

# Irene Hou

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Cognitive Science Department

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<https://houirene.github.io>

## Research Interests

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Human-Computer Interaction, Human-Centered AI, participatory AI, computing pedagogy

## Education

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2024 - Present <i>La Jolla, CA</i>	<b>University of California, San Diego</b> Ph.D. in Cognitive Science, Human-Computer Interaction Advisor: Philip Guo
2018 - 2022 <i>La Jolla, CA</i>	<b>University of California, San Diego</b> B.S. in Cognitive Science (Design/Interaction Spec.), Computer Science minor <i>cum laude</i>

## Publications

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- CHI 2026  
(in submission) [7] **Irene Hou**, Alex Qin, Lauren Cheng, and Philip Guo. Beyond the Desk: Barriers and Future Opportunities for AI to Assist Scientists in Embodied Physical Tasks. *In ACM CHI Conference on Human Factors in Computing Systems, ACM CHI '26, 2026.*
- CHI 2026  
(in submission) [6] **Irene Hou**, Zeyu Xiong, Philip Guo, and April Wang. “Bespoke Bots”: Diverse Instructor Needs for Customizing Generative AI Classroom Chatbots. *In ACM CHI Conference on Human Factors in Computing Systems, ACM CHI '26, 2026.*
- CI 2025 [5] **Irene Hou**,\* Jeongeon Park,\* Risa Sundu,\* and Steven Dow. Value-Centered Framing Supports Inclusive Idea Convergence in Participatory Civic Design. *In ACM Collective Intelligence, ACM CI '25, 2025. (\*denotes co-first author)*
- ITiCSE 2025 [4] **Irene Hou**, Kate Hamilton, Owen Man, Srishty Muthusekaran, Jeffin Johnykutty, Leili Zadeh, and Stephen MacNeil. “All Roads Lead to ChatGPT”: How Generative AI is Eroding Social Interactions and Student Learning Communities. *In Innovation and Technology in Computer Science Education, ACM ITiCSE '25, 2025.*
- ACE 2025 [3] Sebastian Gutierrez, **Irene Hou**, Jihye Lee, Kenneth Angelikas, Owen Man, Sophia Mettille, James Prather, Paul Denny, and Stephen MacNeil. Seeing the Forest and the Trees: Solving Visual Graph and Tree Based Data Structure Problems using Large Multimodal Models. *In Australasian Computing Education Conference, ACM ACE '25, 2025.*
- ACE 2024 [2] **Irene Hou**, Sophia Mettille, Owen Man, Zhuo Li, Cynthia Zastudil, and Stephen MacNeil. The Effects of Generative AI on Introductory Students’ Help Seeking Preferences. *In Australasian Computing Education Conference, ACM ACE '24, 2024.*  
**(Citations: 83)**

ACE 2024

- [1] **Irene Hou**, Owen Man, Sophia Mettille, Sebastian Gutierrez, Kenneth Angelikas, and Stephen MacNeil. More Robots are Coming: Large Multimodal Models (ChatGPT) can Solve Visually Diverse Images of Parsons Problems. *In Australasian Computing Education Conference, ACM ACE '24, 2024.*  
**(Citations: 35)**

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## Posters, Extended Abstracts, Workshop Papers

SIGCSE 2025

- [p.1] **Irene Hou**, Hannah V. Nguyen, Owen Man, and Stephen MacNeil. The Evolving Usage of Generative AI by Computing Students. *In Technical Symposium on Computing Science Education, ACM SIGCSE '25, 2025. Poster.*

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## Research Experience

Summer 2025

*Zurich, Switzerland*

**PEACH Lab, ETH Zürich** · Visiting Researcher

*Advisor: April Wang*

- Investigated how university instructors adapt generative AI classroom chatbots to their own pedagogical contexts

2024 – Present

*La Jolla, CA*

**Design Lab, UC San Diego** · Graduate Researcher

*Advisor: Philip Guo*

- Investigated how wet lab scientists adopt AI tools in their embodied workflows

2024 – Present

*La Jolla, CA*

**ProtoLab, UC San Diego** · Graduate Researcher

*Advisor: Steven Dow*

- Investigated ideation processes using generative AI and multimodal techniques within a community-driven recreation area design initiative

2023 – 2025

*Philadelphia, PA*

**Temple HCI Lab, Temple University** · Research Lead

*Advisor: Stephen MacNeil*

- Supervised 5 teams of undergraduates to publish on the impact of generative AI tools on computing pedagogy and education

2021 – 2022

*La Jolla, CA*

**ProtoLab, UC San Diego** · Undergraduate Researcher

- Designed for the CoBoards project, a digital whiteboard system that enhances collaboration and provides computational support

2021

*La Jolla, CA*

**Comparative Cognition Lab, UC San Diego** · Undergraduate Research Assistant

- Designed interface for intelligent video-analysis behavioral encoding tool

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## Research Mentorship

Students (undergraduates) I have directly supervised in research and/or mentored

**Alexander Yu**, UC San Diego

**Sophia Mettille**, Temple University [1, 2]

**Kenneth Angelikas**, Temple University [2, 3]

**Sebastian Gutierrez**, Temple University [2, 3]

**Leili Massoum Zadeh**, Temple University [4]

**Hannah Vy Nguyen**, Temple University [p.1]

**Brandson Trinh**, De Anza Community College → Data Science @ UC San Diego  
**Ben Nguyen**, Temple University  
**Srishty Muthusekaran**, Temple University [4]  
**Kate Hamilton**, Temple University [4]  
**Jeffin Johnykutty**, Temple University [4]  
**Alex Qin**, UC San Diego [7]  
**Lauren Cheng**, UC San Diego [7]  
**Olivia Lam**, Palomar Community College  
**Owen Man**, De Anza Community College → CS MS @ CSU San Marcos [1, 2, 3, 4, p.1]  
**Devon Tao**, UC San Diego  
**Zhuo Li**, Temple University [1]

## Additional Work Experience

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- 2021 – 2023                   **FluentPet** · UX Lead  
*San Jose, CA*
  - Led a team of designers and developers in the end-to-end design, build, and launch of FluentPet Connect, a connected-hardware app and product
  - Achieved 72% daily active users and 78.7% weekly active users, with over 58,000 weekly interactions in the first active month
- 2020                           **SONY** · Curriculum Designer  
*San Diego, CA*
  - Designed and taught curriculum for SONY's KOOV, an educational technology platform and kit that combines programming, robotics, and design
- 2017                           **Booknection Creative Writing Summer Camp** · Founder  
*San Diego, CA*
  - Founded a creative science-fiction writing camp for teen writers
  - Designed original curriculum, pitched to local academies, secured funding, marketed, and directed classes
- 2013 – 2018                   **Snowspirit: The Virgo Key** · Author  
*San Diego, CA*
  - Wrote and published an award-winning science-fiction/fantasy novel
  - Storyboarded, fundraised, designed PR campaigns, and organized launch events with 2,000+ attendees

## Awards and Honors

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- Apr 2025                      **National Science Foundation Graduate Research Fellowship (NSF GRFP)**  
Awarded to 1,000 of 15,000+ applicants in 2025 (6%); typically 2,300 awarded (15%)
- Jan 2023                      **CES 2023 Innovation Honoree**, Smart Home category  
UX Lead · FluentPet Connect
- Apr 2021                      **CitrusHack '21 Best UI/UX Hack** (500 hackers)  
Product Lead · Nudge (app)
- Jan 2016                      **Letter of Recognition**, California Legislative Assembly  
Honored for student authorship and literary excellence
- Jan 2015                      **Bronze Medalist**, National eLit Illuminary Awards  
Author · *Snowspirit: The Virgo Key*
- Jun 2014                      **State Award of Excellence**, National PTA Reflections  
Recipient · Category: Literature

## Invited Talks

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June 2025	<b>Responsible Tech Institute Student Network</b> , University of Oxford Talk: How GenAI is Eroding Social Interactions and Student Learning Communities
April 2025	<b>Canyon Crest Academy</b> , San Diego Seminar: Introduction to HCI and Exploring HCI Careers
May 2024	<b>Raspberry Pi Foundation</b> , United Kingdom (remote) Seminar: Generative AI is changing undergraduate education; and undergraduate research too!

## Service

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### Academic Service

Reviewer	CHI '25, CHI '24, CHI '26, SIGCSE '26
Student Volunteer	SIGCSE '25

### Outreach

Jan 2025 - May 2025	<b>Graduate Women in Computing @UC San Diego</b> , Outreach Co-Chair
Feb 2025	<b>GradWIC Inaugural Undergraduate Research Night</b> , Host
May 2025 - Present	<b>Graduate Women in Computing @UC San Diego</b> , Vice President

## Teaching

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### Teaching Assistant

Spring 2025 <i>La Jolla, CA</i>	<b>UC San Diego</b> , Department of Cognitive Science COGS 124 HCI Technical Systems Research
Winter 2025 <i>La Jolla, CA</i>	<b>UC San Diego</b> , Department of Cognitive Science COGS 127 Data-Driven UX/Product Design
Winter 2022 <i>La Jolla, CA</i>	<b>UC San Diego</b> , Department of Cognitive Science COGS 13 Field Methods: Studying Cognition in the Wild
Winter 2021 <i>La Jolla, CA</i>	<b>UC San Diego</b> , Department of Cognitive Science COGS 127 Data-Driven UX/Product Design

### Instructor

2019 – 2022 <i>San Diego, CA</i>	<b>Grace Academy</b> Courses taught: Introduction to Robotics, Introduction to Python, Introduction to Physics, Block-Based Programming, Computational Thinking
2018 – 2020 <i>San Diego, CA</i>	<b>Starton Tech EDU</b> Courses taught: Introduction to Python, Computational Thinking, Block-Based Programming, KOOV Robotics
2017 – 2019 <i>San Diego, CA</i>	<b>All-Star Academy</b> Courses taught: Creative Writing, Introduction to Programming