

# HOUJIANG LIU

Ph.D. Student, School of Information, University of Texas at Austin

## CONTACT

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## EDUCATION

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**University of Texas at Austin, School of Information**, 2021–present

Ph.D. Student of Information Studies/Science

Committee: Matthew Lease (advisor), Jacek Gwizdka, & Ahmer Arif

**Northeastern University, College of Arts, Media and Design**, 2020

M.F.A. in Experience Design

Committee: Miso Kim (advisor), Kristian Kloeckl, & Meryl Alper

**Jilin University, College of Physics**, 2015

B.S. in Applied Physics

## RESEARCH AREAS

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My research in **Human-Computer Interaction (HCI)** focuses on **Human-Centered Artificial Intelligence (AI)** and **Design Research**, with an emphasis on integrating human-centered principles into AI system design to increase **AI access and usability for domain experts** across various fields. One central focus is collaborating with diverse stakeholders, such as journalists, fact-checkers, and the public, **to combat mis/dis-information and foster informed public discourse** [M2, J6, J5, J4, P3]. Recently, I have expanded my research to explore **AI-accelerated scientific discovery**, investigating how using LLMs and agents might influence different research activities, including research ideation and code generation. My earlier work focused on **service design** [M3, J2, J3, C1, C2, C3, C5, P2] and **information visualization** [C4, J1, P1].

## AWARDS

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**Best Paper Honorable Mention**, ACM CSCW 2024

Recognition awarded to the top 4% of submitted papers. [[Official announcement](#)]

**4 x Recognized for Outstanding Reviews:** ACM CSCW x 3, ACM UIST x 1

**The Information is Beautiful Awards (longlist)**, 2022

The Information is Beautiful Awards (longlist) highlight exceptional global entries in data visualization, infographics, and information art, serving as showcase for finalists each year. [[Showcase](#), [Software](#), [Code](#)]

**First Design Award**, Health x Design Challenge, 2019

Winner of the 2019 Health Experience Design Challenge, recognizes innovative projects that promote health, financial wellbeing, and social impact, organized by Mad\*Pow (now part of BORN Consulting Group) and Robert Wood Johnson Foundation. [[Press](#)]

**Innovative Design Award**, Reinventing Tencent Map, Tencent, 2014

Winner of the 2014 Tencent Map Redesign, recognized for pioneering the integration of Augmented Reality (AR) features into the mobile application.

**RESEARCH GRANTS & SCHOLARSHIP**

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**Graduate Continuing Fellowship**, University of Texas at Austin, 2025-26

**Professional Development Award**, University of Texas at Austin, 2023, 24

**Summer Research Grant**, University of Texas at Austin, 2023

**Bridges Fellowship**, Center for Design, Northeastern University, 2021

**Deans' Award for Research Scholarship and Creativity**, Northeastern University, 2020

**Summer Research Grant**, Northeastern University, 2019

**Graduate Student Scholarship**, Northeastern University, 2018–20

**Undergrad Merit Scholarship**, Jilin University, 2012–13, 2015

**PROFESSIONAL EXPERIENCE**

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**Academic**

2021–present	Graduate Research Assistant AI & Human-Centered Computing Group, University of Texas at Austin
2020–21	Design Researcher Center for Design, Northeastern University
2020–21	Lecturer College of Arts, Media and Design, Northeastern University

**Professional**

2017–18	User Experience Designer SeetaTech, Beijing
2015–17	Interaction Designer JD.com, Beijing
2015, Spring	Interaction Design Intern JD.com, Beijing
2013, Summer	Design Intern Lenovo, Harbin

**PUBLICATIONS** (Authors with equal contributions are marked with \*)**Under-review Manuscripts**

- [M5] Huimin Xu, **Houjiang Liu**, Yan Leng, and Ying Ding. Adapting to LLMs: How Insiders and Outsiders Reshape Scientific Knowledge Production. 2025.
- [M4] **Houjiang Liu**, Yiheng Su, and Matthew Lease. Rhetorical XAI: Explaining AI's Benefits as well as its Use via Rhetorical Design. 2025. [[arXiv](#)]
- [M3] Mingfei Li, Shanshan Huang, Aimin Deng, and **Houjiang Liu**. Drivers of customer value cocreation behaviors in the context of robotic services: A trust transfer theory perspective. 2025.
- [M2] **Houjiang Liu\***, Li Shi\*, Yian Wong, Utkarsh Mujumdar, Dan Zhang, Jacek Gwizdka, and Matthew Lease. Argumentative Experience: Reducing Confirmation Bias on Controversial Issues through LLM-Generated Multi-Persona Debates. 2024. [[arXiv](#)]
- [M1] Jiaxin An, Siqu Yi, Yao Lyu, **Houjiang Liu**, and Yan Zhang. Conversational Agents for Older Adults' Health: A Systematic Literature Review. 2025. [[arXiv](#)]

**Journal Papers**

- [J6] **Houjiang Liu**, Jacek Gwizdka, and Matthew Lease. Exploring Multidimensional Checkworthiness: Designing AI-assisted Claim Prioritization for Human Fact-checkers. *Proceedings of ACM Human-Computer Interaction* (To appear at CSCW 2025) [[arXiv](#)]
- [J5] **Houjiang Liu\***, Anubrata Das\*, Alexander Boltz\*, Didi Zhou, Daisy Pinaroc, Matthew Lease, and Min Kyung Lee. Human-centered NLP Fact-checking: Co-Designing with Fact-checkers using Matchmaking for AI. *Proceedings of ACM Human-Computer Interaction*. 8, CSCW2, Article 423, 44 pages, 2024. [[DOL](#), [arXiv](#), [Presentation](#)] **Best Paper Honorable Mention (top 4%)**
- [J4] Anubrata Das, **Houjiang Liu**, Venelin Kovatchev, and Matthew Lease. The state of human-centered NLP technology for fact-checking. *Information Processing & Management*, 60(2) :103219, 2023. [[DOL](#), [arXiv](#)]
- [J3] **Houjiang Liu\***, Estefania Ciliotta Chehade\*, William Albert, and Miso Kim. An Empirical Study of How Service Designers Use Metrics. *She Ji: The Journal of Design, Economics, and Innovation*, 9(3) :402–427, 2023. [[DOL](#), [Blog](#)]
- [J2] Mingzhu Li, Miso Kim, Liqing Huang, and **Houjiang Liu**. Designing for people you can't meet: Persuasive design to nurture seniors' participation in community

services during the COVID-19 pandemic. *The Design Journal*, 26(6) :934–955, 2023. [[DOI](#)]

- [J1] Sara Colombo, Estefania Ciliotta Chehade, Lucia Marengo, **Houjiang Liu**, Piero Molino, and Paolo Ciuccarelli. Design for Emergency: How Digital Technologies Enabled an Open Design Platform to Respond to COVID-19. *Interacting with Computers*, 35(5) :650–665, 2023. [[DOI](#), [Website](#), [Blog](#), [Video](#)]

### Conference Papers

- [C5] **Houjiang Liu** and Miso Kim. Is gift a token of gratitude or an imposition of identity? Facilitating positive consequences of gift-giving with receiver-centred design. In: *Proceedings of International Association of Societies of Design Research (IASDR)*, 2023. [[DOI](#), [Presentation](#)]
- [C4] Jiabao Li, **Houjiang Liu**, Jilie Zeng, Di Wu, Ying Ding, and Alec McGail. Shifting Winds: Gendered Structures of Academic Mentorship. In: *2022 IEEE VIS Arts Program (VISAP)*, pp. 14–29, ieeexplore, 2022. [[DOI](#), [Website](#), [Code](#)]
- [C3] **Houjiang Liu**, Ray Lc, Miso Kim, Concettina Cormio, and Meixin Yu. Designing for Distance Nursing: Reconnecting Nursing Students with Senior Home Residents During COVID-19. In: *Proceedings of International Association of Societies of Design Research (IASDR)*, 2022. [[DOI](#), [Presentation](#)]
- [C2] **Houjiang Liu**, Miso Kim, Mingzhu Li, and Shruthi Lakshmi Narayan. Technology, Autonomy, and Participation: Designing Community Games and Services to Enhance Older Adults' Technology Literacy. In: *Proceedings of International Association of Societies of Design Research (IASDR)*, 2022. [[DOI](#), [Presentation](#)]
- [C1] **Houjiang Liu**, Miso Kim, Canqun He, and Tia Thomson. Autonomy as a Design Principle: Service Design for the Technology Literacy of Older Adults. In: *Proceedings of Design Culture(s) Cumulus*, Cumulus, 2021. [[DOI](#)]

### POSTERS & PRESENTATIONS

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#### Extended Abstract, Workshop, & Research Symposium (lightly reviewed)

- [P3] Anubrata Das, **Houjiang Liu**, Venelin Kovatchev, and Matthew Lease. The Need for Human-centered Design in Fact-checking Research. In: *Proceedings of the 1st Information Processing & Management (IP&M) Conference 2022*.
- [P2] **Houjiang Liu**, Enriching Family Gifts: Reciprocity in Family Relationships (Extended Abstract). *NA PhD by Design Symposium*, New York University, 2020.
- [P1] **Houjiang Liu**, Yingyin Xu, Anni Xu, How Food is Served in Early Care Center. *Northeastern University Visualization Consortium (NUVis) Demofest*. 2019.

#### Research & Design Showcases

- [M2] Generating Multi-Persona Debates with LLMs to Explore Diverse Perspectives on Controversial Topics. *Good Systems Annual Symposium, Shaping the Future of Ethical AI*. University of Texas at Austin, 2025.
- [M2] Argumentative Experience: Reducing Confirmation Bias on Controversial Issues through LLM-Generated Multi-Persona Debates. *iSchool AI Showcase: Community-Engaged Research on AI and Society*. University of Texas at Austin, 2024.
- [J4] An Exploration of Service Design Metrics. *Research, Innovation, Scholarship, Entrepreneurship (RISE), Virtual EXPO*. Northeastern University, 2021.
- [C2,3] Participatory Design for Senior Healthcare: Service Design to Improve Seniors' Health Literacy and Autonomy. *Research, Innovation, Scholarship, Entrepreneurship (RISE)*. Northeastern University, 2020.

## SERVICE

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### Peer Reviewer

**4 x Recognized for Outstanding Reviews: ACM CSCW 2024 & 2025; ACM UIST 2024**

- ACM SIGCHI Conference on Designing Interactive Systems (DIS) 2025
- ACM SIGCHI Conference on Computer-Supported Cooperative Work & Social Computing (CSCW) 2022–25
- ACM SIGCHI Conference on User Interface Software and Technology (UIST) 2024
- Design Research Society Conference (DRS) 2024

### Student Volunteer

- ACM SIGCHI Conference on Computer-Supported Cooperative Work & Social Computing (CSCW) 2024
- ACM International World Wide Web Conference (WebConf) 2023
- ACM SIGIR Conference on Human Information Interaction Retrieval (CHIIR) 2022
- User Experience Professionals Association Conference (UXPA) International 2015

### Ph.D. Representative, School of Information, University of Texas at Austin

- Research Committee 2024–25
- Master Studies Committee 2021–22

## TEACHING EXPERIENCE

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### Teaching Fellow, College of Arts, Media and Design, Northeastern University

ARTG2400 Interaction Design, Spring 2021

ARTG2401 Interaction Design Tools, Fall 2019, Spring 2020

### Teaching Assistant, College of Arts, Media and Design, Northeastern University

ARTG6330 Info Design Mapping Strategies, Fall 2020

ARTG6900 Design for Dignity, Fall 2019