

# 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 to 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** [J4, J5, M1, M2, P3]. Recently, I have expanded my research to explore **AI-accelerated scientific discovery**, investigating how advanced AI technologies, such as large language models (LLMs) and AI agents, can automate or accelerate research processes and uncover new scientific insights. In earlier stages of my academic career, I concentrated on **service design** [C1, C2, C3, C5, J2, J3, 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](#)]

**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.*

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**RESEARCH GRANTS & SCHOLARSHIP**

**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 Creative Activity**, Northeastern University, 2020

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

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

**Undergrad Merit Scholarship**, Jilin University, 2012–13, 15

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**PROFESSIONAL EXPERIENCE**

**Academic**

Graduate Research Assistant, AI Human-Centered Computing Group, University of Texas at Austin, 2021–present

Design Researcher, Center for Design, Northeastern University, 2020–21

Lecturer, College of Arts, Media and Design, Northeastern University, 2020–21

**Professional**

User Experience Designer, SeetaTech, Beijing, 2017–18

Interaction Designer, JD.com, Beijing, 2015–17

Interaction Design Intern, JD.com, Beijing, Spring, 2015

Marketing Design Intern, Lenovo, Harbin, Summer, 2013

Marketing Design Intern, Midea Group, Guangdong, Summer, 2012

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**PUBLICATIONS** (Authors with equal contributions are marked with \*)

**Under-reviewed Manuscripts**

[M1] **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.

[M2] **Houjiang Liu**, Jacek Gwizdka, and Matthew Lease. Exploring Multidimensional Checkworthiness: Designing AI-assisted Claim Prioritization for Human Fact-checkers. 2024.

### Journal Papers (strictly peer-reviewed)

- [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. [[DOI](#), [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. [[DOI](#), [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. [[DOI](#), [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 (strictly peer-reviewed)

- [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 peer-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

- [M1] 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.
- [M1] Multi-Agentive LLM Framework to Mitigate Cognitive Biases in Information-Seeking Contexts. Good Systems Annual Symposium, Shaping the Future of Ethical AI. 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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### Paper Reviewer

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

**Review with Special Recognition, CSCW 2025, 24, UIST 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 and 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