Yaxin Hu

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Research Interests

I study how robots can be meaningfully integrated into our daily environments and public spaces to create leisure, social and personal experiences, especially for the ones with accessibility needs.

Education

2020 – Present

University of Wisconsin–Madison – Madison, United States
Ph.D. Candidate in Computer Sciences
Advisor: Professors Bilge Mutlu. *People and Robots Lab.*

2018 – 2020

Carnegie Mellon University – Pittsburgh, United States
MSc. in Computational Design
Advisor: Professors Henny Admoni. *Human and Robots Partners Lab.*

2012 – 2017

The Chinese University of Hong Kong (CUHK) – Hong Kong
BSc. in Computer Science, minor in Fine Arts
Advisor: Professors Tien-tsin Wong

2014 Fall

Dartmouth College – Hanover, United States
Exchange student in Thayer School of Engineering

Full Conference Proceedings

2026
HRI

In situ Bodystorming of Robot Co-Design for Botanical Gardens
Yaxin Hu, Hui-Ru Ho, Chenming Ye, Bilge Mutlu. *ACM/IEEE International Conference on Human Robot Interaction 2026.* [Under Review]

2026
CHI

Robot-Assisted Group Tours for Blind People.
Yaxin Hu, Masaki Kuribayashi, Allan Wang, Seita Kayukawa, Daisuke Sato, Bilge Mutlu, Hironobu Takagi, Chieko Asakawa. *CHI Conference on Human Factors in Computing Systems 2026.* [Under Review]

2025
HRI

Designing Telepresence Robots to Support Place Attachment.
Yaxin Hu, Anjun Zhu, Catalina Toma, Bilge Mutlu. *In Proceedings of ACM/IEEE International Conference on Human Robot Interaction 2025.* (HRI 2025, acceptance rate: **25%**)

2025
UIST

NarraGuide: an LLM-based Narrative Mobile Robot for Remote Place Exploration.
Yaxin Hu*, Arissa J. Sato*, Jingxin Du, Chenming Ye, Anjun Zhu, Pragathi Praveena, Bilge Mutlu. *In Proceedings of the 38th Annual ACM Symposium on User Interface Software and Technology.* (UIST 2025, acceptance rate: **22%**)

2024
DIS

"This really let's us see the entire world:' Designing a conversational Telepresence Robots for Homebound Older Adults.
Yaxin Hu, Laura Stegner, Yasmine Kotturi, Yi-hao Peng, Faria Fuq, Yuhang Zhao, Jeffrey P. Bigham, Bilge Mutlu. *In proceedings of ACM Designing Interactive Systems 2024.* (DIS 2024, acceptance rate: **27.4%**)

2024
ASSETS

SMART-TBI: Design and Evaluation of the Social Media Accessibility and Rehabilitation Toolkit for Users with Traumatic Brain Injury.
Yaxin Hu*, Hajin Lim*, Lisa Kakonge, Jade T. Mitchell, Hailey L. Johnson, Lyn S. Turkstra, Melissa C. Duff, Catalina L. Toma, Bilge Mutlu. *In proceedings of the 25th International ACM SIGACCESS Conference on Computers and Accessibility.* (ASSETS 2024, acceptance rate: **30%**)

2023
ASSETS

Investigating day-to-day experiences with conversational agents by users with traumatic brain injury.
Yaxin Hu, Hajin Lim, Hailey L. Johnson, Josephine M. O'Shaughnessy, Lisa Kakonge, Lyn S. Turkstra, Melissa C. Duff, Catalina L. Toma, Bilge Mutlu. *In proceedings of the 25th International ACM SIGACCESS Conference on Computers and Accessibility.* (ASSETS 2023, acceptance rate: **30%**)

2023
CHI

So, I Can Feel Normal: Participatory Design for Accessible Social Media Sites for Individuals with Traumatic Brain Injury.
Hajin Lim, Lisa Kakonge, Yaxin Hu, Lyn S. Turkstra, Melissa C. Duff, Catalina L. Toma, and Bilge Mutlu. *In Proceedings of CHI Conference on Human Factors in Computing Systems 2023.* (CHI 2023, acceptance rate: **27.6%**)

2022
CHI

Polite or Direct? Conversation Design of a Smart Display for Older Adults Based on Politeness Theory.
Yaxin Hu, Yuxiao Qu, Adam Maus, Bilge Mutlu. *In Proceedings of CHI Conference on Human Factors in Computing Systems 2022.* (CHI 2022, acceptance rate: **24.7%**)

2021
DIS

Exploring the Role of Social Robot Behaviors in a Creative Activity.
Yaxin Hu, Lingjie Feng, Bilge Mutlu, Henny Admoni. *In Proceedings of Designing Interactive Systems Conference 2021.* (DIS 2021, acceptance rate: **26.8%**)

Journals

2025
THRI

Robot Primals: Exploring World Beliefs as a Source for Robot Behavior Design
Dakota Sullivan, Nathan White, Yaxin Hu, Jeremy DW Clifton, Bilge Mutlu. *ACM Transactions on Human-Robot Interaction* (2025).

2025
JMIR

Using Smart Displays to Implement an eHealth System for Older Adults with Multiple Chronic Conditions: A Randomized Controlled Trial
Gina Landucci, David H. Gustafson Sr, Marie-Louise Mares, Klaren Pe-Romashko, John J. Curtin, **Yaxin Hu**, Adam Maus, Kasey Thompson, Sydney Saunders, Kaitlyn Brown, Judith Woodburn, Bilge Mutlu. *JMIR Aging* (2025).

2022
JMIR

Using Smart Displays to Implement an eHealth System for Older Adults With Multiple Chronic Conditions: Protocol for a Randomized Controlled Trial.
Gustafson, David H., Marie-Louise Mares, Darcie C. Johnston, Gina Landucci, Klaren Pe-Romashko, Olivia J. Vjorn, **Yaxin Hu**, Adam Maus, Jane E. Mahoney, and Bilge Mutlu. *JMIR Research Protocols 11, no. 5 (2022): e37522.*

Workshops & Short Papers

2024
DIS

RoboCare Design Workshop: Understanding, Translating, Operationalizing, and Scaling up Design Knowledge Regarding Robotic Systems for Care Assistance.
Laura Stegner, Richard Paluch, Long-Jing Hsu, Sawyer Collins, **Yaxin Hu**, Marius Greuèl, Naonori Kodate, Claudia Müller, Bilge Mutlu, Selma Šabanović. *Companion Publication of the 2024 ACM Designing Interactive Systems Conference.*

2023
VRW

A Preliminary Interview: Understanding XR Developers' Needs towards Open-Source Accessibility Support.
Tiger F. Ji, **Yaxin Hu**, Yu Huang, Ruofei Du, and Yuhang Zhao. *In 2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW), pp. 493-496. IEEE, 2023.*

2022
ICA

[Extended Abstract] A Pilot Study of Patients' Self-disclosure and Privacy Concerns to a Conversational Social Robot in Hospitals.
Jingyoung Choi, **Yaxin Hu**. *Presented at International Communication Association Conference, 2022, Paris, France. (ICA 2022).*

Work & Research Experience

Sep 2025 – Present
Visiting Research Student, Singapore Management University - Singapore
Advisor: Prof. Tony Tang.

Jul 2025 – Sep 2025
Summer Internship, Miraikan - Tokyo, Japan
Advisors: Dr. Hironobu Takagi, Dr. Chieko Asakawa.
Project: Robot-Assisted Group Tours for Blind People.

Jun 2023 – Nov 2023
Visiting Research Student, HCII, Carnegie Mellon University - Pittsburgh
Advisor: Prof. Jeffrey P. Bigham.
Project: Conversational Telepresence Robots for Homebound Older Adults

Jul 2017 – Jul 2018	**Deutsche Bank** - Hong Kong *Analyst in Technology.* Production support for global equity derivatives trading. Integrated global trading data feeding pipeline in Java and migrated Oracle database. Analyzed trading activities and automated report generation.

Honors and scholarships

2018 – 2020	Merit Scholarship, Carnegie Mellon University
2017	Master List, Morningside College, The Chinese University of Hong Kong
2017	Dean's List, The Chinese University of Hong Kong
2014	GEF Scholarship, The Chinese University of Hong Kong *Awarded to attend summer program at Oxford University*

Teaching experience

Spring 2025 UW–Madison	**Co-Instructor for CS 571 - Building User Interfaces** *[Course Website]* Undergraduate CS major selective course (300+ enrollment) Conduct weekly lectures for human computer interaction concepts and user-centered methods
Summer 2022 UW–Madison	**Instructor for Social Robotics Sessions - Grandparent University (GPU)** Hosted two sessions on social robots with lectures and hands on robot programming activities with 30+ alumni grandparents and grandchildren.

Academic Services

Conference Reviewer	CHI (2023–2026), HRI (2022, 2026), DIS (2025), UIST (2024), RO-MAN (2024–2025) CHI 2025, DIS 2025, RO-MAN 2025, UIST 2024, CHI 2024, RO-MAN 2024, CHI 2023, CSCW 2023, HRI 2022
Journal Reviewer	ACM Transactions on Human Robot Interaction (THRI 2025), ACM Transactions on Computer-Human Interaction (TOCHI 2023), Computers in Human Behavior (2022)

Mentoring Experience

2024 – 2025	Chenming Ye (Honors Thesis at UW–Madison) Anjun Zhu (Next: PhD student at Simon Fraser University)
2023 – 2024	Caroline Zhang (Next: Master student at UCSD) Mrigya Kumar
2022 – 2023	Weiyu Kong (Next: Master student at USC)

References

Bilge Mutlu, *Professor*
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University of Wisconsin–Madison
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Yuhang Zhao, *Assistant Professor*
Department of Computer Sciences
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Catalina Toma, *Professor*
Department of Communication Arts
University of Wisconsin–Madison
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Jeffrey P. Bigham, *Professor*
Human-Computer Interaction Institute
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