jose, CA

[P.1] Raymond Liaw, Ari Zilnik, **Mark Baldwin**, and Stephanie Butler. (2013, May 1). “Maater: Crowdsourcing to Improve Online Journalism”. Student Design Competition. ACM SIGCHI Conference on Human Factors in Computing Systems. Paris, France.

INVITED DOCTORAL CONSORTIA

[DC.2] **Mark Baldwin** (2018). “Activity Theory as a Framework for Nonvisual Computing.” HCIC Pajaro Dunes Resort, Watsonville, CA.

[DC.1] **Mark Baldwin** (2017). “Beyond Audition: Tangible Alternatives for Nonvisual Computer Interaction.” Doctoral Consortium at ACM International Joint Conference on Pervasive and Ubiquitous Computing. Maui, HI.

TECHNICAL SYSTEMS

[TS.5] **Mark Baldwin**, Sen Hirano, RJ DeRama. “CoOP: Cooperative Outrigger Paddling.” A system to support one person outrigger canoeing for blind and low vision paddlers. 2018.

[TS.4] **Mark Baldwin**. “KinD: Kinesthetic Interaction Device.” Software and physical hardware to support tangible activity-based computing. 2016.

[TS.3] **Mark Baldwin**, Leon Cao, Niraj Patel, Paul Dao, Kevin Truong. “Granular Jamming Refreshable Tactile Display.” A refreshable tactile display that utilizes a granular jammed substrate to support individual pin actuation. 2016.

[TS.2] **Mark Baldwin**. “The Tangible Desktop.” A suite of 3D printed, motorized computer peripherals

and supporting software that, place visual computing metaphors in the physical world. 2014.

[TS.1] **Mark Baldwin**, Meng Shi, Nikola Banovic, Jennifer Mankoff and Scott Hudson. “3D Printed Refreshable Braille Display.” A motor and gear driven twelve character braille display that converts digital text into braille. 2013.

MEDIA COVERAGE

[M.4] “Community leaders work to expand opportunities for inclusive paddling and ocean sports” Hawaiian Public Radio, Reported by Jayna Omaye, September 23, 2022.

[M.3] “Paddling toward a more accessible future” UCI News, Reported by Daisy Murguia, November 14, 2018.

[M.2] KUCI News, Interview by Jana Magbitang, October 30, 2018.

[M.1] “UCI student helps design canoe that allows the blind to paddle solo” LA Times, Reported by Charity Lindsey, October 23, 2018.

AWARDS

UCI Engage Graduate Student Great Partnership Award	2019
Ford Foundation Predoctoral Fellowship, Honorable Mention	2017
ASSETS Conference, Best Paper	2016
CHI Student Design Competition, 3rd Place Winner	2013

SERVICE

<i>Faculty Advisor</i> , Google Developers Student Club at UCI	2022-Present
<i>Board of Directors</i> , Makapo Aquatics Project	2020-Present
<i>Board of Directors</i> , The Gus and Buddy Fund	2018-Present
<i>Web Chair</i> , ACM International Joint Conference on Pervasive and Ubiquitous Computing	2016-2017
<i>Student Volunteer</i> , ACM Conference on Human Factors in Computing Systems	2017
<i>Social Chair</i> , Informatics Graduate Student Association	2016-2017
<i>Treasurer</i> , Informatics Graduate Student Association	2015-2016
<i>Teaching Assistant</i> , Empowertech, Los Angeles, CA	2015
<i>Teaching Assistant</i> , Blind Children’s Learning Center, Tustin, CA	2012
<i>Tutor</i> , Inner City Impact, Chicago, CA	1997

TEACHING EXPERIENCE

Primary Instructor

Full-time Lecturer, University of California, Irvine Fall 2020-Present

ICS 3 Internet and Society (S22)

ICS 32 Programming Software Libraries (F20, W21, SU21, F21, W22)

INF 133 User Interaction Software (F20, F21, F22, W23, F23)

INF 134 Project in Software User Interaction (W21, S21, W22, S23)

INF 151 Project Management (F22, F23)

INF 286 Innovations in HCI (SU21, SU22)
 INF 287 Research Capstone (S21, S2, S23)
 GDIM 127 Professional Studio/Practicum (W23)

PhD Candidate, University of California, Irvine

Fall 2017-Summer 2020

ICS 10 How Computers Work (F19)
 INF 286 Innovations in HCI (SU17, SU18, SU19, SU20)

Teaching Assistant

INF 280 Overview of Human-Computer Interaction and Design, University of California, Irvine	Summer 2018
INF 280 Overview of Human-Computer Interaction and Design, University of California, Irvine	Summer 2017
INF 280 Overview of Human-Computer Interaction and Design, University of California, Irvine	Summer 2016
INF 162w Organization Information Systems, University of California, Irvine	Winter 2016
INF 133 User Interaction Software, University of California, Irvine	Fall 2015

Guest Lecturer

<i>Design in the Public Square</i> Human Computer Interaction, CPSC 355, Chapman University	Spring 2019
<i>Accessibility in HCI</i> Human Computer Interaction, CPSC 355, Chapman University	Spring 2018
<i>Agile Practices in UX</i> Human Computer Interaction, CPSC 355, Chapman University	Spring 2017
<i>Assistive Technology Research</i> Special Topics in Computer Science: Assistive Technology, CPSE 370, Chapman University	Winter 2017
<i>Accessibility in HCI</i> INF 131 Human Computer Interaction, University of California, Irvine	Fall 2016
<i>Accessibility in HCI</i> ICS 4 Human Factors for the Web, University of California, Irvine	Winter 2016
<i>Physical Prototyping for Assistive Technology</i> INF 131 Human Computer Interaction, University of California, Irvine	Winter 2015

ADVISING

Capstone Supervision

Team Obsidian, MHCID Capstone, Informatics	2019
Tactile Display, Senior Design Capstone, EECS	2016 - 2017
Water Fixture Automation, Senior Design Capstone, ICS & EECS	2016

Master's Student Research Supervision

Stella Lau, M.S. Computer Science	2021 - 2023
Anthony Navarrette, M.S. Computer Science	2021 - 2022
Neeraj Kumar, M.S. Informatics	2014 - 2016

Undergraduate Student Research Supervision

Zhaoyang Lu, B.S. Informatics	2023 - Present
Kaiwen Shi, B.S. Electrical Engineering	2023 - Present

Elissa Yang, B.S. Electrical Engineering	2023 - Present
Antonia Piercey, B.S. Electrical Engineering	2022 - Present
Beril Gurkas, B.S. Computer Science	2021 - Present
Samuel Hansen, B.S. Computer Science	2021 - Present
Timothy Twigg, B.S. Computer Science	2021 - Present
Vito Christopher Nash, B.S. Computer Science	2021 - 2023
Jesus Ramirez, B.S. Computational Physics	2021 - 2022
Jeremy Chang, B.S. Computer Engineering	2021 - 2022
Congyu Luo, B.S. Computer Science Engineering	2021 - 2022
Jayden Le, B.S. Computer Science	2021 - 2022
Anthony Navarrette, B.S. Computer Science	2021
Angel Mendoza, B.S. Computer Science	2018 - 2019
Mark Jeremy Delarosa, B.S. Electrical Engineering	2017 - 2019
Alexander Arrieta, B.S. Software Engineering	2017 - 2018
Leon Cao, B.S. Computer Science and Engineering	2016 - 2017
Niraj Patel, B.S. Computer Science and Engineering	2016 - 2017
Paul Dao, B.S. Computer Science and Engineering	2016 - 2017
Kevin Truong, B.S. Computer Science and Engineering	2016 - 2017
Abhimanyu Tripathi, B.S. Informatics	2016
Sania Bishnoi, B.S. Informatics	2015 - 2016
Jasmine Nguyen, B.S. Informatics	2015 - 2016
Yuang Li, B.S. Informatics	2015
Ziyu Yi, B.S. Informatics	2015

EDUCATION

<i>Ph.D.</i> in Informatics University of California, Irvine <i>Designing Multimodal Alternatives for Nonvisual Computer Interaction.</i> UMI: 28094181	2014-2020
<i>Master of Human Computer Interaction</i> , Human Computer Interaction Institute Carnegie Mellon University, Pittsburgh, PA	August 2013
<i>Bachelor of Arts in Computing</i> , College of Computing and Digital Media DePaul University, Chicago, IL	July 2012

MEMBERSHIPS

IEEE, Student Member	2011 - Present
ACM, Student Member	2011 - Present
ACM SIGACCESS, Accessible Computing	2012 - Present