MARK S BALDWIN

Donald Bren School of Information and Computer Sciences   baldwinm@uci.edu
Department of Informatics   https://markbaldw.in
University of California, Irvine
5224 Donald Bren Hall
Irvine, CA 92697

PROFESSIONAL EXPERIENCE (ACADEMIC)

University of California, Irvine, CA   2020 - Present
Lecturer, Department of Informatics,
Donald Bren School of Information and Computer Sciences

University of California, Irvine, CA   2014 - 2020
Graduate Research Assistant, Department of Informatics,
Donald Bren School of Information and Computer Sciences

Carnegie Mellon University, Pittsburgh, PA   Summer 2013
Graduate Student Research Assistant

PROFESSIONAL EXPERIENCE (INDUSTRY)

Belkin, Playa Vista, CA   Summer 2015
Research Intern, Eco Water Research Group

Extron Electronics, Anaheim, CA   2013 - 2014
Software Interaction Designer

Baldwin Technology Consulting, Chicago, IL
Founder, President   2002-2012

Bender, Browning, Dolby & Sanderson, Chicago, IL
Manager of Interactive Services   1998-2001

Static Multimedia, Chicago, IL
Co-founder, Lead Software Engineer   1997-2000

Cyberdyne Technologies, Chicago, IL
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 (TAC-CESS), 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

Board of Directors, Makapo Aquatics Project	2020-Present
Board of Directors, The Gus and Buddy Fund	2018-Present
Web Chair, ACM International Joint Conference on Pervasive and Ubiquitous Computing	2016-2017
Student Volunteer, ACM Conference on Human Factors in Computing Systems	2017
Social Chair, Informatics Graduate Student Association	2016-2017
Treasurer, Informatics Graduate Student Association	2015-2016
Teaching Assistant, Empowertech, Los Angeles, CA	2015
Teaching Assistant, Blind Children's Learning Center, Tustin, CA	2012
Tutor, 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)

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

INF 151 Project Management (F22)

INF 286 Innovations in HCI (SU21, SU22)

INF 287 Research Capstone (S21, S22)

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

Design in the Public Square   Spring 2019
Human Computer Interaction, CPSC 355, Chapman University

Accessibility in HCI   Spring 2018
Human Computer Interaction, CPSC 355, Chapman University

Agile Practices in UX   Spring 2017
Human Computer Interaction, CPSC 355, Chapman University

Assistive Technology Research   Winter 2017
Special Topics in Computer Science: Assistive Technology, CPSE 370, Chapman University

Accessibility in HCI   Fall 2016
INF 131 Human Computer Interaction, University of California, Irvine

Accessibility in HCI   Winter 2016
ICS 4 Human Factors for the Web, University of California, Irvine

Physical Prototyping for Assistive Technology   Winter 2015
INF 131 Human Computer Interaction, University of California, Irvine

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. Informatics	2021 - Present
Anthony Navarrette, MSWE	2021 - Present
Neeraj Kumar, M.S. Informatics	2014 - 2016

Undergraduate Student Research Supervision

Antonia Piercey, B.S. Electrical Engineering	2022 - Present
Vito Christopher Nash, B.S. Computer Science	2021 - 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
Jesus Ramirez, B.S. Computational Physics	2021 - Present
Jeremy Chang, B.S. Computer Engineering	2021 - Present
Congyu Luo, B.S. Computer Science Engineering	2021 - Present
Jayden Le, B.S. Computer Science	2021 - Present
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

Ph.D. in Informatics	2014-2020
University of California, Irvine	
Designing Multimodal Alternatives for Nonvisual Computer Interaction. UMI: 28094181	

Master of Human Computer Interaction, Human Computer Interaction Institute	August 2013
Carnegie Mellon University, Pittsburgh, PA	

Bachelor of Arts in Computing, College of Computing and Digital Media	July 2012
DePaul University, Chicago, IL	

MEMBERSHIPS

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