Warda Usman

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RESEARCH INTERESTS

My research investigates how people perceive and respond to security threats in practice, attending to the roles of technology, social context, and lived experience. It contributes to areas including usable security, human–computer interaction, critical data studies, and sociotechnical security research.
I employ a mix of qualitative and quantitative methods, including in-depth interviewing, fieldwork, contextual inquiry, surveys, and content analysis to develop detailed accounts of how people construct threat models and to examine how security research practice can better center and respect participants' lived realities.

EMPLOYMENT

2025 *Research Scientist*, Walmart Information Security
Leading and conducting research on human-centered threats in Walmart's security operations center

2023-2024 *Diversity, Equity and Inclusion Strategic Committee Lead*, Department of CS, Brigham Young University

EDUCATION

Ph.D. Computer Science, Brigham Young University, 2025
Dissertation: Building and Demonstrating a Framework and Guide for Human-Centered Threat Modeling

M.S. Computer Science, Brigham Young University, 2023
Thesis: "I think they're poisoning my mind: Understanding user rationales and mental models for adopting secure email"

B.S Computer and Information Science, Pakistan Institute of Engineering and Applied Sciences, 2019

PUBLICATIONS

Peer-Reviewed Full-length Papers

2026 **Usman, W**, Zou, Y., Zappala, D. Human-Centered Threat Modeling in Practice: Lessons, Challenges, and Paths Forward. In 2026 IEEE Symposium on Security and Privacy (IEEE S&P) (13% acceptance rate)

2026 S. Iqbal, **Usman, W**, and D. Zappala. "Don't Let Them Get To You": Identifying and Evaluating the Quality of Cyberbullying Advice on TikTok, SOUPS, 2026

2026 **Usman, W**, Taha, Iqbal, S, Batool, A, and Zappala, D., 2026, Understanding gendered experiences of harassment among Pakistani young adults through human-centered threat modeling, at CHI Conference on Human Factors in Computing Systems

2025 **Usman, W.** and Zappala, D., 2025, May. SoK: A framework and guide for human-centered threat modeling in security and privacy research. In 2025 IEEE Symposium on Security and Privacy (IEEE S&P) (pp. 2697-2715). (14% acceptance rate)

2025 **Usman, W.**, Sadik, J., Taha, Elgedawy, R., Ruoti, S. and Zappala, D., 2025, May. Security and Privacy Experiences of First-and Second-Generation Pakistani Immigrants to the US: Perceptions, Practices, Challenges, and Parent-Child Dynamics. In 2025 IEEE Symposium on Security and Privacy (SP) (pp. 2284-2302)..(14% acceptance rate)

2023 **Usman, W**., Hu, J., Wilson, M. and Zappala, D., 2023. Distrust of big tech and a desire for privacy: Understanding the motivations of people who have voluntarily adopted secure email. In Nineteenth Symposium on Usable Privacy and Security (SOUPS 2023) (pp. 473-490). (22% acceptance rate)

INVITED TALKS

2024 Invited panelist. Women in Tech Utah, "Building Inclusive Futures in Computing: Research Pathways and Leadership"

2024 Invited speaker. Pakistan institute of engineering and applied sciences "Security Beyond Systems: Understanding Threats Through People"

2024 Invited panelist. Brigham young university, WiCS chapter "Thriving in Computing Research"

2024 Speaker. Brigham young university HCI Seminar "Human-centered threat modeling and its importance in the security world"

TEACHING AND ADVISING

2024 *Instructor*, CS 256: Introduction to Human-Computer Interaction, Brigham Young University
Co-developed the course with Prof. Amanda Hughes

2023 *Teaching Assistant*, CS 456: Computer Security

2022 *Teaching Assistant*, CS 110: Introduction to computer programming

2022 *Lab Instructor*, CS 110: Introduction to computer programming

2021 *Teaching Assistant*, CS 260: Web programming

TRAINING AND MENTORSHIP

2024-2025 *Lead Research Mentor*, Usable Security and Privacy Lab
Mentored four undergraduate students on year-long research projects

2024 *PhD participant*, UR2PhD Graduate Student Mentor Training Course
Completed a specialized mentoring course from the Computing Research Association (CRA), developing a strong foundation in culturally-responsive mentoring. Applied best practices to support diverse students, ensuring an inclusive and empowering learning environment.

DEPARTMENT LEADERSHIP

Vice President, Graduate Student Society, BYU (2024)

Organizer, PhD Student Mentoring Program, Brigham Young University (2022-23)

PhD Representative, Diversity, Equity, and Inclusion Strategic Committee, BYU (2021-22)

PhD Representative, Graduate Program Steering Committee, BYU (2024-25)

PROGRAM COMMITTEE & REVIEWING

Reviewer, CHI 2026

Program Committee Member, USENIX Security 2026

Program Committee Member, AsiaCCS 2026

Program Committee, Usable Security and Privacy (USEC) Symposium at Network and Distributed System Security (NDSS) 2026

Student Volunteer and reviewer, Symposium on Usable Privacy and Security 2023-2024

AWARDS AND HONORS

UR2PhD Graduate Student Mentor Training Award, $1000
Brigham Award Nominee, BYU Student Connection & Leadership Center (2023)
Winner, BYU Computer Science 3-Minute Thesis Competition (2024)
Google Conference Scholarship (2022)
USENIX Student Grant, $1350 (2022)
BYU Graduate Professional Development Grant, $2500 (2022)
Ministry of IT Pakistan Startup Competition Winner (70,000 PKR, 2018)

PROFESSIONAL MEMBERSHIPS

Association for Computing Machinery (ACM)

Institute of Electrical and Electronics Engineers (IEEE)

Association for Information Science and Technology (ASIS&T)