

# 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] <b>Beyond the Desk: Barriers and Future Opportunities for AI to Assist Scientists in Embodied Physical Tasks.</b> <u>Irene Hou</u> , Alex Qin, Lauren Cheng, and Philip Guo. <i>In ACM CHI Conference on Human Factors in Computing Systems, ACM CHI '26, 2026.</i>
CHI 2026 (in submission)	[6] <b>“Bespoke Bots”: Diverse Instructor Needs for Customizing Generative AI Classroom Chatbots.</b> <u>Irene Hou</u> , Zeyu Xiong, Philip Guo, and April Wang. <i>In ACM CHI Conference on Human Factors in Computing Systems, ACM CHI '26, 2026.</i>
CI 2025	[5] <b>Value-Centered Framing Supports Inclusive Idea Convergence in Participatory Civic Design.</b> Jeongeon Park*, <u>Irene Hou</u> *, Risa Sundu*, and Steven Dow. <i>In ACM Collective Intelligence, ACM CI '25, 2025.</i>
ITiCSE 2025	[4] <b>“All Roads Lead to ChatGPT”: How Generative AI is Eroding Social Interactions and Student Learning Communities.</b> <u>Irene Hou</u> , Kate Hamilton, Owen Man, Srishty Muthusekaran, Jeffin Johnykutty, Leili Zadeh, and Stephen MacNeil. <i>In Innovation and Technology in Computer Science Education, ACM ITiCSE '25, 2025.</i>
ACE 2025	[3] <b>Seeing the Forest and the Trees: Solving Visual Graph and Tree Based Data Structure Problems using Large Multimodal Models.</b> Sebastian Gutierrez, <u>Irene Hou</u> , Jihye Lee, Kenneth Angelikas, Owen Man, Sophia Mettelle, James Prather, Paul Denny, and Stephen MacNeil. <i>In Australasian Computing Education Conference, ACM ACE '25, 2025.</i>
ACE 2024	[2] <b>The Effects of Generative AI on Introductory Students’ Help Seeking Preferences.</b> <u>Irene Hou</u> , Sophia Mettelle, Owen Man, Zhuo Li, Cynthia Zastudil, and Stephen MacNeil. <i>In Australasian Computing Education Conference, ACM ACE '24, 2024.</i> (Citations: 81)

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

## Posters, Extended Abstracts, Workshop Papers

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

## Research Experience

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Summer 2025 **PEACH Lab, ETH Zürich** · Visiting Researcher  
*Zurich, Switzerland* *Advisor: April Wang*

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

2024 – Present **Design Lab, UC San Diego** · Graduate Researcher  
*La Jolla, CA* *Advisor: Philip Guo*

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

2024 – Present **ProtoLab, UC San Diego** · Graduate Researcher  
*La Jolla, CA* *Advisor: Steven Dow*

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

2023 – 2025 **Temple HCI Lab, Temple University** · Research Lead  
*Philadelphia, PA* *Advisor: Stephen MacNeil*

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

2021 – 2022 **ProtoLab, UC San Diego** · Undergraduate Researcher  
*La Jolla, CA*

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

2021 **Comparative Cognition Lab, UC San Diego** · Undergraduate Research Assistant  
*La Jolla, CA*

- Designed interface for intelligent video-analysis behavioral encoding tool

## 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 <i>San Diego, CA</i>	<b>SONY · Curriculum Designer</b> <ul style="list-style-type: none"> <li>Designed and taught curriculum for SONY's KOOV, an educational technology platform and kit that combines programming, robotics, and design</li> </ul>
2017 <i>San Diego, CA</i>	<b>Booknection Creative Writing Summer Camp · Founder</b> <ul style="list-style-type: none"> <li>Founded a creative science-fiction writing camp for teen writers</li> <li>Designed original curriculum, pitched to local academies, secured funding, marketed, and directed classes</li> </ul>
2013 – 2018 <i>San Diego, CA</i>	<b>Snowspirit: The Virgo Key · Author</b> <ul style="list-style-type: none"> <li>Wrote and published an award-winning science-fiction/fantasy novel</li> <li>Storyboarded, fundraised, designed PR campaigns, and organized launch events with 2,000+ attendees</li> </ul>

## Awards and Honors

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

## Invited Talks

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June 2025	<b>Oxford University Responsible Tech Institute</b> , United Kingdom 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

## Mentorship

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

**Alexander Yu**, UC San Diego  
**Sophia Mettelle**, 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]  
**Katelyn Luu**, UC San Diego

**Zhuo Li**, Temple University [1]