

EDUCATION

Ph.D. in Human-Centered Computing, 2017 (Expected)

University of Maryland, Baltimore County
Advisor: Dr. Amy Hurst

M.S. in Human-Centered Computing, 2014

University of Maryland, Baltimore County

B.S. in Computer Science, 2011

Eastern Washington University

PUBLICATIONS

Note: Within my discipline, conference proceedings are perceived as having equal or higher impact than journal publications. Conference proceedings are highly selective, peer-reviewed, and archival publications. Paper acceptance rates are indicated in brackets [%] wherever they are publically available.

Peer-Reviewed Journal Articles

- [J1] Buehler, E., Comrie, N., Hofmann, M., McDonald, S., and Hurst, A. (2016). "Investigating the Implications of 3D Printing in Special Education." *ACM Transactions on Accessible Computing (TACCESS)*, 8, 3, Article 11 (March 2016).

Peer-Reviewed Conference Papers

- [C7] Easley, W., Buehler, E., Salib, G., and Hurst, A. (2017). "Fabricating Engagement: Benefits and Challenges of Using 3D Printing to Engage Underrepresented Students in STEM Learning." *Proceedings of the American Society of Engineering Education, Minorities in Engineering Division*. Columbus, OH, USA, (to appear).
- [C6] McDonald, S., Comrie, N., Buehler, E., Carter, C., Dubin, B., Gordes, K., McCombe-Waller, S., and Hurst, A. (2016). "Uncovering Challenges and Opportunities for 3D Printing Assistive Technology with Physical Therapists." *Proceedings of the 2016 ACM Conference on Computers and Accessibility (ASSETS)*. ACM, New York, NY, USA, 131-139. [25%] 🏆 **Best student paper award [1%]**. 🏆
- [C5] Buehler, E., Easley, W., Poole, A., and Hurst, A. (2016). "Accessibility Barriers to Online Education for Young Adults with Intellectual Disabilities." *Proceedings of the Web for All Conference, (W4A)*. ACM, New York, NY, USA, Article 27.

- [C4] [Buehler, E.](#), Easley, W., McDonald, S., Comrie, N., and Hurst, A. (2015). "Inclusion and Education: 3D Printing for Integrated Classrooms." *Proceedings of the 2015 ACM Conference on Computers and Accessibility (ASSETS)*. ACM, New York, NY, USA, 281-290. [23%]
- [C3] [Buehler, E.](#), Branham, S., Ali, A., Chang, J., Hofmann, M., Hurst, A., and Kane, S.K. (2015). "Sharing is Caring: Assistive Technology Designs on Thingiverse." *Proceedings of the 2015 ACM SIGCHI Conference on Human Factors in Computing Systems (CHI)*. ACM, New York, NY, USA, 525-534. [25%] 🏆 **Best paper award [1%]**. 🏆
- [C2] [Buehler, E.](#), Kane, S. K., and Hurst, A. (2014). "ABC and 3D: Opportunities and Obstacles to 3D Printing in Special Education Environments." *Proceedings of the 2014 ACM Conference on Computers and Accessibility (ASSETS)*. ACM, New York, NY, USA, 107-114. [26%]
- [C1] [Buehler, E.](#), Alayed, F., Epstein, S., and Komlodi, A. (2012). "It is magic!: A Global Perspective on What Technology Means to Youth." *Proceedings of the 2012 International Conference on Cultural Attitudes Towards Technology and Communication (CaTaC)*. Murdoch University, Australia, 100-104.

Peer-Reviewed Posters, Notes, and Demos

- [P5] Comrie, N., McDonald, S., Hurst, A., and [Buehler, E.](#) (2016). "Empowering Physical Therapists to Create 3D Printed Assistive Technology." *ACM Richard Tapia Celebration of Diversity in Computing*. Poster.
- [P4] [Buehler, E.](#), Grimes, S., Grimes, S., and Hurst, A. (2015). "Investigating 3D Printing Education with Youth Designers and Adult Educators." *Conference on Creativity and Fabrication in Education (FabLearn)*. Poster.
- [P3] Williams, M., [Buehler, E.](#), Hurst, A., and Kane, S.K. (2015). "What Not to Wearable: Using Participatory Workshops to Explore Wearable Device Form Factors for Blind Users." *Proceedings of the 2015 Web for All Conference (W4A)*. ACM, New York, NY, USA, Article 31. Communication. [35%]
- [P2] [Buehler, E.](#), Hofmann, M., and Hurst, A. (2014). "Coming to Grips: 3D Printing for Accessibility." *Proceedings of the 2014 ACM Conference on Computers and Accessibility (ASSETS)*. ACM, New York, NY, USA, 291-292. Demo. [26%]
- [P1] [Buehler, E.](#), Johnson, J., Price, K., Hopkins, T., and Taylor, C. (2010). "LEGO Robots can Stimulate Interest in Computer Science." *The 2010 Grace Hopper Celebration of Women in Computing (GHC)*. Poster.

Invited Editorials

- [E2] [Buehler, E.](#) (2016). "Fabrication Lends a Hand: Creating Custom Assistive Technology." *ACM XRDS*, 22, 3 (April 2016), 70-75.
- [E1] Kane, S., Hurst, A., [Buehler, E.](#), Carrington, P., and Williams, M. (2014). "Collaboratively Designing Assistive Technology." *ACM Interactions* 21, 2 (March 2014), 78-81.

Doctoral Consortium

- [D1] Buehler, E. (2015). "Supporting Inclusive and Collaborative Postsecondary Education For Adults With Intellectual Disabilities." Presented at the ACM *SIGACCESS Conference on Computers and Accessibility (ASSETS)*, printed in *SIGACCESS Accessible Computing*, Issue 114 (March 2016), 16-19.

Peer-Reviewed Workshops

- [W4] Ducharme, K., Buehler, E., and Blackorby, J. (2017). "Makerspaces: Moving Beyond Accessibility with UDL." *SXSWedu Conference and Festival*. Organizer.
- [W3] Buehler, E. (2016). "Leveraging 3D Printing to Support Education and Accessibility." *Coleman Institute Conference on Cognitive Disability and Technology*. Organizer.
- [W2] Buehler, E. (2016). "Emergent Technology Literacy and Access to Postsecondary Education." In *Exploring Social Justice, Design, and HCI at ACM SIGCHI Conference on Human Factors in Computing Systems (CHI)*. Participant.
- [W1] Rode, J., Brady, E., Buehler, E., Kane, S., Ladner, R., Ringland, K., and Mankoff, J. (2016). "SIG on the State of Accessibility at CHI." *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing (CHI EA)*. ACM, New York, NY, USA, 1100-1103. Organizer.

Invited Talks

- [I3] "Making and Learning: 3D Printing and Education", NSF Day: PAEMST Professional Development Session – NSF, July 2015.
- [I2] "3D Printing for Education and Accessibility", Maker Educators: 3D Night – Digital Harbor Foundation, March 2015.
- [I1] "Assistive Technology", Meet the Innovators – KID Museum, March, 2015.

FUNDING

2016	Google Anita Borg Memorial Scholarship: \$10,000
2016	Web for All Conference Addressing Information Barriers (W4A) <i>Student travel grant: \$500</i>
2015	Conference on Creativity and Fabrication in Education (FabLearn) <i>Student scholarship: \$250</i>
2014 – 2015	UMBC Graduate Student Association <i>Student travel grant: \$750</i>

2014	N.S.F. Grant, "EAGER: Exploring Appropriate 3D Printing Paradigms in Special Education" (Award #1451661) <i>PI: Dr. Amy Hurst (I provided a significant writing contribution): \$149,884</i>
2014	Alex. Brown Center for Entrepreneurship, UMBC, Entrepreneurship and Innovation Curriculum Grant <i>PI: Dr. Amy Hurst (I provided a significant writing contribution): \$5,000</i>
2013 - 2015	U.S. Department of Education, GAANN Fellowship <i>Annual stipend: \$30,000</i>
2009	The Computing Research Association's Committee on the Status of Women in Computing Research (CRA-W) Collaborative Research Experience for Undergraduates (CREU) at Eastern Washington University <i>PI: Dr. Carol Taylor (I provided a significant writing contribution); team stipend and travel award: \$14,600</i>
2009	Washington State University's Research Experience for Undergraduates (REU) Student researcher to Dr. Diane Cook; summer research stipend: \$4,000

HONORS & AWARDS

2016	ACM Conference on Computers and Accessibility; <i>Best Student Paper</i>
2016	ACM Conference on Human Factors in Computing Systems; <i>Excellent Reviewer</i>
2015	ACM Conference on Human Factors in Computing Systems; <i>Best Paper Award</i>
2011	Eastern Washington University; <i>Outstanding Student in Computer Science</i>

TEACHING EXPERIENCE

Lecturer

2015 - 2017	Special Topic: 3D Printing and Entrepreneurship, IS 298/498
2014	Introduction to Computer Programming, IS 147
2013	Fundamentals of Human-Computer Interaction, IS 303
2012	Computer Programming II, IS 247

Assistant

2013	Structured Systems Analysis and Design, IS 634
2012 - 2013	Learning About, with, and from Students with Intellectual Disabilities, FYS 102R
2011	Electronic Commerce, IS 667

MENTORING

Graduate Students

Abdullah Ali

M.S. in Human-Centered Computing, graduated May 2016. Currently pursuing a Ph.D. in Information Science at the University of Washington.

William Easley

Ph.D. in Human-Centered Computing, expected graduation May 2019.

Amy Poole

M.S. in Human-Centered Computing, expected graduation May 2018.

Morgan Scheuerman

M.S. in Human-Centered Computing, expected graduation May 2018.

Undergraduate Students

Nicholas Carter

B.S. in Mechanical Engineering, expected graduation May 2017.

Jeremy Chang

B.S. in Mechanical Engineering, graduated May 2016. Currently pursuing a Ph.D. in Aerospace Engineering at the University of Maryland, College Park.

Niara Comrie

B.S. in Mathematics, expected graduation May 2017.

Braxton Dubin

B.S. in Computer Science, expected graduation May 2017.

Caroline Galbraith

B.A. in Linguistics, graduated December 2013. Currently pursuing a M.S. in Human-Centered Computing at the University of Maryland, Baltimore County.

Michael Hardesty

B.S. in Information Systems, graduated in May 2015.

Megan Hofmann

B.E. in Computer Engineering & Science at Colorado State University, expected graduation May 2017.

Samantha McDonald

B.S. in Information Systems, graduated May 2016. Currently pursuing a Ph.D. in Informatics at the University of California, Irvine.

Gabrielle Salib

B.S. in Interdisciplinary Studies with a focus on Human-Centered Computing, expected graduation May 2017.

Shaniece Young

UMBC SUCCESS Certificate Program, May 2016.

ACADEMIC SERVICE

Committees

ACM SIGACCESS Conference on Computers and Accessibility (ASSETS)

2017 Accessibility Chair

ACM Conference on Human Factors in Computing Systems (CHI)

2018 Accessibility Co-Chair

2016 DIY Healthcare Workshop Committee

Conference Reviewing

2017 International Conference on Computer Supported Collaborative Learning

2016 ACM Symposium on Computer-Human Interaction in Play (CHI PLAY)

2016 ACM Conference on Computers and Accessibility (ASSETS)

2016 ACM International Conference on Intelligent User Interfaces (IUI)

2015 – 2017 ACM Conference on Human Factors in Computing Systems (CHI)

2015 ACM Conference on Tangible, Embedded, and Embodied Interaction (TEI)

2015 ACM Symposium on User Interface Software and Technology (UIST)

2012 International Conference on Cultural Attitudes Towards Technology and
Communication (CaTaC)

Journal Reviewing

2017 Journal of Geoscience Education

2016 ACM Transactions on Accessible Computing (TACCESS)

2016 – 2017 Interacting with Computers (IWC)

Student Volunteering

2017 ACM Conference on Human Factors in Computing Systems (CHI)

DEPARTMENTAL & UNIVERSITY VOLUNTEERING

Research Exhibits

2016 Americans with Disabilities Act Celebration at the National Federation of the Blind

2015 White House Accessibility Hackathon

2014 U.S. Science and Engineering Festival

2013 Innovation Expo: DIY in Maryland at Enoch Pratt Free Library

Internal Presentations

2016 "Positive Day: Designing a Positive Lab Environment". *Interactive Systems Research Center; Fika Lecture Series, UMBC*

2015 "Publication Writing: CHI Conference". *GOIS Graduate Writing Improvement Program, UMBC*

2013 "Designing for the Scariest Users: Kids". *Guest Lecture, IS403, UMBC*

MEDIA MENTIONS

- [M6] Markland, L. "3D Printing AT, for Entrepreneurs and Students Alike", *Where It's AT – Maryland Department of Disabilities AT Blog*, 2016. <http://www.equipmentlink.org/blog/?p=3334>.
- [M5] Dubrow, A. "Making the Maker Movement Accessible." NSF.gov, 2015. https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=135608.
- [M4] Nourbakhsh, I. "Make for Humanity." *Huffington Post*, 2015. http://www.huffingtonpost.com/illah-Nourbakhsh/make-for-humanity_b_7681562.html.
- [M3] NSF. "New Paths to Innovation and Learning Through DIY Technologies." NSF.gov, 2015. https://www.nsf.gov/news/news_summ.jsp?cntn_id=135397.
- [M2] Masterson, K. "Launch PAD." *UMBC Magazine*, Winter 2014. <http://umbcmagazine.wordpress.com/umbc-magazine-winter-2014/launch-pad/>.
- [M1] Eastman, E. "College Program for Disabled Students a Big SUCCESS." written by *Capital News Service*, published in *LA Times*, and *Chicago Tribune*, October 31, 2013. <http://cnsmaryland.org/2013/10/31/college-program-for-disabled-students-a-big-success/>.