Rahaf Alharbi

Email: rmalharb@umich.edu
Website: rahaf.info

OVERVIEW

My research lies at the intersection of accessibility, privacy, and responsible artificial intelligence (AI). Grounded in empirical research with blind communities, my dissertation explores the possibilities and limitations of emerging AI-enabled privacy tools and transparency techniques. Drawing from disability justice activism and disability studies, my research contributes theoretical, design, and practical implications. Beyond my dissertation, I have led and collaborated on projects related to accessible workplaces, multilingual captioning, and customizable assistive technologies. My scholarly work has been published in top-tier HCI venues, including ACM CHI, ASSETS, and CSCW.

EDUCATION

University of Michigan, Ann Arbor, MI, USA   Aug. 2020 - Present
Ph.D. in Information, specialized in Accessibility and Human-Computer Interaction
Affiliated with Accessibility, HCI, Aging (AHA!) and Center for Ethics, Society, and Computing (ESC)
Advisors: Dr. Robin Brewer and Dr. Sarita Schoenebeck
Dissertation topic: *Reimagining Privacy and Transparency in Visual Assistance Technologies With Blind People*
Committee: Dr. Sarita Schoenebeck (co-chair), Dr. Robin Brewer (co-chair), Dr. Ann Heffernan (UM Political Science), and Dr. Cynthia Bennett (Google Research)
🏆 Reciepent of the Predoctoral Fellowship by UM
🏆 Named as Gary M. Olson Outstanding Ph.D. Student by UMSI

University of California, San Diego, CA, USA   Sep. 2015 - Mar. 2020
B.S. in Mechanical Engineering (minor in Ethnic Studies), GPA: 3.67/4.00
Fully funded by the KAUST Gifted Students Scholarship

RESEARCH EXPERIENCE

University of Michigan, Ann Arbor, MI, USA   Aug. 2020 - Present
Graduate Research Assistant
• Led, designed, and conducted studies with over 70 people with disabilities to understand accessibility barriers, benefits, and trade-offs in various contexts such as AI assistance technologies and live streaming
• Collaborated with over 10 researchers across various institutions and departments (e.g., computer science and communication)
• Resulted in several first-authored and co-authored papers

Meta, Menlo Park, CA, USA   May 2023 - Aug. 2023
UX Research Intern (Responsible AI Team)
Manager: Dr. Amy Piedalue, collaborators: Dr. Jessica Heal, Dr. Ella Gamze Strack, and Dr. Chloé Bakalar
• Collaborated with UX team members and Chief Ethicist to design and conduct a foundational research study
• Performed an extensive literature review on internal and external research articles
• Collected and analyzed in-depth qualitative data
• Presented implications that critically shaped Meta's responsible AI approach to various teams, including directors and managers
• Published two internal research papers

Microsoft Research, Redmond, WA, USA   May 2022 - Aug. 2022
Research Intern (Ability Team)
Mentored by Dr. John Tang (at Microsoft Research) and Karl Henderson (at Experiences & Devices)
• Designed and conducted qualitative interviews with 21 professionals with disabilities to understand their experiences in hybrid meetings
• Uncovered the unique accessibility benefits, drawbacks, and conflicts of hybrid meetings
• Generated design implications to improve the accessibility of hybrid meetings and videoconferencing
• Resulted in a first-authored CHI 2023 paper

PUBLICATIONS

- **Peer-Reviewed Journals and Conference Publications**[*]

[P7] Misfitting With AI: How Blind People Verify and Contest AI Errors
Rahaf Alharbi, Pa Lor, Jaylin Herkovitz, Sarita Schoenebeck, Robin Brewer
Proceedings of the ACM SIGACCESS Conference on Computers and Accessibility
Acceptance rate: 30%

[P6] ProgramAlly: Creating Custom Visual Access Programs via Multi-Modal End-User Programming
Jaylin Herskovitz, Andi Xu, Rahaf Alharbi, Anhong Guo
Proceedings of the ACM Symposium on User Interface Software and Technology

[P5] Accessibility Barriers, Conflicts, and Repairs: Understanding the Experience of Professionals with Disabilities in Hybrid Meetings
Rahaf Alharbi, John Tang, Karl Henderson
Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI), 2023
Acceptance rate: 28.4%

[P4] Hacking, Switching, Combining: Understanding and Supporting DIY Assistive Technology Design by Blind People
Jaylin Herskovitz, Andi Xu, Rahaf Alharbi, Anhong Guo
Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI), 2023
Acceptance rate: 28.4%

[P3] Denition drives design: Disability models and mechanisms of bias in AI technologies
Denis Newman-Griffis, Jessica Sage Rauchberg, Rahaf Alharbi, Louise Hickman, Harry Hochheiser
First Monday, 2023

[P2] Understanding Emerging Obfuscation Technologies in Visual Description Services for Blind and Low Vision People
Rahaf Alharbi, Robin N. Brewer, Sarita Schoenebeck
Proceedings of the ACM on Human-Computer Interaction (CSCW), 2022

[P1] Beyond Borders: Womens Perspectives on Harm and Justice after Online Harassment
Jane Im, Sarita Schoenebeck, Marilyn Iriarte, Gabriel Grill, Daricia Wilkinson, Amna Batool,
Rahaf Alharbi, Audrey N. Funwie, Tergel Gankhuu, Eric Gilbert, Mustafa Naseem
Proceedings of the ACM on Human-Computer Interaction (CSCW), 2022

- **Selected Full Papers Under Preparation and Review**

[R2] **"Better Than Nothing": Exploring Accessible Error Detection in Emerging Privacy Techniques With Blind People**
Rahaf Alharbi, Angela Cheong, Jaylin Herkovitz, Sarita Schoenebeck, and Robin Brewer

[R1] **Toward Language Justice: Exploring Multilingual Captioning for Accessibility Techniques**
Aashaka Desai, Rahaf Alharbi, Stacy Hsueh, Richard Ladner, and Jennifer Mankoff

- **Workshops & Special Interest Groups Organized**

[W3] **Organizing for More Just and Inclusive Futures: A Community Discussion**
Kim Fernandes and Rahaf Alharbi, Cella M. Sum, Vaishnav Kameswaran,
Franchesca Spektor, Ashique Ali Thuppilikkat, Adrian Petterson, Megh Marathe, Foad Hamidi
and Priyank Chandra
ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW '24)

[W2] **Bridging the Gap: Towards Advancing Privacy and Accessibility**
Rahaf Alharbi, Robin Brewer, Gesu India, Lotus Zhang, Leah Findlater, Yixin Zou, and Abigale Stangl
ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'23)

[W1] Dreaming Disability Justice in HCI
Cella Sum, Rahaf Alharbi, Franchesca Spektor, Cynthia Bennett, Rua Williams, Katta Spiel,
Christina Harrington
ACM CHI Conference on Human Factors in Computing Systems - Extended Abstract (EA CHI'22)

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[*]In the field of human-computer interaction, conference papers are rigorously peer-reviewed, archived, and considered to be prestigious.

• Invited Articles

[A1] **Challenging Ableism: A Critical Turn Toward Disability Justice in HCI**
Cella Sum, Franchesca Spektor, <u>Rahaf Alharbi</u>, Leya Breanna Baltaxe-Admony, Erika Devine,
Hazel Anneke Dixon, Jared Duval, Tessa Eagle, Frank Elavsky, Kim Fernandes,
Leandro S. Guedes, Serena Hillman, Vaishnav Kameswaran, Lynn Kirabo,
Tamanna Motahar, Kathryn E. Ringland, Anastasia Schaadhardt,
Laura Scheepmaker, and Alicia Williamson
XRDS, Summer 2024, VOL.30, NO.4

• Selected Peer-Reviewed Workshop Papers and Extended Abstracts

[WP4] **Speculating Perfect Algorithmic Reparations for Disability**
Robin Brewer, <u>Rahaf Alharbi</u>, Sarita Schoenebeck
Algorithmic Reparation Workshop, University of Michigan, 2022

[WP3] **Care, Disability, & Live Streaming**
<u>Rahaf Alharbi</u>, Audrey Labrie
Presented in The Future of Care Work: Towards a Radical Politics of Care in CSCW Research
and Practice. CSCW 2021 Workshop

[WP2] **On Obfuscation, Privacy & Visual Description: Rethinking Access Technology as Contested**
<u>Rahaf Alharbi</u>, Jasmine Duong, Robin Brewer, Sarita Schoenebeck.
Presented in Articially Intelligent Technology for the Margins: A Multidisciplinary Design
Agenda CHI 2021 Workshop

[WP1] I Am Not an Engineer: Understanding How Clinicians Design & Alter Assistive Technology
<u>Rahaf Alharbi</u>, Ada Ng, Rawan Alharbi, Josiah Hester
ACM CHI Conference on Human Factors in Computing Systems - Extended Abstract (EA CHI'20)

TEACHING EXPERIENCE

University of Michigan, Ann Arbor, MI, USA
Teaching Assistant for Introduction to Accessibility (Graduate Level)   Fall 2021

• Invited Teaching

[C4] **ARTG 6600: Design for Accessibility, Northeastern University, Winter 2024**
Invited by Dr. Maitraye Das
Talk: Co-Imagining Privacy Futures with Blind People: The Case of Visual Assistance Technologies

[C3] **SI 623: Research Methods for Information Professionals, University of Michigan, Winter 2024**
Invited by Yvette Ramírez & Dr. Melissa Chalmers
Talk: Co-Imagining Privacy Futures with Blind People: The Case of Visual Assistance Technologies

[C2] **SI 710: Algorithms, Discrimination, and Justice, University of Michigan, Fall 2022**
Invited by Dr. Sarita Schoenebeck
Talk: Understanding Emerging Obfuscation Technologies in Visual Description Services

[C1] **SI 552: Introduction to Accessibility, University of Michigan, Fall 2021**
Invited by Dr. Robin Brewer
Talk: Understanding Emerging Obfuscation Technologies in Visual Description Services

AWARDS AND HONORS

Gary M. Olson Outstanding Ph.D. Student Award, UM School of Information	2024
Human Computer Interaction Consortium (HCIC) invite with travel funding	2024
Rackham Predoctoral Fellowship	2024-2025

Most prestigious award offered by the University of Michigan, aimed to support dissertations that are "unusually creative, ambitious, and impactful"

UMSI Travel Grant x 2 (granted twice)	2023
Rackham Graduate School Travel Grant x 2 (granted twice)	2023
DEI Travel Grant from ACM SIGACCESS	2022
Mini grant from UM Initiative On Disability Studies (UMInDS)	2021
DEI Travel Grant from ACM SIGACCESS	2020
KAUST Gifted Student Scholarship (KGSP)	2015

Awarded to top 1% of Saudi high school students for achievement in international science olympiads. Includes full tuition and stipends to pursue an undergraduate degree in the United States.

TALKS AND PRESENTATIONS

[T4] **Accessibility Barriers, Conflicts, and Repairs: Understanding the Experience of Professionals with Disabilities in Hybrid Meetings**
- Presented research and product-oriented talks to various groups at Microsoft
- Presented at CHI 2023

[T3] **Understanding Emerging Obfuscation Technologies in Visual Description Services for Blind and Low Vision People**
- Presented at Fourth Annual U-M Center for Disability Health and Wellness Research Symposium, 2023
- Presented at the Michigan Interactive and Social Computing (MISC) research group, 2022
- Presented at CSCW 2022

[T2] **Understanding the Motivations and Practices of Disabled Live Streamers**
- Co-presented at UMSI Lighting Talks at the Intersections of Information, Diversity, Inclusion and Equity. Ann Arbor, Michigan, 2021

[T1] **I Am Not an Engineer: Understanding How Clinicians Design & Alter Assistive Technology**
- Presented at the ACM Special Interest Group on Accessible Computing (SIGACCESS), Riyadh, 2020

SERVICE AND LEADERSHIP

- **Research Mentorship**

Graham Xavier, Data Science Undergraduate	Fall 2024 - Present
Angela Cheong, UMSI Undergraduate	Winter 2024 - Present
Pa Lor, UMSI Masters, co-authored [P7]	Fall 2023 - Winter 2024
Jasmine Duong, UMSI Undergraduate, co-authored [W2]	Fall 2020 - Winter 2021

- **Service to the university**

Co-Coordinator & Reviewer for UMSI PhD Applicant Feedback Program 2023
Assisted in assigning reviewers for over 50 underrepresented PhD applicants, and reviewed several applications.

Making Research Communication Accessible Panel 2023
Served as co-panelist at Michigan Interactive and Social Computing (MISC) research group to share accessibility practices for designing presentations.

Community Advisory Board at the Motor & Visual Development Lab 2023-2024
Served as a research and community advisor to the MVD lab at the School of Kinesiology (University of Michigan). My responsibilities included reviewing research projects, study design materials, and brainstorming projects that are inclusive of neurodivergent people.

Neubacher Award Committee Member 2023
Reviewed nominees and selected winners for the James T. Neubacher Award which is presented to University of Michigan faculty, students, and staff who empower people with disabilities, advocate for disability rights, and increase accessibility in the university.

Co-Authored Proposal to Increase UMSI Travel Funding 2023
Assisted Doctoral Executive Committee (DEC) at UMSI to research and author a proposal to address equity concerns and increase travel funding for Ph.D. students who attend and present in conferences. As a result our successful proposal, the current policy increased by a maximum of $1300 from the original funding amount.

Accessibility, HCI, Aging (AHA) Research Group at the University of Michigan 2022 - 2023
Co-moderator of biweekly group meetings with faculty and students across the School of Information and the Computer Science & Engineering department.

Personal Care Assistant Graduate Student Scholarship at the University of Michigan 2021
My responsibilities included advertising and reviewing scholarship applicants.

Disability Studies & HCI Reading Group at the University of Michigan 2020 - 2021
Organizer.

Services for Students with Disability Office at the University of Michigan 2020 - 2021
Advisory Board.

- Service to the the field

ACM Designing Interactive Systems (DIS)   2022 - 2023
Assisted Accessibility Chairs (Robin Brewer and Cynthia Bennett) with numerous tasks such as co-authoring a guide for creating accessible figures and tables, selecting accessibility services, and evaluating the in-person venue for access.

ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW)   2021
Student Volunteer (Day Lead): assigned tasks to various student volunteers and created a document for writing alternative texts on images shared on CSCW Twitter.

- Reviewing

ACM CSCW   2020 - Present
2-3 reviews per year
Associate Chair (AC) for posters in CSCW 2024

ACM CHI   2020 - Present
2-3 reviews per year
Special Recognition for Outstanding Reviews in CHI 2022 & CHI 2024

ACM ASSETS   2020 - Present
1-2 workshop reviews per year

SKILLS

Methods: Qualitative Analysis, Interviewing, Focus Groups, Co-design Workshops, Ethnography, Usability Testing, Quantitative Analysis, Survey
Programming: Python, MATLAB
Languages: English (fluent), Arabic (native)