

Jianguen He

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RESEARCH INTERESTS

- Human-AI Interaction, Human-Robot Interaction, Conversational AI
- Quantitative Studies of Science, AI for Science
- Information Visualization, Visual Analytics

WORK EXPERIENCE

- School of Information Sciences, The University of Tennessee, Knoxville
- **Assistant Professor** Aug 2020 – present
- College of Computing and Informatics, Drexel University
- **Research Assistant**, Visual Analytics and Text Mining Sep 2014 – Jun 2020
- Social Network Business Group, Tencent Inc
- **Front-end Development Engineer** Jul 2012 – May 2014
 - Development of web games and web apps.

EDUCATION

- Drexel University**, Philadelphia, USA
- Doctor of Philosophy in Information Studies Sep 2014 – Jun 2020
 - Dissertation topic: Predictive and Visual Analytics of Scientific Development
- Wuhan University**, Wuhan, China
- Master of Management Science in Information Science Aug 2010 – Jun 2012
 - Graduated with Outstanding Dissertation Award.
- Nanjing Tech University**, Nanjing, China
- Dual Bachelor in Business Administration & Computer Science Sep 2006 – Jun 2010
 - Graduated with Honors and Outstanding Dissertation Award.

GRANTS

- [10] 2026 – 2028. He, J. (PI). *Beyond Walls of Text: Building UI-Native LLM Agents as the Next Gateway to the Internet*. **Amazon Research Award** — Agentic AI. \$70,000 cash funding plus \$50,000 in AWS credits.
- [9] 2026–2027. He, J. (PI). *Scientific Novelty in AI-assisted Research*. **Google Gemini Academic Program Award**. \$10,000 in Google Cloud credits.
- [8] 2026–2027. Horne, B. (PI), & He, J. (co-PI). *Designing Generative AI Chatbots for Appropriate Reliance via Information Interventions*. The University of Tennessee, **CCI Artificial Intelligence Grant**, \$9,420.
- [7] 2026–2027. He, J. (PI). *Empowering Collaborative Learning: Co-Designing and Evaluating Social Robots as Participation Facilitators*. The University of Tennessee, **CCI Artificial Intelligence Grant**, \$9,981.
- [6] 2026. He, J. (co-PI), & Horne, B. (co-PI). *Investigating Media Trust in AI-Mediated News Consumption*. The University of Tennessee, **CCI Information Integrity Institute Research Funding Award**, \$2,500.
- [5] 2026–2028. Zahra, F. (PI), Bowers, D. (co-PI), & He, J. (co-PI). *Next Level Teaching Blueprint: Higher Order Thinking with Generative AI*. **UTK ORIED**, \$200,000.
- [4] 2022. The University of Tennessee, Student/Faculty Research Awards, \$5,000.

- [3] 2021-2024. Yan, E. (lead PI), He, J. (site PI), Ni, C. (site PI), Palmer, R. (site PI), & Kelly, M. (co-PI). *Collaborative Research: Examining the effects of academic mobility on individual professors' research activity and institutional human capital at HBCUs*. **National Science Foundation**, #2122691, \$737,596 (UT share: \$191,102).
- [2] 2021. The University of Tennessee, Research Development Academy, \$4,000.
- [1] 2018. Drexel University ExCITE Center Research Funding Award, \$5,000.

PUBLICATIONS

Journal Papers

- [19] Liu, J., & He, J. (2026). The decoy dilemma in online medical information evaluation: A comparative study of credibility assessments by LLM and human judges. *ACM Transactions on Interactive Intelligent Systems* (accepted).
- [18] Luo, Z., He, J., Qian, J., Wang, Y., & Lu, W. (2025). Do the paper's connections to existing work disclose its citation impact? A study based on graph representation learning. *Journal of Information Science*, 51(3), 638–657. <https://doi.org/10.1177/01655515231151651>
- [17] Bilal, D., He, J., & Liu, J. (2025). Guest editorial: AI in education: transforming teaching and learning. *Information and Learning Sciences*, 126(1/2), 1–7. <https://doi.org/10.1108/ILS-01-2025-0001>
- [16] Yan, E., Palmer, R. T., He, J., Ni, C., Kelly, M., & Zarrillo, D. (2025). Diversity of HBCUs' institutional human capital: A cross-discipline, longitudinal analysis of faculty hiring and placement at HBCUs. *Innovative Higher Education*, 50(3), 1021–1039. <https://doi.org/10.1007/s10755-024-09772-y>
- [15] Wu, C., Yan, E., Ni, C., & He, J. (2024). To move or to be promoted: Examining the effect of promotions and academic mobility on professors' productivity and impact. *Journal of the Association for Information Science and Technology*, 75(12), 1350–1367. <https://doi.org/10.1002/asi.24844>
- [14] Zhu, Y., Kim, D., Jiang, T., Zhao, Y., He, J., Chen, X., & Lou, W. (2024). Dependency, reciprocity, and informal mentorship in predicting long-term research collaboration: A co-authorship matrix-based multivariate time series analysis. *Journal of Informetrics*, 18(1), 101486. <https://doi.org/10.1016/j.joi.2023.101486>
- [13] Lou, W., He, J., Xu, Q., Zhu, Z., Lu, Q., & Zhu, Y. (2024). Rhetorical structure parallels research topic in LIS articles: A temporal bibliometrics examination. *Aslib Journal of Information Management*, 76(3), 416–434. <https://doi.org/10.1108/AJIM-03-2023-0138>
- [12] Lou, W., He, J., Zhang, L., Zhu, Z., & Zhu, Y. (2023). Support behind the scenes: The relationship between acknowledgement, coauthor, and citation in Nobel articles. *Scientometrics*, 128(10), 5767–5790. <https://doi.org/10.1007/s11192-023-04785-4>
- [11] Luo, Z., Lu, W., He, J., & Wang, Y. (2022). Combination of research questions and methods: A new measurement of scientific novelty. *Journal of Informetrics*, 16(2), 101282. <https://doi.org/10.1016/j.joi.2022.101289>
- [10] Li, Y., He, J., Liu, C., & Ping, Y. (2022). Peer influence in the adoption of video games. *International Journal of E-Business Research*, 18(1), 1–16. <https://doi.org/10.4018/IJEER.290110>
- [9] Lou, W., Su, Z., He, J., & Li, K. (2021). A temporally dynamic examination of research method usage in the Chinese library and information science community. *Information Processing & Management*, 58(5), 102686. <https://doi.org/10.1016/j.ipm.2021.102686>
- [8] Lou, W., Zhang, J., Li, K., & He, J. (2020). Understanding the application of science mapping tools in LIS and non-LIS domains. *Data and Information Management*, 4(2), 94–108.
- [7] Yan, E., Zhu, Y., & He, J. (2020). Analyzing academic mobility of U.S. professors based on the ORCID data and the Carnegie Classification. *Quantitative Science Studies*, 1(4), 1451–1467.
- [6] He, J., Ping, Q., Chen, C., & Lou, W. (2019). PaperPoles: Toward supporting exploration of citations based on evolving information needs. *Journal of the Association for Information Science and Technology*, 70(8), 843–857. <https://doi.org/10.1002/asi.24171>

- [5] He, J., & Chen, C. (2018). Temporal representations of citations for understanding the changing roles of scientific publications. *Frontiers in Research Metrics and Analytics*, 3, 27. <https://doi.org/10.3389/frma.2018.00027>
- [4] He, J., & Chen, C. (2018). Predictive effects of novelty measured by temporal embeddings on the growth of scientific literature. *Frontiers in Research Metrics and Analytics*, 3, 9. <https://doi.org/10.3389/frma.2018.00009>
- [3] Lou, W., Wang, H., & He, J. (2018). Of the people for the people: Digital literature resource knowledge recommendation based on user cognition. *Information Technology and Libraries*, 37(3), 66–83. <https://doi.org/10.6017/ital.v37i3.10101>
- [2] Ping, Q., He, J., & Chen, C. (2017). How many ways to use CiteSpace? A study of user interactive events over 14 months. *Journal of the Association for Information Science and Technology*, 68(5), 1234–1256. <https://doi.org/10.1002/asi.23770>
- [1] Lu, W., He, J., Wang, X., & Wu, J. (2012). A visualization technique for multidimensional data with hierarchical and temporal structure. *Journal of the China Society for Scientific and Technical Information*, 31(11), 1131–1139.

Conference Papers

- [19] He, J., & Liu, J. (2026). Not all transparency is equal: Source presentation effects on attention, interaction, and persuasion in conversational search. In *Proceedings of the 2026 ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR '26)* (pp. 529–533). New York, NY: ACM. <https://doi.org/10.1145/3786304.3787874>
- [18] Wang, P., Wolfram, D., & He, J. (2026). AI-assisted semantic analysis of key elements in scientific journal open peer reviews. In *Proceedings of the 2026 11th International Conference on Big Data Analytics (ICBDA)*.
- [17] Zhang, W., He, J., & Santos, M. (2026). Bridging psychological safety and skill guidance: An adaptive robotic interview coach. In *Companion Proceedings of the 21st ACM/IEEE International Conference on Human–Robot Interaction (HRI Companion '26)*, pp. 783–787. Edinburgh, Scotland, UK. <https://doi.org/10.1145/3776734.3794502>
- [16] He, J., Zhang, W., & Barfield, J. K. (2026). From human bias to robot choice: How occupational contexts and racial priming shape robot selection. In *Proceedings of the 21st ACM/IEEE International Conference on Human–Robot Interaction (HRI '26)*, pp. 581–589. Edinburgh, Scotland, UK. <https://doi.org/10.1145/3757279.3788658> (Featured in *Scientific American*)
- [15] Liu, J., & He, J. (2025). Boundedly rational searchers interacting with medical misinformation: Characterizing context-dependent decoy effects on credibility and usefulness evaluation in sessions. In *Proceedings of the ACM SIGIR Conference on Human Information Interaction and Retrieval* (pp. 1-10). New York, NY: ACM.
- [14] He, J., Feng, C., Lou, W., Song, B., & Zang, Y. (2023). The role of open code in scholarly communication: A citation analysis in computational linguistics. In *Proceedings of the 2023 International Conference on Scientometrics & Informetrics*.
- [13] Yan, E., Kelly, M., Zarrillo, D., He, J., Ni, C., & Palmer, R. (2023). Examining the academic mobility at Historically Black Colleges and Universities in the U.S. In *Proceedings of the 2023 International Conference on Scientometrics & Informetrics*.
- [12] Zhu, Z., Zhang, L., He, J., & Lou, W. (2021). The impact of acknowledgement on coauthorship and citation: Who were acknowledged in Nobel Prize Laureates' publications? In *Proceedings of Metrics 2021: Workshop on Informetric and Scientometric Research (SIG-MET)*, Salt Lake City, United States.
- [11] He, J., Yan, E., & Ni, C. (2021). Examining international research collaboration under the COVID-19 pandemic by arXiv preprints. In *Proceedings of the 2021 International Conference on Scientometrics & Informetrics*.
- [10] Lou, W., Su, Z., Zheng, S., & He, J. (2021). The effects of rhetorical structure on citing behavior in research articles. In *Proceedings of the 2021 International Conference on Scientometrics & Informetrics*.

- [9] Liao, Y., & He, J. (2020). The effects of racial mirroring in chatbot-based psychotherapeutic conversation. In *Proceedings of the 25th International Conference on Intelligent User Interfaces (ACM IUI 2020)*, Cagliari, Italy. <https://doi.org/10.1145/3377325.3377488>
- [8] He, J., Lou, W., & Li, K. (2019). How were science mapping tools applied? The application of science mapping tools in LIS and non-LIS domains. In *Proceedings of the Association for Information Science and Technology (ASIST 2019)*, Melbourne, Australia.
- [7] Yang, Z., Huang, Y., Kahn, B., & He, J. (2019). Voice or click? How shopping by voice influences consumer's product choices. In *Proceedings of the 2019 Association for Consumer Research Conference (ACR 2019)*, Atlanta, United States.
- [6] He, J., & Chen, C. (2019). The citations of papers with conflicting reviews and confident reviewers. In *Proceedings of the International Society for Scientometrics and Informetrics Conference (ISSI 2019)*, Rome, Italy.
- [5] Yang, Z., He, J., Huang, Y., & Kahn, B. (2019). Understand consumer behavior and product decision making in voice-assisted vs. mouse-click shopping. In *Proceedings of the Theory + Practice in Marketing (TPM) Conference*, New York, United States.
- [4] Li, Y., Liu, C., & He, J. (2019). Do recommendation from friends matter? Evidence from video game platforms. In *Proceedings of the Northeast Decision Sciences Institute 2019 Annual Conference*, Philadelphia, United States.
- [3] He, J., & Chen, C. (2017). Visualizing temporal patterns in representation data. In *Proceedings of the 2017 Workshop on Visual Analytics for Deep Learning*, Phoenix, United States.
- [2] He, J., & Chen, C. (2017). Understanding the changing roles of scientific publications via citation embeddings. In *Proceedings of 2nd Workshop on Mining Scientific Papers: Computational Linguistics and Bibliometrics* (pp. 42-48), Wuhan, China.
- [1] He, J., & Chen, C. (2016). Spatiotemporal analytics of topic trajectory. In *Proceedings of the 9th International Symposium on Visual Information Communication and Interaction* (pp. 112-116), Dallas, Texas, United States. <https://doi.org/10.1145/2968220.2968240>

Book Chapters

- [1] Barfield, J., & He, J. (2026). A Discussion of Theories Guiding Human-Robot Interaction with Implications for Ethics. In Y.-H. Weng (Ed.), *Social Robots and Ethical Design: Interdisciplinary Insights from Experimental Governance*. Springer Singapore. (Perspectives in Law, Business and Innovation Series)

Conference Posters and Short Papers

- [10] He, J., & Lou, W. (2025). How academic structure shapes research focus in Library and Information Science schools. In *Proceedings of the Association for Information Science and Technology*, 62(1), 1475–1477.
- [9] Xu, Q., Meng, J., He, J., & Lou, W. (2023). How does AI assist scientific research domains? Evidence based on 26 million research articles. In *Proceedings of EEKE/AII@JCDL*, pp. 90–92.
- [8] Meng, J., Lou, W., & He, J. (2022). Quantifying individual research's distance from the trends based on dynamic topic modeling. In *Proceedings of the Association for Information Science and Technology*, 59(1), 762–763.
- [7] Chong, M., Shah, C., Shu, K., He, J., & Hagen, L. (2022). Delving into data science methods in response to the COVID-19 infodemic. In *Proceedings of the Association for Information Science and Technology*, 59(1), 555–558.
- [6] He, J. (2022). Scientific convergence and divergence in visualization and visual analytics. In *EuroVis Workshop on Visual Analytics (EuroVA)*, pp. 1–3.
- [5] Peng, Y., Lou, W., He, J., & Larivière, V. (2021). Where did they come from? On global mobility of Chinese returnees. In *Proceedings of the Association for Information Science and Technology*, 58(1), 804–805.
- [4] Luo, Z., He, J., Qian, J., Wang, Y., Chen, J., & Lu, W. (2020). Can scientific publication's network structural features predict its citation? In *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries (JCDL '20)*, pp. 485–486.

- [3] He, J., & Li, K. (2019). How comprehensive is the PubMed Central Open Access full-text database? In *Proceedings of the iConference 2019*, Washington D.C., United States.
- [2] He, J. (2018). Deep learning for predicting scientific growth trends. In *Proceedings of the 14th International Conference on Knowledge Management*, Vancouver, Canada.
- [1] Lu, K., Lu, W., Cheng, Q., Lei, S., & He, J. (2012). A visualization tool for topic evolution among research fields. In *Proceedings of International Society of Scientometrics and Informetrics Conference* (pp. 1063–1066).

Preprints/Under Review

- [12] Yang, Q., & He, J. (2026). Navigating AI uncertainty: How human verification shapes decision-making patterns.
- [11] Horne, B., He, J., & Nevo, D. (2026). On the effectiveness of fact-checking information from politically congruent and incongruent large language models. (*Equal contribution with first author.*)
- [10] He, J., Zhang, W., & Barfield, J. K. (2026). Why that robot? A qualitative analysis of justification strategies for robot color selection across occupational contexts. *arXiv preprint arXiv:2603.28919*. (Featured in *Scientific American*)
- [9] Yang, Q., & He, J. (2026). Guiding or misleading? How AI confidence disclosures shape human verification strategy and trust calibration.
- [8] He, J., & Liu, J. (2026). Seeing to think? How source transparency design shapes interactive information seeking and evaluation in conversational AI. *arXiv preprint arXiv:2601.14611*.
- [7] Nevo, D., Horne, B., & He, J. (2026). Belief congruency and the processing of AI-generated advice: A heuristic–systematic perspective.
- [6] Yang, Z., Huang, Y., Kahn, B., & He, J. (2026). How interaction design shapes acceptance of SST recommendations: The role of input modality and system competence.
- [5] Zhang, W., He, J., & Santos, M. (2026). Tackling the scaffolding paradox: A person-centered adaptive robotic interview coach. *arXiv preprint arXiv:2601.15600*.
- [4] Lou, W., Díaz-Faes, A. A., He, J., Liu, Z., & Larivière, V. (2026). Global inequalities in clinical trials participation. *medRxiv 2026.01.08.26343653*.
- [3] He, J., & Lou, W. (2026). How disciplinary partnerships shape research landscape in US Library and Information Science schools. *arXiv preprint arXiv:2601.20806*.
- [2] He, J. (2025). Who gets cited? Gender- and majority-bias in LLM-driven reference selection. *arXiv preprint arXiv:2508.02740*.
- [1] He, J., & Liu, J. (2025). Investigating the impact of LLM personality on cognitive bias manifestation in automated decision-making tasks. *arXiv preprint arXiv:2502.14219*.

AWARDS

- 2026 SIS Bonnie Carroll and Roy Cooper Faculty Enrichment Award (\$2,500)
- 2021 The University of Tennessee, Research Development Academy Scholar
- 2020 Beta Phi Mu Eugene Garfield Doctoral Dissertation Fellowship (\$3,000)
- 2019 ISSI Eugene Garfield Doctoral Dissertation Scholarship (\$3,000)
- 2019 *Publications* Travel Award (\$850)
- 2018 Drexel University International Presentation Award (\$750)
- 2016, 2017, 2018 Drexel University CCI Travel Award (\$3,000)
- 2011, 2012 Wuhan University the First Prize Scholarship for Graduate Students
- 2009 National Computer Design Competition for Chinese College Students, National First Prize

TEACHING

Instructor

- INSC 584 Database Management System (Graduate), University of Tennessee
- INSC 486 Data Analytics (Undergraduate), University of Tennessee
- INSC 489 Data Visualization (Undergraduate), University of Tennessee

- INSC 210 Foundations of Information Technology (Undergraduate), University of Tennessee
- INFO 210 Database Management System (Undergraduate), Drexel University

Teaching Assistant

- INFO 600 Web Systems and Architecture (Graduate), Drexel University, 2018
- CI 103 Computing and Informatics Design III, Lab Instructor, Drexel University, 2016
- CI 102 Computing and Informatics Design II, Lab Instructor, Drexel University, 2016
- CI 101 Computing and Informatics Design I, Lab Instructor, Drexel University, 2015
- INFO 320 Server Technology I, Teaching Assistant, Drexel University, 2015

REVIEWS

Grant Proposals

- Dutch Research Council (NWO)
- Institute of Museum and Library Services
- National Science Foundation

Journals

- *Open Sage*
- *Journal of Medical Internet Research*
- *PeerJ Computer Science*
- *Sustainability*
- *Entropy*
- *IEEE Access*
- *Open Information Sciences*
- *PLOS One*
- *Publications*
- *Journal of Information Science*
- *Scientometrics*
- *KSII Transactions on Internet and Information Systems*
- *Journal of the Association for Information Science and Technology*
- *Information Visualization*
- *Frontiers in Research Metrics and Analytics*
- *IEEE Transactions on Emerging Topics in Computing*
- *Information Processing and Management*

Conferences

- *ACL*
- *ALISE*
- *ASIS&T*
- *iConference*
- *Society for Consumer Psychology Annual Meeting*
- *VINCI*

SERVICE

Internal

- Research Advisory Committee Member, College of Communication and Information, University of Tennessee, 2021-2026
- Data Science Curriculum Committee Member, University of Tennessee, 2021-2024
- Tenure-track Assistant Professor Search Committee Member, School of Information Sciences, University of Tennessee, 2021-2022
- Undergraduate Program Committee Member, School of Information Sciences, University of Tennessee, 2020-2021, 2022-2023

- Clinical Assistant Professor Search Committee Member, School of Information Sciences, University of Tennessee, 2020-2021

External

- Committee Member, **ALISE Bohdan S. Wynar Research Paper Competition**, 2021
- Committee member, 2nd Workshop on Extraction and Evaluation of Knowledge Entities from Scientific Documents, 2021
- Committee member, IEEE International Workshop on Data Quality for Intelligent Systems, 2021
- Associate Editor, **Frontiers in Research Metrics and Analytics**, 2021-present
- Instructor, **IDEA Institute on Artificial Intelligence**, 2024, 2025
- Instructor and Advisory Board Member, **IDEA Institute on Artificial Intelligence**, 2021, 2022
- Panel & Alternative Events Co-Chair, **ASIS&T**, 2021
- Doctoral Dissertation Committee Member, Kathleen Padova, Drexel University, 2021
- Program Committee Member, The 10th International Symposium on Visual Information Communication and Interaction, **VINCI**, 2017

PRESENTATIONS

- Paper Presentation, **CHIIR**, 2026
- Poster Presentation, **ASIS&T**, 2025
- Poster Presentation, **ASIS&T**, 2025
- Paper Presentation, **JCDL**, 2023
- Poster Presentation, **ASIS&T**, 2022
- Poster Presentation, **ASIS&T**, 2021
- Paper Presentation, **Annual Meeting of the Society for Social Studies of Science (SSSS)**, 2022
- Early Career Colloquium, **iConference**, 2021
- Invited Talk, INSC 588, **University of Tennessee**, 2021
- Invited Talk, LIS 4673/5673, **University of Oklahoma**, 2020
- Paper Presentation, **ASIS&T**, 2019
- Doctoral Colloquium, **ASIS&T**, 2019
- Poster Presentation, **ALISE**, 2019
- Paper Presentation, **ISSI**, 2019
- Doctoral Forum, **ISSI**, 2019
- Poster Presentation, **iConference**, 2019
- Young Researcher Presentation, **ICKM**, 2018
- Invited Talk, **INORMS**, 2018
- Workshop Paper Presentation, **IEEE VIS**, 2017
- Workshop Paper Presentation, **ISSI**, 2017
- Doctoral Forum, **ISSI**, 2017
- Paper Presentation, **VINCI**, 2016

SKILLS

- [Web Development]: **JavaScript**, **React.js+Redux**, Electron, Webpack, ES2015, Node.js, CSS, HTML, Angular.js, ASP.NET
- [Programming]: **Python**, Java, R, SQL
- [Machine Learning]: TensorFlow, Keras, Theano, scikit-learn
- [AI]: DialogFlow, Voice Assistant
- [Information Visualization]: **D3.js**, Tableau

PROFESSIONAL MEMBERSHIPS

- ASIST
- ACM

