

Haochuan Cui

Network Scientist & Computational Social Scientist

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WOS ResearchID: HKF-3464-2023

ACADEMIC POSITION

University of Pittsburgh

Associate Scholar, School of Computing and Information

2023 – Present

EDUCATION

Beijing Normal University

Ph.D. in Systems Science, Advisor: Prof. An Zeng

2016 – 2023

The University of Chicago

Visiting Student, Advisor: Prof. James A. Evans

2019 – 2023

Anhui University

B.A. in Mathematics,

2012 – 2016

RESEARCH INTERESTS

Science of Science, Computational Social Science, Team Science and Innovation, Complex Network and Complex Systems

PUBLICATIONS

Journal

- [1] Wang, C. J., Yan, L., & Cui, H.* (2023). Unpacking the essential tension of knowledge recombination: Analyzing the impact of knowledge spanning on citation impact and disruptive innovation. *Journal of Informetrics*, 17(4), 101451.
- [2] Cui, H., Li, T., & Wang, C. J. (2023). Climbing up the ladder of abstraction: how to span the boundaries of knowledge space in the online knowledge market? *Humanities and Social Sciences Communications*, 10(1), 1-12.
- [3] Cui, H., Zeng, A., Fan, Y., & Di, Z. (2021). Quantifying the impact of a teamwork publication. *Journal of Informetrics*, 15(4), 101217.
- [4] Cui, H., Zeng, A., Fan, Y., & Di, Z. (2020). Identifying the key reference of a scientific publication. *Journal of Systems Science and Systems Engineering*, 29(4), 429-439.

Conference

- [1] Cui, H., Lin, Y., Wu, L., & Evans, J. A. (2024). Age, Aging Scientists and Slowed Advance. *International Conference of Science of Science and Innovation (Contributed Talk)*
- [2] Yan, L., Cui, H.* , Wang, C.* (2024). Are Disruptive Patents Less Likely to be Granted? Analyzing Scientific Gatekeeping with USPTO Patent Data (2004-2018), the 5th Extraction and Evaluation of Knowledge Entities from Scientific Documents, *EEKE&iConference (Presentation Talk)*

- [3] **Cui, H.**, Wu, L., & Evans, J. A. (2023). Aging Scientists and Slowed Advance. *National Bureau of Economic Research (NBER) -Investments in Early Career Scientists: Promoting Diversity in Science Careers*. (**Presentation Talk**)
- [4] **Cui, H.** (2022). Unpacking the Essential Tension of Knowledge Recombination: Analyzing the Impact of Knowledge Spanning on Citation Counts and Disruptive Innovations, *NETSCI 2022*. (**Presentation Talk**)

UNDER REVIEW

- [1] **Cui, H.**, Wu, L., & Evans, J. A.* (2022). Aging Scientists and Slowed Advance. arXiv preprint arXiv:2202.04044. (2nd review, *Nature*)
- [2] Yan, L., **Cui, H.***, Wang, C.* (2024). Are Patent Examiners Killing Disruptive Innovation? Analyzing the Effect of Scientific Gatekeeping with USPTO Patent Data (2004-2018) (under review, *Research Policy*)

WORKING PAPER

- [1] **Cui, H.* & Li, L.***, Does Disruptive innovation entrench giants?

AWARDS, FELLOWSHIP & HONORARIA

- ✓ Chinese Government Scholarship, Chinese Scholarship Council, 2021 (~ \$23K)
- ✓ Kaifeng-Swarm Research fellowship, Kaifeng Foundation, 2020 (~ \$20K)
- ✓ Top Innovative Talents Scholarship, Beijing Normal University, 2019 (~ \$10K)
- ✓ The 1st Prize of Scholarship, Beijing Normal University, 2018 (~ \$2000)
- ✓ The 2nd Prize of Scholarship, Beijing Normal University, 2018 (~ \$1700)
- ✓ Baogang Student Scholarship, Baogang Education Foundation (totally 5 students in the university), 2015 (~ \$1700)
- ✓ The First Prize of Scholarship, Anhui University, 2014 (~ \$800)
- ✓ Xindi Student Scholarship, Anhui University, 2013 (totally 25 students) (~ \$1400)
- ✓ Meritorious Winner of Interdisciplinary Contest in Modeling (ICM), COMAP, 2016
- ✓ Meritorious Winner of Interdisciplinary Contest in Modeling (ICM), COMAP, 2015
- ✓ The First Prize of China Undergraduate Mathematical Contest in Modeling, CSIAM, 2015
- ✓ The 2nd Prize of national mathematic contest in Anhui for undergraduate students, 2013

TEACHING ASSISTANT

- Guest Lecturer (Remote), Data Analysis with Python, Beijing Normal University, 2022
- Teaching Assistant, Frontier on Complex Science, Beijing Normal University, 2021
- Teaching Assistant, Complex Network, Beijing Normal University, 2019
- Guest Lecturer, Computational Communication Seminar, Nanjing University, 2019

TALK VISITS

- Slower Diffusion of Knowledge and Aging in Science. University of Chicago, Knowledge Lab, 2022
- Will Academic Experience Still Matter in the Future? University of Pittsburg, School of Information Science, 2022
- Aging Scientist and Slow Advance. Nanjing University, School of Information

Management, 2021

- The Formation of the Scientific Team. Beijing University of Chemical Technology, School of Computer Science, 2021
- The Nature of Innovation. Annual Conference of Swarm Club, 2019

SERVICE

- Invited Reviewer for Academic Journals:
Journal of Informetrics
Journal of Knowledge Management
Journal of Social Computing
Physical Review X
Scientific Reports
- Conference/Workshop Co-Chair/Organizer:
PC Member, Conference on Complex Systems (CCS 2024)
PC Member, International Conference of Computational Social Science (IC2S2 2023)
PC Member, International Conference of Computational Social Science (IC2S2 2022)
Session Host, Conference on Complex Systems of China, (CSSC 2021)
- Mentorship and Advising:
Lihan Yan (Co-mentoring with Prof. Cheng-Jun Wang)

OTHERS

SKILLS: Python, R, Matlab, SQL, Liunx shell, Pytorch/Deep Learning, NLP, LLM