Hui-Ru (Irene) Ho

PhD Student · Computer Sciences Program

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Education

University of Wisconsin–Madison *Madison, WI, USA*

PhD Computer Sciences (Human-Computer Interaction) *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 *Madison, WI, USA*

MS Computer Sciences *2021 - 2023*

- Advisor: Dr. Bilge Mutlu

University of Wisconsin–Madison *Madison, WI, USA*

MS Educational Psychology (Learning Sciences and Human Development) *2019 - 2023*

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

National Taiwan University *Taipei, Taiwan*

BS Psychology (Human Perception and Cognition) *2014 - 2019*

- minor in Economics

Publications

Published

†**Mentored undergraduate student**

Ho, H. R., Dodhia, A., Sharma, I., Chen, S., Mutlu, B. (Under Review). Designing Embodied AI for Informal Learning: How a Mobile Robot Can Support In Situ Discovery in the Physical World. Proceedings of the 2026 CHI conference on human factors in computing systems (CHI '26). *Under Review*

†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). *Under Review*

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** (*Acceptance rate: 23%*), HRI 2026	
April 2025	**CHI '25 Best Paper Honorable Mention Award** (*Top 251 in 5014*), CHI 2025	
April 2025	**CHI '25 Doctoral Consortium Award** (*Acceptance rate: 18%*), CHI 2025	*$1800*
May 2024	**CHI '24 Best Paper Honorable Mention Award** (*Top 150 in 4028*), 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*

People and Robotics Lab, UW-Madison *09/2019 - Present*

- 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*

HAI Lab, Singapore Management University *09/2025 - 03/2026*

- 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*

Meta Platforms, Inc. *Summer 2022*

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

User Experience Researcher Intern – Consumer Team *Taipei, Taiwan*

Trend Micro Taiwan *Summer 2017*

- 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)* **Special recognition for outstanding reviews*	
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*