

# Erzhen Hu

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## Research

My research is at the intersection of **Human-AI Interaction**, **Artificial Intelligence**, and **Social and Collaborative Computing**. I design and study interactive systems that engineer both the scale and nuance of communication, bridging **behavioral theories** of human interaction with **AI-driven authoring and generative tools**. These systems span conversational interfaces, avatar-based simulations, and multimodal media. I envision a future where humans and AI co-exist as expressive, socially aware, and creative partners. My PhD was supported by a Google PhD Fellowship and a selection as MIT EECS Rising Stars participant. During summers, I've interned at Microsoft Research, Google, and Autodesk Research.

## Education

- 2021 – 2026 **Ph.D. in Computer Science, University of Virginia** – Charlottesville, VA  
(Exp.) Advisor: Prof. Seongkook Heo
- 2018 – 2020 **M.S. in Statistics, University of Virginia** – Charlottesville, VA
- 2014 – 2018 **B.A. in Sociology, Shanghai University** – Shanghai, CN

## Work Experience

- May–Sep 2025 **Autodesk Research**, Toronto, CA  
*Research Intern*  
Mentors: Dr. Frederik Brudy, Dr. David Ledo, and Dr. Fraser Anderson
- Jan–Aug 2024 **Google**, Hybrid, US  
*Student Researcher*  
Mentors: Dr. Ruofei Du
- May–Aug 2023 **Microsoft Research**, Redmond, US  
*Research Intern*  
Mentors: Dr. Nicolai Marquardt and Dr. Kori Inkpen

## Conference Full Publications

- Note** [ACM *CHI*, ACM *CSCW*, and ACM *UIST* are top-tier conferences in HCI and CS.]
- [C9] **PrevizWhiz: Combining Rough 3D Scenes and 2D Video to Guide Generative Video Previsualization**  
Erzhen Hu, Frederik Brudy, David Ledo, George Fitzmaurice, Fraser Anderson.  
[CHI 2026](#) - Accepted
- [C8] **Redirected Pinch: Efficient and Comfortable Bare-Hand Interaction for 2D Windows in VR**  
Wen Ying, Yeonsu Kim, Adil Rahman, Erzhen Hu, Geehyuk Lee, Seongkook Heo  
[CHI 2026](#) - Accepted

- [C7] **DialogLab: Authoring, Simulating, and Testing Dynamic Human-AI Group Conversations**  
Erzhen Hu, Yanhe Chen, Mingyi Li, Vrushank Phadnis, Pingmei Xu, Xun Qian, Alex Olwal, David Kim, Seongkook Heo, Ruofei Du.  
**UIST 2025** - The ACM Symposium on User Interface Software and Technology
- [C6] **Thing2Reality: Enabling Spontaneous Creation of 3D Objects from 2D Content using Generative AI in XR Meetings**  
Erzhen Hu, Mingyi Li, Xun Qian, Alex Olwal, David Kim, Seongkook Heo, Ruofei Du.  
**UIST 2025** - The ACM Symposium on User Interface Software and Technology
- [C5] **ThingMojji: User-Captured Cut-Outs For In-Stream Visual Communication**  
Erzhen Hu, Wan Qian, Changkong Zhou, Piaohong Wang, Xingyi Hu, Md Azim Asshikur Rahman, Yuhan Tsang, Zhicong Lu, Seongkook Heo.  
**CSCW 2025** – *ACM Conference on Computer-Supported Cooperative Work & Social Computing*.
- [C4] **ThingShare: Ad-Hoc Digital Copies of Physical Objects for Sharing Things in Video Meetings**  
Erzhen Hu, Jens Emil Grønbaek, Wen Ying, Ruofei Du, Seongkook Heo.  
**CHI 2023** – *ACM CHI Conference on Human Factors in Computing Systems*.
- [C3] **OpenMic: Utilizing Proxemic Metaphors for Conversational Floor Transitions in Multiparty Video Meetings**  
Erzhen Hu, Jens Emil Grønbaek, Austin Houck, Seongkook Heo.  
**CHI 2023** – *ACM CHI Conference on Human Factors in Computing Systems*.
- [C2] **Enjoy the Ride Consciously with CAWA: Context-Aware Advisory Warnings for Automated Driving**  
Erfan Pakdamanian, Erzhen Hu, Shili Sheng, Sarit Kraus, Seongkook Heo, Lu Feng.  
**AutoUI 2022**.
- [C1] **FluidMeet: Enabling Frictionless Transitions Between In-Group, Between-Group, and Private Conversations During Virtual Breakout Meetings**  
Erzhen Hu, Md Aashikur Rahman Azim, Seongkook Heo.  
**CHI 2022** – *ACM CHI Conference on Human Factors in Computing Systems*.

## Demo, Posters, Workshops

- [W3] **SpaceShare: Leveraging Multimodal Context For Fluid Sharing Of Spaces In Video Meetings**  
Hyeongjin Kim, Erzhen Hu, Seongkook Heo  
*UIST 2025 Poster*.
- [W2] **Experiencing Thing2Reality: Transforming 2D Content into Conditioned Multi-views and 3D Gaussian Objects for XR Communication**  
Erzhen Hu, Mingyi Li, Xun Qian, Alex Olwal, David Kim, Seongkook Heo, Ruofei Du.  
*UIST 2024 Demo*.
- [W1] **Enabling Remote Hand Guidance in Video Calls Using Directional Force Illusion**  
Archana Narayanan, Erzhen Hu, Seongkook Heo.  
*CSCW 2022 Poster*.

## Patents

- [P3] **Combining Rough 3D scenes and 2D video to guide generative video previsualization**  
[Erzhen Hu](#), David Ledo, Fraser Anderson, George Fitzmaurice and Frederik Brudy  
Autodesk, filed Jan 2026
- [P2] **Creating Three-Dimensional Object From Two-Dimensional Image**  
Ruofei Du, [Erzhen Hu](#)  
Google, filed May 2025
- [P1] **Media Stream Storyboard Generation**  
Kori Inkpen, Nicolai Marquardt, John Tang, Asta Roseway, [Erzhen Hu](#), Sasa Junuzovic, Nathalie Riche. WO2025/106208 (also published as US20250157103A1)  
Microsoft, filed Nov 2023, published May 2025

## Honors and Scholarships

- 2025 [EECS Rising Stars](#), MIT  
*One of the eight participants worldwide in HCI track in 2025*
- 2024 [Google PhD Fellowship](#) (HCI track, \$98,000)  
*One of the seven recipients worldwide in HCI track in 2024*
- 2024 Google Travel Award (\$3,000)
- 2022 ACM SIGCHI Gary Marsden Travel Award (\$1,400)
- 2021-2022 University of Virginia Computer Science Fellowship

## Professional Services

- 2023-2025 **Program Committee Member**  
ACM Creativity & Cognition (C&C) papers 2025  
ACM CHI Late-Breaking-Work (LBW) 2023, 2024  
ACM CSCW Poster 2024, ACM CSCW Demo Jury 2024
- 2022-2025 **Reviewer** [\* = Outstanding Reviews]  
CHI 2023 (\*), 2024, 2025 (\*x4), 2026 (\*x2)  
CSCW 2022, 2024 (\*); UIST 2023, 2024 (\*), 2025 (\*x2)  
DIS 2025 (\*), 2026; C&C 2024, 2025 (\*);  
MobileHCI 2022 (\*); Auto UI 2022; NordiCHI 2022 (\*)
- 2024 **Mentor**, Girls Who Code at UVA
- 2022 **Lab Visit Demo**, High School Visitation event organized by the Society of Women Engineers
- 2021-2022 **Student Volunteer**, CSCW 2022, UIST 2022, IUI 2022, IEEE VR 2022, ISS 2021

## Talks

- 2026 **Invited Talk**, [Intercollegiate Extended Reality \(ICXR\) organization](#), Virtual, US Jan 2026  
*Reality Across Dimensions: Virtual Communication with AI and XR*

2025	<b>Research Talk</b> , Autodesk Research, Toronto, ON	Aug 2025
	<b>Invited Lecture</b> , George Mason University, Fairfax, VA <i>Designing for Object-Centric Communication in Real-Time Video Streaming Systems</i>	Apr 2025
2024	<b>AR Intern Show &amp; Tell</b> , Google, CA, US	Aug 2024
	<b>Research Intern Talk</b> , Google, Virtual, US	Apr 2024
	<b>Invited Talk at HCI Seminar</b> , Google, Remote, CA	Feb 2024
2023	<b>Presentation on HC(AI)X Day</b> , Microsoft Research, Redmond, WA	Jul 2023
	<b>Research Talk</b> , Microsoft Research, Redmond, WA	Jun 2023
	<b>Invited Talk at City University of Hong Kong</b> , Virtual, HK	Feb 2023
2022	<b>UVA Link Lab Student Awardee and UVA Research Day</b> , Charlottesville, VA	Sep 2022
	<b>Invited Talk at Social Presence Seminar Series</b> , Virtual, US Host: Nicole Immorlica, Benjamin C. Pierce and Qiao Jin <a href="#">Talk Schedule</a>	Apr 2022

## Teaching

2025	<b>CS 3205 HCI in Software Development</b> , University of Virginia	Spring 2025
2024	<b>CS 6501 Human-Computer Interaction</b> , University of Virginia	Fall 2024
2023	<b>CS 4501/6501 Engineering Interactive Technology</b> , University of Virginia	Spring 2023
	<b>CS 6501 Human-Computer Interaction</b> , University of Virginia	Fall 2023