

Hui-Ru (Irene) Ho

PHD STUDENT · COMPUTER SCIENCES PROGRAM

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Education

University of Wisconsin-Madison

PHD COMPUTER SCIENCES (HUMAN-COMPUTER INTERACTION)

Madison, WI, USA

2024 - present

- Advisor: Dr. Bilge Mutlu (People and Robots Laboratory)
- Human-centered AI research with a focus on designing embodied AI to enhance human capabilities and in situ experiences
- GPA: 3.9/4.0

University of Wisconsin-Madison

MS COMPUTER SCIENCES

Madison, WI, USA

2021 - 2023

- Advisor: Dr. Bilge Mutlu

University of Wisconsin-Madison

MS EDUCATIONAL PSYCHOLOGY (LEARNING SCIENCES AND HUMAN DEVELOPMENT)

Madison, WI, USA

2019 - 2023

- Advisor: Dr. Edward Hubbard (Educational Neuroscience Laboratory)

National Taiwan University

BS PSYCHOLOGY (HUMAN PERCEPTION AND COGNITION)

Taipei, Taiwan

2014 - 2019

- minor in Economics

Publications

PUBLISHED

†Mentored undergraduate student

†Liu, Z., †Wang, Y. K., **Ho, H. R.**, Wu, Y. H., Zhao, Y. H., Mutlu, B. (Under Review). AskNow: An LLM-powered Interactive System for Real-Time Question Answering in Large-Scale Classrooms. Proceedings of the 2026 CHI conference on human factors in computing systems (CHI '26). **Acceptance Rate: 25%**

Ho, H. R. (2026, March). Empowering Human Learning through Human-Robot Interaction. In Companion of the 2026 ACM/IEEE International Conference on Human-Robot Interaction (HRI '26). **Acceptance Rate: 23%**

Ho, H. R., Kargeti, N., Liu, Z., Mutlu, B. (2025, April). SET-PAiRED: Designing for Parental Involvement in Learning with an AI-Assisted Educational Robot. Proceedings of the 2025 CHI conference on human factors in computing systems (CHI '25). **Acceptance Rate: 24%**

Kim, C., Sato, A., White, N., **Ho, H. R.**, Lee, C., Huang, Y., Mutlu, B. (2025, April). Bridging Generations using AI-Supported Co-Creative Activities. Proceedings of the 2025 CHI conference on human factors in computing systems (CHI '25). **Acceptance Rate: 24% Honorable Mention Award (Top 251 in 5014)**

Ho, H. R. (2025, April). Empowering Parents and Teachers to Support Children's Learning through AI-based and Robotic Learning Companions. Extended Abstract of the 2025 CHI conference on human factors in computing systems (CHI EA '25). **Acceptance Rate: 18%**

Ho, H. R., Hubbard, E. M., Mutlu, B. (2024, May). "It's Not a Replacement:" Enabling Parent-Robot Collaboration to Support In-Home Learning Experiences of Young Children. Proceedings of the 2024 CHI conference on human factors in computing systems (CHI '24). **Acceptance Rate: 25% Honorable Mention Award (Top 150 in 4028)**

Ho, H. R., White, N. T., Hubbard, E. M., Mutlu, B. (2023, June). Designing Parent-child-robot Interactions to Facilitate In-Home Parental Math Talk with Young Children. In Proceedings of the 22nd Annual ACM Interaction Design and Children Conference (IDC '23) (pp. 355-366). **Acceptance Rate: 29%**

Ho, H. R., Cagiltay, B., White, N., Hubbard, E., Mutlu, B. (2021, June 24-30). RoboMath: Designing a Learning Companion Robot to Support Children's Numerical Skills. ACM Interaction Design and Children Conference (IDC '21), Athens, Greece. **Acceptance Rate: 36%**

Cagiltay, B., **Ho, H. -R.**, Michaelis, J., Mutlu, B. (2020, June 21-24). Investigating Family Perceptions and Design Preferences for an In Home Robot. ACM Interaction Design and Children Conference (IDC '20), London, United Kingdom. *Acceptance Rate: 32%*

Ho, H. -R., Chen, Y. -L., Wu, A. -Y., Yeh, S. -L., Youngstrom, E. A. (2017, August). Do people with different personalities show different emotion patterns? Poster presented at the American Psychological Association Annual Convention (APA '17), San Francisco, CA, United States.

Awards, Fellowships, & Grants

March 2026	HRI '26 Pioneers (<i>Acceptance rate: 23%</i>), HRI 2026	
April 2025	CHI '25 Best Paper Honorable Mention Award (<i>Top 251 in 5014</i>), CHI 2025	
April 2025	CHI '25 Doctoral Consortium Award (<i>Acceptance rate: 18%</i>), CHI 2025	\$1800
May 2024	CHI '24 Best Paper Honorable Mention Award (<i>Top 150 in 4028</i>), CHI 2024	
June 2023	Graduate Student Travel Award , University of Wisconsin-Madison	\$500
June 2023	Student Research Grants Competition , University of Wisconsin-Madison	\$1500
May 2022	Government Scholarship to Study Abroad (GSSA) , Ministry of Education, Taiwan (R.O.C.)	\$32,000
July 2018	Fully-Funded Scholarship: Study Abroad Program for Future Scholars in the Humanities and Social Sciences , Ministry of Education, Taiwan (R.O.C.)	\$30,000

Research Experience

Graduate Researcher

Madison, WI

09/2019 - Present

PEOPLE AND ROBOTICS LAB, UW-MADISON

- Designing novel interactions for human-AI and human-robot collaboration to enhance human learning and cognition.
- Leveraging principles in learning sciences and techniques in large language model (LLM) to conduct human-centered machine learning research.

Visiting Researcher

Singapore

09/2025 - 03/2026

HAI LAB, SINGAPORE MANAGEMENT UNIVERSITY

- Advised by Prof. Jiannan Li
- Led projects investigating how AI-powered robotic arm motion and physical manipulation can enhance human learning.

Graduate Researcher

Madison, WI

EDUCATIONAL NEUROSCIENCE LAB, UW-MADISON

2019-2023

- Investigated how attention and multisensory perception affect working memory and numerical cognition.

User Experience Researcher Intern – AI Platform Team

Menlo Park, CA

Summer 2022

META PLATFORMS, INC.

- Led mixed-methods studies collaborating with AI/ML engineers and support AI productivity through quantitative methods.

User Experience Researcher Intern – Consumer Team

Taipei, Taiwan

Summer 2017

TREND MICRO TAIWAN

- Led mixed-methods research to develop privacy-sensitive products and evaluated in-home parental control device.

Mentoring Experience

2025-now	Sophia Chen , Undergraduate Assistant	Madison, WI
2025-now	Arushi Dodhia , Undergraduate Assistant	Madison, WI
2024-2025	Tony (Yuankun) Wang , Undergraduate Assistant	Madison, WI
2023-2025	Ziqi Liu , Undergraduate Assistant (Honors)	Madison, WI
2023-2025	Justina Wang , Undergraduate Assistant (Honors)–Current CS PhD at Northwestern Univ.	Madison, WI
2023-2025	Nitigya Kargeti , Graduate Assistant	Madison, WI
2024	Yash Sancheti , Undergraduate Assistant–Current Software Engineer at Microsoft	Madison, WI
2022-2024	Muhammad Junaid , Graduate Assistant–Current Software Developer at Whova	Madison, WI

Teaching Experience

SU 2025	CS 540 Intro to Artificial Intelligence , Teaching Assistant	UW-Madison
2022 - 2024	EP 301 How People Learn , Teaching Assistant	UW-Madison
2020 - 2022	EP 326 Mind, Brain and Education , Teaching Assistant	UW-Madison

Service and Outreach

2022-now	Peer Review , CHI (2024*, 2025*, 2026*), HRI (2025, 2026), IUI (2026), IDC (2022, 2023, 2024), ICHEC (2026) * <i>Special recognition for outstanding reviews</i>	
March 2025	Academic Seminar by Prof. Ying Xu from HGSE , Student Host and Coordinator	Madison, WI
May 2024	ACM CHI 2024 , Student Volunteer	Honolulu, HI
June 2023	ACM IDC 2023 , Student Volunteer	Chicago, IL