Yaxin Hu

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Education

Ph.D. Student in Computer Sciences, University of Wisconsin – Madison, United States 2020 – 2026 (expected)
Affiliated with People and Robots Laboratory
Advisor: Professor Bilge Mutlu

M.Sc. in Computational Design, Carnegie Mellon University, United States 2018 – 2020
Affiliated with Human and Robots Partners Lab
Advisor: Professor Henny Admoni

B.Sc. in Computer Science, The Chinese University of Hong Kong, Hong Kong 2012 - 2017
First Class Honour, Minor in Fine Arts

Exchange Student, Dartmouth College, United States 2014 Aug – 2014 Dec

Selected Publication

C5. **Yaxin Hu**, Laura Stegner, Yasmine Kotturi, Yi-hao Peng, Faria Fuq, Yuhang Zhao, Jeffrey Bigham, Bilge Mutlu. "This really let's us see the entire world:" Designing a conversational Telepresence Robots for Homebound Older Adults" *In proceedings of ACM Designing Interactive Systems 2024*. (DIS 2024, acceptance rate: 27.4%)

C4. **Yaxin Hu**, Hajin Lim, Hailey L. Johnson, Josephine M. O'Shaughnessy, Lisa Kakonge, Lyn S. Turkstra, Melissa C. Duff, Catalina L. Toma, Bilge Mutlu. "Investigating day-to-day experiences with conversational agents by users with traumatic brain injury." *In proceedings of the 25th International ACM SIGACCESS Conference on Computers and Accessibility*. (ASSETS 2023, acceptance rate: 30%)

C3. Hajin Lim, Lisa Kakonge, **Yaxin Hu**, Lyn S. Turkstra, Melissa C. Duff, Catalina L. Toma, and Bilge Mutlu. "So, I Can Feel Normal: Participatory Design for Accessible Social Media Sites for Individuals with Traumatic Brain Injury." In *Proceedings of CHI Conference on Human Factors in Computing Systems 2023*. (CHI 2023, acceptance rate: 27.6%)

C2. **Yaxin Hu**, Yuxiao Qu, Adam Maus, Bilge Mutlu. "Polite or Direct? Conversation Design of a Smart Display for Older Adults Based on Politeness Theory." In *Proceedings of CHI Conference on Human Factors in Computing Systems 2022.* (CHI 2022, acceptance rate: 24.7%)

C1. **Yaxin Hu**, Lingjie Feng, Bilge Mutlu, Henny Admoni. "Exploring the Role of Social Robot Behaviors in a Creative Activity." In *Proceedings of Designing Interactive Systems Conference 2021*. (DIS 2021, acceptance rate: 26.8%)

J1. 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. "Using Smart Displays to Implement an eHealth System for Older Adults With Multiple Chronic Conditions: Protocol for a Randomized Controlled Trial." *JMIR Research Protocols* 11, no. 5 (2022): e37522.

W3. **Yaxin Hu**, Laura Stegner, Bilge Mutlu. "Designing Socially Assistive Robots with Transactive Memory System." *Socially Assistive Robots as Decision Makers Workshop at CHI Conference on Human Factors in Computing System 2023.*

W2. Tiger F. Ji, **Yaxin Hu**, Yu Huang, Ruofei Du, and Yuhang Zhao. "A Preliminary Interview: Understanding XR Developers' Needs towards Open-Source Accessibility Support." In *2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, pp. 493-496. IEEE, 2023.

W1. Jingyoung Choi, **Yaxin Hu**. "[Extended Abstract] A Pilot Study of Patients' Self-disclosure and Privacy Concerns to a Conversational Social Robot in Hospitals." Presented at *International Communication Association Conference, 2022, Paris, France. (ICA 2022).*

Research Experience

Visiting Scholar at Human-Computer Interaction Institute, Carnegie Mellon University, United States 2023 Jun – 2023 Nov
Hosting advisor: Professor Jeffrey Bigham

People and Robots Lab, Department of Computer Sciences, University of Wisconsin – Madison
Research Assistant; Advisor: Prof. Bilge Mutlu
Multimodal telepresence robotics 03/2023 – present

- Led robotics design and system implementation: conversational interface using Large Language Models, robot mechanics and hardware with Turtlebot.
- Built community partnership with local senior facilities and conducted user studies through participatory design.

Social Communication for People with Traumatic Brain Injury 03/2022 – 08/2023

- Led the research on social media support tool for people with traumatic brain injury.

eHealth System for Senior People with Chronic Pain 08/2020 – 05/2023

- Led the implementation on the conversational interface for health-intervention systems on smart displays (Google Nest Hub and Amazon Echo Show).

Human and Robot Partners Lab, Robotics Institute, Carnegie Mellon University. 06/2019 – 08/2020
Research Assistant; Advisor: Prof. Henny Admoni

- Led the research on non-verbal behaviors of a social robot Kuri for creativity activities.
- Designed interactive activities and conducted pilot study at Children's Museum of Pittsburgh.
- Let OurCS workshop for undergraduate women engineers and guided social robotics research project with Kuri.

Work Experience

Project Amelia (Immersive Theater), Bricolage Production Company, Pittsburgh 05/2019 – 08/2019
Theater Assistant and Hardware Engineer

- Built indoor tracking system with Bluetooth beacons for audience locating and personalized experience.
- Assisted in project management and logistics of the immersive theater production.

Global Equity Derivatives, Deutsche Bank, Hong Kong 07/2017 – 07/2018
Analyst in Technology

- Integrated global trading data feeding pipeline in Java and migrated Oracle database with PL/SQL.
- Analyzed trading activities with Python scripts and automated report generation for mass email among the global teams.

Thomson Reuters, Hong Kong 08/2015 – 12/2015
Training Engineer in Technology Division

- Built up an automation testing system for a searching engine using Ruby, Cucumber and Selenium Toolkit.

Services

Conference Review: UIST 2024, CHI 2024, RO-MAN2024, CHI 2023, CSCW 2023, HRI 2022

Journal Review: Computers in Human Behavior (2022), ACM Transactions on Computer-Human Interaction (TOCHI 2023)

Awards

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

Skills

- Engineering: ROS (Robot Operating System), C++, Python, PyTorch, Java, Javascript, Node.js, Perl, Linux, Pandas, Unity
- Design Tools: Adobe Creative Suites, Figma, OpenFrameworks