

EDUCATION

Ph.D. in Human-Centered Computing, 2018

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 publicly 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)
PI: Dr. Amy Hurst (I provided a significant writing contribution): \$149,884
- 2014 Alex. Brown Center for Entrepreneurship, UMBC, Entrepreneurship and Innovation Curriculum Grant
PI: Dr. Amy Hurst (I provided a significant writing contribution): \$5,000
- 2013 - 2015 U.S. Department of Education, GAANN Fellowship
Annual stipend: \$30,000
- 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
PI: Dr. Carol Taylor (I provided a significant writing contribution); team stipend and travel award: \$14,600
- 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; *Best Student Paper*
- 2016 ACM Conference on Human Factors in Computing Systems; *Excellent Reviewer*
- 2015 ACM Conference on Human Factors in Computing Systems; *Best Paper Award*
- 2011 Eastern Washington University; *Outstanding Student in Computer Science*

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 2016. Completing a Ph.D. in Information Science at the University of Washington. Accepted an offer with Amazon AWS.

William Easley

Ph.D. in Human-Centered Computing, expected graduation 2020.

Amy Poole

M.S. in Human-Centered Computing, graduated 2018.

Morgan Scheuerman

M.S. in Human-Centered Computing, graduated 2018. Currently pursuing a Ph.D. in Information Science at the University of Colorado, Boulder.

Undergraduate Students

Nicholas Carter

B.S. in Mechanical Engineering, graduated 2017.

Jeremy Chang

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

Niara Comrie

B.S. in Mathematics, graduated 2017. Completed an M.S. in Management Information Systems at Ashford University.

Braxton Dubin

B.S. in Computer Science, graduated 2017. Accepted an offer at SONA Networks.

Caroline Galbraith

B.A. in Linguistics, graduated 2013. Completed an M.S. in Human-Centered Computing at the University of Maryland, Baltimore County. Accepted an offer at Northrop Grumman.

Michael Hardesty

B.S. in Information Systems, graduated in 2015. Completed an M.S. in Cybersecurity Technologies at University of Maryland, University College.

Megan Hofmann

B.E. in Computer Engineering & Science at Colorado State University, graduated 2016. Currently pursuing a Ph.D. in Human-Computer Interaction at Carnegie Mellon University.

Samantha McDonald

B.S. in Information Systems, graduated 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, graduated 2017. Currently pursuing a Ph.D. in Information Science at Drexel University.

Shaniece Young

UMBC SUCCESS Certificate Program, graduated 2016.

ACADEMIC SERVICE

Committees

ACM SIGACCESS Conference on Computers and Accessibility (ASSETS)

2020 Program Committee
 2018 Program Committee
 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 - 2018 ACM Conference on Computers and Accessibility (ASSETS)
 2016 ACM International Conference on Intelligent User Interfaces (IUI)
 2015 - 2020 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

2020 Assistive Technology
 2019 International Journal of Child-Computer Interaction
 2019 Journal of Enabling Technologies
 2017 Journal of Geoscience Education
 2016 ACM Transactions on Accessible Computing (TACCESS)
 2016 - 2017 Interacting with Computers (IWC)

Paper Stewardship & Mentoring

2020 ACM Conference on Computers and Accessibility (ASSETS)

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/>.