HOUJIANG LIU

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

CONTACT

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EDUCATION

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, June 2020
M.F.A. in Design
Committee: Miso Kim (advisor), Kristian Kloeckl, & Meryl Alper

Jilin University, College of Physics, July 2015
B.S. in Applied Physics

RESEARCH AREAS

My research in Human-Computer Interaction (HCI) centers on Human-Centered Artificial Intelligence (AI) and Design Research, with a particular focus on integrating human-centered principles into AI system design.

A major strand of my work involves collaborating with key stakeholders in the online information ecosystem, such as journalists, fact-checkers, and the public, to address mis/disinformation and foster informed public discourse [J6, J5, J4, M2]. More recently, I have expanded my interests to AI-accelerated scientific discovery, examining how large language models (LLMs) and LLM-based agents may shape different stages of research activities [M5, M4]. In addition, building on my prior work, I continue to investigate service design for older adults' tech literacy and health [J3, J2, C5, C3, C2, C1, M1] and information visualization [J1, C4, P4, E3].

AWARDS

Best Paper Honorable Mention, ACM CSCW 2024
Recognition is 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 showcases 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

Graduate Continuing Fellowship, University of Texas at Austin, 2025-26
Professional Development Award, University of Texas at Austin, 2023, 24, 25
Summer Research Grant, University of Texas at Austin, 2023
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

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
2012, Summer	Design Intern
	Midea Group, Foshan

PUBLICATIONS (Authors with equal contributions are marked with *)

Peer-Reviewed Journal [J]

[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, 9 (7): CSCW292,* 49 pages, 2025 [DOI, arXiv, Code, Slides, Video]

[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, Slides] **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]

Peer-Reviewed Conference [C] Proceedings

[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, Slides]

[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, Slides]

[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, Slides]

[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]

Lightly Reviewed Extended Abstracts & Posters [P]

[P2]   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. [pdf]

[**P1**] **Houjiang Liu**, Enriching Family Gifts: Reciprocity in Family Relationships (Extended Abstract of C5). *NA PhD by Design Symposium*, New York University, 2020. (Symposium canceled due to COVID19 shutdown)

Pre-print Manuscripts [M]

[**M5**] **Houjiang Liu***, Yujin Choi*, Sanjana Gautam, Gabriel Jaffe, Soo Young Rieh, and Matthew Lease. Who Owns Creativity and Who Does the Work? Trade-offs in LLM-Supported Research Ideation. 2025.

[**M4**] Huimin Xu, **Houjiang Liu**, Yan Leng, and Ying Ding. Adapting to LLMs: How Insiders and Outsiders Reshape Scientific Knowledge Production. 2025. [arXiv]

[**M3**] **Houjiang Liu**, Yiheng Su, and Matthew Lease. Rhetorical XAI: Explaining AI's Benefits as well as its Use via Rhetorical Design. 2025. [arXiv]

[**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, Siqi Yi, Yao Lyu, **Houjiang Liu**, and Yan Zhang. Conversational Agents for Older Adults' Health: A Systematic Literature Review. 2025. [arXiv]

TALKS & PRESENTATIONS (Referencing previous academic work)

[**J6**] Exploring Multidimensional Checkworthiness: Designing AI-assisted Claim Prioritization for Human Fact-checkers.
- *iSchools Doctoral Seminar Series*, August 2025.

[**M2**] Generating Multi-Persona Debates with LLMs to Explore Diverse Perspectives on Controversial Topics.
- *Kungfu.AI* guest lecture, May 2025.
- *Good Systems Annual Symposium, Shaping the Future of Ethical AI.* University of Texas at Austin, Spring 2025.
- *iSchool AI Showcase: Community-Engaged Research on AI and Society.* University of Texas at Austin, Fall 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.

EXHIBITION & ARTWORKS (Some exhibition referencing previous academic work)

[**E3**] Yinan Dong, **Houjiang Liu**. Biophilia: Mapping the Emotional Pulse of Urban Nature. In: *2025 Information+ Conference*, Boston, 11/14-16. [Exhibition]

[**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. [Exhibition]

[**E2**] Sara Lenzi, Paolo Ciuccarelli, **Houjiang Liu**, Yuan Hua. Data Sonification Archive, 2021. [Website]

[**E1**] **Houjiang Liu**, Yingyin Xu, Anni Xu, How Food is Served in Early Care Center. *Northeastern University Visualization Consortium (NUVis) Demofest*. Boston, 2019.

SERVICE

Peer Reviewer
5 x Recognized for Outstanding Reviews: ACM CSCW24 & 25; UIST24; CHI26
- *ACM SIGCHI Conference on Human Factors in Computing Systems (CHI) 2026*
- *ACM SIGCHI Conference on Collective Intelligence (CI) 2025*
- *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, 2025*
- *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 2024–26
- Master Studies Committee 2021–22

TEACHING EXPERIENCE

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