

Dr. Emma J. McDonnell

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<https://ej-mcdonnell.github.io/>

Department of Human Centered Design and Engineering, University of Washington, Seattle, 98122
630-340-0253

Education

UNIVERSITY OF WASHINGTON

SEATTLE, WA

Ph.D. in Human Centered Design and Engineering

2019 – 2024

Advised by Dr. Leah Findlater

Committee Members: Dr. Daniela Rosner, Dr. Jon Froehlich, Dr. Mark Harniss

Graduate Certificate in Disability Studies

2020-2024

Master of Science in Human Centered Design and Engineering

2019-2023

NORTHWESTERN UNIVERSITY

EVANSTON, IL

Bachelor of Science in Computer Science

2015 – 2019

Minor in Gender and Sexuality Studies

Research Interests

Human-Computer Interactions, Accessibility, Communication Technology, Design, Disability Studies, Health

Research Experience

UNIVERSITY OF WASHINGTON SCHOOL OF MEDICINE

2024-2026

National Library of Medicine Postdoctoral Fellow

- Supervised in the Department of Biomedical Informatics and Medical Education by Dr. Wanda Pratt
- Investigating how perspectives from accessible technology research and disability studies can inform health technologies and health care practices

UNIVERSITY OF WASHINGTON

2019 – 2024

Research Assistant

- Advised by Dr. Leah Findlater
- Investigating how to design captioning systems to support hearing and d/Deaf and hard of hearing people in creating more accessible group conversation practices

NORTHWESTERN UNIVERSITY

2017 – 2019

Research Assistant

- Advised by Dr. Anne Marie Piper and Dr. Bryan Pardo
- Developed a real-time conversation monitoring system for small-group conversations designed to indicate to hearing individuals when their conversation behaviors become inaccessible to hard of hearing people
- Created a small dataset of audio segments from podcasts, and used it to train a classifier to recognize audio as speech, non-speech noise, or silence to allow blind audio engineers to navigate an audio file faster

Publications

JOURNAL PAPERS

- [1] **Honorable Mention and Diversity and Inclusion Recognition: Emma J. McDonnell**, Ping Liu, Steven M. Goodman, Raja Kushalnagar, Jon E. Froehlich, and Leah Findlater. 2021. Social, Environmental, and Technical: Factors at Play in the Current Use and Future Design of Small-Group Captioning. In *PACM on Human Computer Interaction*, Vol. 5, CSCW2, Article 434, October 2021. ACM, New York, NY, USA. 25 pages. <https://doi.org/10.1145/3479578>
- [2] Steven M. Goodman, Ping Liu, Dhruv Jain, **Emma J. McDonnell**, Jon E. Froehlich, and Leah Findlater. 2021. Toward User-Driven Sound Recognizer Personalization With People Who Are d/Deaf or Hard of Hearing. *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.* 5, 2, Article 63 (June 2021), 23 pages. <https://doi.org/10.1145/3463501>

CONFERENCE PAPERS

- [1] *In Submission*. Gina Clepper, **Emma J. McDonnell**, Leah Findlater, and Nadya Peek. 2025. "What Would I Want to Make? Probably Everything": Practices and Speculations of Blind and Low Vision Tactile Graphics Creators. Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems. ACM, New York, NY, USA.
- [2] *In Submission*. Steven M. Goodman, **Emma J. McDonnell**, Jon E. Froehlich, and Leah Findlater. 2025. SPECTRA: Personalizable Sound Recognition for Deaf and Hard of Hearing Users through Interactive Machine Learning. Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems. ACM, New York, NY, USA.
- [3] **Emma J. McDonnell** and Leah Findlater. 2024. Envisioning Collective Communication Access: A Theoretically-Grounded Review of Captioning Literature from 2013 to 2023. Proceedings of the 26th Interactional ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '24). ACM, New York, New York, USA.
- [4] **Emma J. McDonnell**, Tessa Eagle, Pitch Sinlapantakul, Soo Hyun Moon, Jon E. Froehlich, Kate Ringland, and Leah Findlater. 2024. "Caption it in an Accessible Way That Is Also Enjoyable": Characterizing User-Driven Captioning Practices on TikTok. Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems. ACM, New York, NY, USA. <https://doi.org/10.1145/3613904.3642177>
- [5] **Emma J. McDonnell**, Soo Hyun Moon, Lucy Jiang, Steven M. Goodman, Raja Kushalnagar, Jon E. Froehlich, and Leah Findlater. 2023. "Easier or Harder, Depending on Who the Hearing Person Is": Codesigning Videoconferencing Tools for Small Groups with Mixed Hearing Status. Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems. ACM, New York, NY, USA. <https://doi.org/10.1145/3544548.3580809>
- [6] **Best Paper Nominee: Emma J. McDonnell***, Kelly Avery Mack*, Leah Findlater, and Heather D. Evans. 2022. Chronically Under-Addressed: Considerations for HCI Accessibility Practice with Chronically Ill People. In Proceedings of the 24th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '22). ACM, New York, NY, USA. <https://doi.org/10.1145/3517428.3544803>
- [7] **Honorable Mention:** Kelly Avery Mack, **Emma J. McDonnell**, Venkatesh Potluri, Maggie Xu, Jaily Zabala, Jeffrey P. Bigham, Jennifer Mankoff, and Cynthia L. Bennett. 2022. Anticipate and Adjust: Cultivating Access in Human-Centered Methods. In Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI '22). ACM, New York, NY, USA. <https://doi.org/10.1145/3491102.3501882>
- [8] Jazz Rui Xia Ang*, Ping Liu*, **Emma J. McDonnell**, and Sarah Coppola. 2022. "In this Online Environment, We're Limited": Exploring Inclusive Video Conferencing Design for Signers. Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems. ACM, New York, NY, USA. <https://doi.org/10.1145/3491102.3517488>
- [9] **Honorable Mention:** Kelly Avery Mack, **Emma J. McDonnell**, Dhruv Jain, Lucy Lu Wang, Jon E. Froehlich, and Leah Findlater. 2021. What Do We Mean by "Accessibility Research"? A Literature Survey of Accessibility Papers in CHI and ASSETS from 1994 to 2019. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA. DOI: <https://dl.acm.org/doi/10.1145/3411764.3445412>

EXTENDED ABSTRACTS, POSTERS, AND OTHER REVIEWED PUBLICATIONS

- [1] **Emma J. McDonnell***, Kelly Avery Mack*, Kathrin Gerling, Katta Spiel, Cynthia L. Bennett, Robin N. Brewer, Rua Mae Williams, Garreth W. Tigwell. 2023. Tackling the Lack of a Practical Guide in Disability-Centered Research. Accepted Workshop Proposal. In Proceedings of the 25th ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '23). ACM, New York, NY, USA.

- [2] Kelly Avery Mack, Natasha Sidik, Aashaka Desai, **Emma J. McDonnell**, Kunal Mehta, Christina Zhang, Jennifer Mankoff. 2023. Maintaining the Accessibility Ecosystem: A Multi-Stakeholder Analysis of Accessibility in Higher Education. Experience Report. In Proceedings of the 25th ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '23). ACM, New York, NY, USA.
- [3] *In Submission*. Momona Yamagami, Kelly Avery Mack, **Emma J. McDonnell**, Jerry Cao, Katherine M. Steele, Heather D. Evans, Leah Findlater, Jennifer Mankoff, on behalf of CREATE. 2022. Centering Accessibility for Person-Centered Care Planning for MCC. Response to Request for Information on Person-Centered Care Planning for Multiple Chronic Conditions (MCC). Federal Register.
- [4] **Emma J. McDonnell**. 2022. Understanding Social and Environmental Factors to Enable Collective Access Approaches to the Design of Captioning Technology. Doctoral Consortium. In Proceedings of the 24th ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '22). ACM, New York, NY, USA.
<https://doi.org/10.1145/3517428.3550417>
- [5] Lucy Lu Wang, Kelly Avery Mack, **Emma J. McDonnell**, Dhruv Jain, Leah Findlater, and Jon E. Froehlich. 2021. A bibliometric analysis of citation diversity in accessibility and HCI research. In CHI Conference on Human Factors in Computing Systems Extended Abstracts (CHI '21 Extended Abstracts), May 8–13, 2021, Yokohama, Japan. ACM, New York, NY, USA, 11 pages. <https://doi.org/10.1145/3411763.3451618>

ACCEPTED WORKSHOP PAPERS

- [1] **Emma J. McDonnell**. 2022. Time to Think About Time. For the workshop "Dreaming Disability Justice in HCI," *CHI 2022*, New Orleans, LA.
- [2] **Emma J. McDonnell**, Leah Findlater, Audrey Desjardins. 2020. [Bridging Accessibility and Disability Studies Research to Speculate Beyond Ability Norms](#). For the workshop "Nothing About Us Without Us: Investigating the Role of Critical Disability Studies in HCI," *CHI 2020*, Honolulu, HI.

"*" signals that authors should be considered co-first authors of this publication.

Grants and Funding

CREATE STUDENT MINIGRANT	August 2024
<ul style="list-style-type: none"> Awarded \$1,000 to fund research into how a range of assistive technologies practically provide access to users 	
NCWIT CONFERENCE ATTENDANCE GRANT	August 2024
<ul style="list-style-type: none"> Awarded \$2,500 to support travel to the 2024 ASSETS Conference to present research findings 	
NATIONAL SCIENCE FOUNDATION GRADUATE RESEARCH FELLOW	2021-2024
<ul style="list-style-type: none"> Five-year fellowship awarded to top graduate student applicants in NSF-supported STEM fields Three years of financial support in the form of a stipend and tuition waiver, totaling \$138,000 	

Honors and Awards

HCDE PhD STUDENT AWARD OF EXCELLENCE FOR TEACHING AND MENTORSHIP	June 2024
<ul style="list-style-type: none"> Annual departmental award for graduating PhD students committed to teaching and mentorship 	
WE RISE OUTSTANDING SCHOLAR	May 2024
<ul style="list-style-type: none"> Recognized by Women Engineers Rise at UW for outstanding scholarship and community engagement 	
DENNIS LANG AWARD	May 2023
<ul style="list-style-type: none"> Awarded annually by UW's Disability Studies Program to undergraduate and graduate students who demonstrate academic excellence in disability studies and a commitment to disability-related social justice issues 	
GEORGE C. CASEY PRIZE	May 2019
<ul style="list-style-type: none"> Awarded to the best essay written by an undergraduate Gender Studies student at Northwestern each year 	
MURPHY SCHOLAR	2015-2019
<ul style="list-style-type: none"> One of 17 (of 377) first years in Northwestern's McCormick School of Engineering and Applied Sciences selected to receive a stipend for independent research and research mentoring 	

Teaching Experience

DIRECTED RESEARCH GROUP: CURRENT TRENDS IN ACCESSIBILITY RESEARCH Fall 2020, 2021, 2022, 2023

Facilitator

- Organize, plan, and facilitate weekly discussions of accessibility papers published in CHI and ASSETS that year with HCDE community members ranging from first year undergraduates to post-doctoral scholars
- University of Washington Department of Human Centered Design and Engineering

INTRODUCTION TO DISABILITY STUDIES

Spring 2021

Teaching Assistant

- Dr. Joanne Woiak – University of Washington Disability Studies Program
- Ran two discussion sections, teaching 50 students weekly, grading, and planning weekly section content

USABILITY STUDIES

Winter 2021

Teaching Assistant

- Dr. Sarah Coppola – University of Washington Department of Human Centered Design and Engineering

FUNDAMENTALS OF COMPUTER PROGRAMMING

Winter 2018, Fall 2018, Winter 2019

Head Teaching Assistant

- Dr. Sara Sood and Dr. Ian Horswill - Northwestern University Department of Computer Science
- Worked with Dr. Sara Sood to design and teach discussion sessions for students with no prior coding experience

Selected Invited Talks & Panels

ACCESSCOMPUTING WEBINAR

August 2024

Co-Presenter

- Disability Studies for Technologists

ACCESSIBLE PRESENTATIONS WORKSHOP, CREATE CENTER

May 2024

Co-Presenter

- Disability Studies for Technologists

UNIVERSITY OF WASHINGTON FOUNDATION BOARD

April 2024

Representative of the UW CREATE Center

- Advancing Engineering Excellence for the Public Good: From Basic Science to Innovation, Disability Inclusion Equalizes the Playing Field

HCDE 315 and 515 ACCESSIBILITY AND INCLUSIVE DESIGN

April 2022, October 2022, January 2023, April 2024

Guest Lecturer for Dr. Sarah Coppola, Dr. Leah Findlater

- Disability Studies for HCI and Design Practice

DEPARTMENT OF INFORMATION SCIENCES, UNIVERSITY OF COLORADO, BOULDER

February 2024

Guest Speaker

- Designing Collective Communication Access

SCHOOL OF INFORMATION, UNIVERSITY OF MICHIGAN

February 2024

Guest Speaker

- Designing Collective Communication Access

DISABILITY STUDIES WORKING GROUP, NORTHWESTERN MEDICINE

January 2024

Guest Speaker

- Translating Disability Studies and Activism into Accessibility Practice

INTERDISCIPLINARY RESEARCH METHODS, NORTHEASTERN UNIVERSITY

September 2023

Guest Lecturer for Dr. Michael Arnold Mages

- Methods in HCI Accessibility Research

ADVANCED TOPICS IN ACCESSIBILITY, UNIVERSITY OF MICHIGAN

September 2023

Guest Lecturer for Dr. Dhruv Jain

- Disability History for Computer Scientists

ACCESSHACK, NORTHEASTERN UNIVERSITY

July 2023

Panelist

- Disabled Perspectives on Accessibility

CSE-P 590 THE FUTURE OF ACCESSIBLE TECHNOLOGY, UNIVERSITY OF WASHINGTON

February 2023

Guest Lecturer for Dr. Jennifer Mankoff

- Chronically Under-Addressed: Considerations for HCI Accessibility Practice with Chronically Ill People

CSCI 327 INCLUSIVE TECHNOLOGY DESIGN, OBERLIN COLLEGE

February 2023

Guest Lecturer for Dr. Emily Wang

- Disability History for Computer Science

ACCESSCOMPUTING WEBINAR

January 2023

Presenter and Panelist

- Considerations for Technology Design for People with Chronic Illnesses

ACCESS LUNCH, CARNEGIE MELLON UNIVERSITY

December 2022

Guest Speaker

- Toward Collective Access in Captioning Design

UW ALLEN SCHOOL OF COMPUTER SCIENCE AND ENGINEERING ACCESSIBILITY COLLOQUIUM

November 2022

Guest Speaker

- Chronically Under-Addressed: Considerations for HCI Accessibility Practice with Chronically Ill People

ACCESSIBILITY, HCI, AND AGING GROUP, UNIVERSITY OF MICHIGAN

October 2022

Guest Speaker

- Toward Collective Access in Captioning Design

SOCIETY FOR DISABILITY STUDIES

April 2021

Panelist

- Devva Kasnitz, Jen Mankoff, Meryl Alper, **Emma McDonnell**, Kelly Avery Mack, and Venkatesh Potluri. April 18, 2021. Human Computer Interaction Folk Have Found Disability Studies: Playing Together Well! *Society for Disability Studies @ Ohio State University Conference 2021*

Work Experience

IBM, Austin, Texas

June 2018 – September 2018

Research Intern, Division of Accessibility Research

- Implemented an indoor navigation system called NavCog which provides blind users turn-by-turn directions to make multiple spaces on the IBM Austin campus more accessible to blind visitors and employees
- Accessibility Subject Matter Expert and team lead for a group of designers exploring accessible airport navigation
- Created a tool to automatically generate accessible color palettes to enable web designers to meet web accessibility standards for color contrast

UNIVERSITY OF MINNESOTA, Soudan, Minnesota

June 2016 – September 2016

Decommissioning Intern, Soudan Underground Laboratory

- Deconstructed MINOS Neutrino detector, a joint venture between the University of Minnesota and Fermi National Accelerator Laboratory

Mentoring & Advising

UNIVERSITY OF WASHINGTON

- Gina Clepper, PhD Human Centered Design and Engineering, 2023-Present
- Adrian Rodriguez, PhD Human Centered Design and Engineering, 2022-2024
- Weerachet (Pitch) Sinlapanuntakul, PhD Human Centered Design and Engineering, 2023-2024
- Andy Moon, M.S. Human Centered Design and Engineering, 2020-2023
- Lucy Jiang, B.S. Computer Science and Engineering, 2021-2022
- Ana Liu, M.S. Human Centered Design and Engineering, 2019-2022
- Jazz Ang, M.S. Human Centered Design and Engineering 2021-2022

Volunteer/Service

UW OFFICE OF THE ADA'S COMMITTEE ON DISABILITY, ACCESSIBILITY, AND INCLUSION October 2024 – Present

- Member of the university-wide advisory committee providing input on campus climate and guiding policy focused on issues related to disability, accessibility and inclusion

ASSETS 2024 HYBRID CO-CHAIR June 2024-October 2024

- Member of the ASSETS 2024 Organizing Committee, planning and implementing an accessible, synchronous hybrid conference experience

CSCW 2023 STUDENT VOLUNTEER October 2023

- Part of the student team conducting tasks necessary to running the CSCW 2023 conference
- Recognized as an "Accessibility Ambassador"

ASSETS 2022 VIRTUAL CO-CHAIR November 2021-October 2022

- Member of the ASSETS 2022 Organizing Committee, responsible for planning and executing all virtual aspects of the 2022 hybrid conference

UAW 4121 CONTRACT ENFORCEMENT January 2022 – August 2024

- Member of contract enforcement for UAW chapter #4121, the union that represents Academic Student Employees, Postdocs, and Research Scientists and Engineers at the University of Washington
- Responsible for meeting with students who suspect they have been harmed by a contract violation, investigating the facts of their case, representing them in meetings with administrators, and, when appropriate, supporting students in a contractual grievance process
- Train new members and support other contract enforcement members in their cases

HCDE PhD STUDENT RESEARCH GRANT REVIEWER April 2022-April 2023

- Providing feedback on and making decisions about PhD student applications for department grants, making decisions about \$6000 of funding annually

PhD STUDENT AMBASSADOR October 2021-June 2024

- Serving as a contact for prospective HCDE PhD students, meeting 1:1 and facilitating information sessions

PhD APPLICATION REVIEW December 2020-December 2023

- Annually review applications for the HCDE PhD Program

PROSPECTIVE PhD VISIT COORDINATOR March 2020-March 2024

- Annually plan and run activities to introduce visiting prospective PhD students to HCDE and to Seattle

GIRLS WHO CODE FACILITATOR September 2021-June 2022

- Supporting high school girls in learning Python and gaining familiarity with computer science

TOURNAMENT DIRECTOR January 2018 – May 2019

- Ran Northwestern's Tournament of Champions in Extemporaneous Speaking, a national speech tournament for 60-70 of the nation's best high school extemporaneous speakers

- Coordinated an annual conference and two-day tournament, leading a team of 15 peers to manage catering, registration, tournament administration, judging, scheduling, and awards

BEST BUDDIES NORTHWESTERN

September 2015 – March 2019

- Three-year member of the executive board, serving as Vice President and Membership and Activities Coordinator for Northwestern's Best Buddies chapter which connects college students with local disabled high schoolers

Reviewing

- CHI 2022*, 2023, 2024, 2025
- IJHCS 2024
- TACCESS 2022, 2023
- ASSETS 2022
- DIS 2022
- CSCW 2022
- alt.chi 2022
- ISWC 2021

"*" Indicates Special Recognition for Outstanding Reviews

Skills

- Programming experience in Python, JavaScript, HTML, CSS, R, and Racket
- Working proficiency in Spanish, conversational proficiency in American Sign Language
- Accomplished public speaker, making national semifinals in extemporaneous, impromptu, and persuasive speaking at the collegiate level