

# Hui-Ru (Irene) Ho

PHD STUDENT · COMPUTER SCIENCES PROGRAM

University of Wisconsin-Madison, 1205 University Ave, Madison, WI 53726

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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

†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	<b>HRI '26 Pioneers</b> ( <i>Acceptance rate: 23%</i> ), HRI 2026	
April 2025	<b>CHI '25 Best Paper Honorable Mention Award</b> ( <i>Top 251 in 5014</i> ), CHI 2025	
April 2025	<b>CHI '25 Doctoral Consortium Award</b> ( <i>Acceptance rate: 18%</i> ), CHI 2025	\$1800
May 2024	<b>CHI '24 Best Paper Honorable Mention Award</b> ( <i>Top 150 in 4028</i> ), CHI 2024	
June 2023	<b>Graduate Student Travel Award</b> , University of Wisconsin-Madison	\$500
June 2023	<b>Student Research Grants Competition</b> , University of Wisconsin-Madison	\$1500
May 2022	<b>Government Scholarship to Study Abroad (GSSA)</b> , Ministry of Education, Taiwan (R.O.C.)	\$32,000
July 2018	<b>Fully-Funded Scholarship: Study Abroad Program for Future Scholars in the Humanities and Social Sciences</b> , 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	<b>Sophia Chen</b> , Undergraduate Assistant	Madison, WI
2025-now	<b>Arushi Dodhia</b> , Undergraduate Assistant	Madison, WI
2024-2025	<b>Tony (Yuankun) Wang</b> , Undergraduate Assistant	Madison, WI
2023-2025	<b>Ziqi Liu</b> , Undergraduate Assistant (Honors)	Madison, WI
2023-2025	<b>Justina Wang</b> , Undergraduate Assistant (Honors)– <i>Current CS PhD at Northwestern Univ.</i>	Madison, WI
2023-2025	<b>Nitigya Kargeti</b> , Graduate Assistant	Madison, WI
2024	<b>Yash Sancheti</b> , Undergraduate Assistant– <i>Current Software Engineer at Microsoft</i>	Madison, WI
2022-2024	<b>Muhammad Junaid</b> , Graduate Assistant– <i>Current Software Developer at Whova</i>	Madison, WI

## Teaching Experience

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

## Service and Outreach

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