Samantha McDonald

I am a mixed methods researcher using ethnographic observations, interviews, and surveys to study civic communication technologies in the U.S. Congress. I am currently collaborating with three non-profits to perform office observations. Findings will be used to provide guidance and assistance to House and Senate offices by translating research insights into actionable strategies to improve constituent communication practices.

Education:

2016- In Progress — **Ph.D., Informatics**
Donald Bren School of Information and Computer Sciences
University of California, Irvine
Advisor: Bonnie Nardi
GPA: 3.9

Expected March 2019 — **M.S., Informatics**
Donald Bren School of Information and Computer Sciences
University of California, Irvine

2016 — **B.S., Information Systems**
Department of Information Systems
University of Maryland Baltimore County (UMBC)
Masters Classes in Human-Centered Computing
Research Advisor: Amy Hurst
GPA: 3.77 Magna Cum Laude

2014 — **Study Abroad,** Sophia University 上智大学 Tokyo, Japan

Experience:

Summer 2018 — **Congressional Management Foundation**, Independent Consultant
Washington D.C.
Advising the Congressional Management Foundation on matters related to constituent communication technology research. All recommendations are being used to inform and produce public reports funded by the Democracy Fund.

Summer 2017 — **Congressional Management Foundation**, Research Assistant
Washington D.C.
Performed data analysis for four Members of Congress deploying constituent satisfaction surveys to their district. Translated results into district satisfaction deliverables for each office. I also wrote two blog posts on the company page to discuss congressional use of technology.

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2016-2017 **Social Code Group**, Graduate Student Research Assistant
Informatics Department, UCI
Assisted senior Ph.D. students in their research on sustainable agriculture and polyculture systems. Helped manage an ACM conference workshop on sustainable food systems and develop a magazine article describing outcomes and actionable strategies discussed at the workshop.

2013-2016 **Prototyping and Design Lab**, Undergraduate Researcher
UMBC
Conducted three years of research on 3D printing for assistive technology use and education. I was in charge of a year-long project to educate 60 physical therapy students and their professors on the potential of 3D printing and rapid prototyping in their medical practice. I also developed tactile tools to educate a visually impaired student on website design.

Summer 2015 **Johns Hopkins University Applied Physics Lab (APL)**, Intern
Asymmetric Operations Unit
Laurel, MD
A SIRIUS IARPA funded project. I worked with APL as a 3rd party tester with three subject matter experts in the field of intelligence and cognitive biases. We used the experts to test the effectiveness of video games designed to mitigate cognitive biases for decision-making in the intelligence field.

News Article: Drummond, Katie. "U.S. Intelligence Will Train Super-Sleuths With Videogames." *Wired.com*. Conde Nast Digital, 22 Nov. 2011. Web.

Summer 2013 **Merkle Inc**., Intern
Columbia, MD
Captured SQL database requirements for a new billing application.

Research Grants:

2018-2021 **Graduate Research Fellowship Program (GRFP)**
National Science Foundation

Summer 2018 **Democracy Fund Summer Research Grant**
A grant provided by the Democracy Fund in collaboration with the Congressional Management Foundation and the Open Gov Foundation to conduct observations and surveys of Congress.

2017 **UCI Center for Organizational Research (COR) Research Grant**
Used to conduct interviews with congressional interns.

2016 **Collaborative Research Experiences For Undergraduates (CREU)**
Computing Research Association For Women (CRA-W). Used to prototype assistive technology and conduct educational research of physical therapy students at the University Of Maryland, School of Medicine.

Publications[1]:

[1] A Grand Challenge For HCI: Food + Sustainability. Juliet Norton, Ankita Raturi, Bonnie Nardi, Sebastian Prost, Samantha McDonald, Daniel Pargman, Oliver Bates, Maria Normark, Bill Tomlinson, Nico Herbig, and Lynn Dombrowski. 2017. Interactions 24, 6 (October 2017), 50-55.

[2] Political Realities of Digital Communication: The Limits of Value from Digital Messages to Members of the US Congress. Samantha McDonald, Bonnie Nardi, Bill Tomlinson. 2017. LIMITS 2017. ACM.

[3] Sustainable Food Systems for Preventative and Prescriptive Medicine. Samantha McDonald and Bill Tomlinson. Designing Sustainable Food Systems - CHI Workshop. 2017.

[4] Uncovering Challenges and Opportunities for 3D Printing Assistive Technology with Physical Therapists. Samantha McDonald, Niara Comrie, Erin Buehler, Nicholas Carter, Braxton Dubin, Karen Gordes, Sandy McCombe-Waller, Amy Hurst. ACM SIGACCESS Conference on Computers & Accessibility (ASSETS '16) * **Best Student Paper Award, First Author**

[5] 3D Printing: A Future Collapse-Compliant Means of Production. Samantha McDonald. 2016. LIMITS 2016. ACM.

[6] Inclusion and Education: 3D Printing For Integrated Classrooms. Erin Buehler, William Easley, Samantha McDonald, Niara Comrie, Amy Hurst. 2015. In Proceedings of the 17th international ACM SIGACCESS Conference on Computers & Accessibility (ASSETS '15). ACM, New York, NY, USA.

[7] Tactile aids for visually impaired graphical design education. Samantha McDonald, Joshua Dutterer, Ali Abdolrahmani, Shaun K. Kane, and Amy Hurst. 2014. In Proceedings of the 16th international ACM SIGACCESS conference on Computers & accessibility (ASSETS '14). ACM, New York, NY, USA, 275-276.

[8] Investigating the Implications of 3D Printing in Special Education. Erin Buehler, William Easley, Samantha McDonald, Niara Comrie, Amy Hurst. ACM TACCESS.

Media Post:

McDonald, Samantha. "Data, Storytelling, and Congress." *Congressional Management Foundation* Blog. 21, July. 2017.

McDonald, Samantha. "Stuck in Thomas Land No More." *Congressional Management Foundation* Blog. 13, July. 2017.

[1] ACM conference papers are considered prestigious high-impact publications in my field, much like journals in other fields.

Scholarships and Awards:

2016-2017	**Graduate Assistance in Areas of National Need (GAANN) Fellowship,** U.S. Department of Education Assist graduate students with excellent records who demonstrate financial need and plan to pursue the highest degree available in their course study at the institution in a field designated as an area of national need.
2012-2016	**Center for Women in Technology (CWIT) Scholarship Program,** University of Maryland, Baltimore County Competitive, four-year, academic scholarship dedicated to increasing the representation of women in the creation of technology in the engineering and information technology fields.
2016	**Best Student Paper Award,** ASSETS SIGACCESS Conference on Computers & Accessibility
2014,2016	**Best Research Poster,** UMBC Information Systems Department *Clinical Fabrication of 3D Printed Assistive Technology* 2014 Annual IS Student Research Poster Contest *Universal Gripper Using Granular Compression Technology* 2016 Annual IS Student Research Poster Contest
2015	**Vijay Jose Memorial Scholarship,** Provide scholarship support to a deserving UMBC undergraduate.
2012, 14, 15	**The Grace Hopper Celebration of Women in Computing,** Conference Travel Scholarship

Teaching Assistantship:

Fall 2017	**ICS5,** Global Disruption and Information Technology Online course, 200+ students with online discussion forums around technology and sustainability.
Winter 2018/ Spring 2018	**ICS 162W,** Organizational Information Systems 40+ students per class. Taught weekly discussion sections on technical writing and organizational theories.

Workshops:

2018	**Opaque Media: A Workshop,** Workshop Presenter
2018	**UCI Technology, Law, and Society Summer Institute,** Participant
2017	**Food CHI Designing Sustainable Food Systems Workshop,** Assistant Organizer
2016	**Sustainable CHI Workshop,** Participant

Technical Skills:

Experience: R, C++, Java, SQL, XHTML, CSS,
Some Experience: Javascript, PHP, PSP, Linux, Unix, 3D Modeling, Git, Arduino,
3D Printer Hardware Assembly, Computer Hardware Assembly

Research Skills:

Iterative Prototyping of Physical Devices
Ethnographic Observations
Interview Protocol Development and Implementation
Qualitative Coding and Discourse Analysis
Survey Design, Piloting, and Implementation
Survey Regression Analysis and Modeling

Volunteer:

2017-Current	**Court Appointed Special Advocate (CASA),** Orange County Advocate and mentor for a child in the foster care/dependency system.
2017-Current	**UCI Anteater Recreational Center,** Rock Wall Setter Create rock climbing routes quarterly at UCI's gym.
Summer 2017	**End of Term Archiving Hackathon (#DataRefuge)** UCI Organizer, Preservation of federal data to support environmental issues.
2017	**UCI Sustainable Polycultures Project** Volunteer gardener
2016-2017	**Vex Robotics Competitions** Volunteer robot inspector at semi-annual competitions.
2016-2017	**UCI Aquaponics Club** Volunteer Builder
2015-2017	**Mid-Atlantic Climbers Association** Trail Clean Up Volunteer
2013	**STEM Girl Power** Guest Panel Speaker
2013, 2014	**UMBC CWIT Bits and Bytes Retreat For High School Girls** Guest Speaker and Volunteer
2013	**Maryland Food Bank Donation Coordinator** CWIT Scholars Living Learning Community
2012, 2015	**UMBC Rock Climbing Club** Treasurer '15-16, Secretary '14-15