

Yiling Lin

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- RESEARCH SUMMARY** I am a computational social scientist. I use large-scale data, network science, and AI to study how science advances, and how its organization and technologies enhance or hinder this process. My work develops new datasets and methods to rethink theories of innovation and discovery. My work has been published in *Nature* and the *Journal of Informetrics*.
- KEYWORDS** Innovation, Team, Science of Science, Computational Social Science, AI for Science, Network Science, Data Science
- EDUCATION**
- | | |
|---|----------------|
| <i>PhD - Information Science</i> | 2021 - Present |
| University of Pittsburgh | |
| <i>MA - Computational Social Sciences</i> | 2019 - 2021 |
| University of Chicago | |
| <i>BA - Management Science</i> | 2014 - 2018 |
| Beijing Normal University | |
- JOURNAL ARTICLES**
- Lin, Y.**, Frey, C. B., & Wu, L. (2023). Remote Collaboration Fuses Fewer Breakthrough Ideas. *Nature*, 623(7989), 987-991.
Onsite teams fuse ideas while remote teams diffuse them.
- Lin, Y.**, Evans, J. A., & Wu, L. (2022). New Directions in Science Emerge from Disconnection and Discord. *Journal of Informetrics*, 16(1), 101234.
Disruptive papers are "sleeping beauties," accumulating impact over the long run.
- WORKING PAPERS**
- Risha, Z.[†], **Lin, Y.**[†], Leahey, E., & Wu, L. (2025). The Death of Renaissance Scientists. ([†]Equal contribution)
The decline of generalists has led to innovation losses unmatched by specialist teams.
- Cui, H., **Lin, Y.**, Wu, L., & Evans, J. A. (2025). The Nostalgia Effect in Science.
As scientists advance in academic age, their recombinant innovation increases, whereas their disruptive innovation declines.
- Lin, Y.**, Li, L., & Wu, L. (2025). The disruption index measures displacement

between a paper and its most cited reference.

A paper is disruptive not because of how many references it cites, but because it challenges a dominant idea and drives that idea into obsolescence.

Li, L., **Lin, Y.**, & Wu, L. (2025). Innovation by Displacement.

Scientific breakthroughs stem from displacing dominant knowledge, rather than simply recombining distant ideas.

TALKS

- 07/2025 **Invited participant**, NBER Summer Institute Science of Science Funding Workshop, Boston
- 06/2025 **Invited talk**, Copenhagen Center for Social Data Science, University of Copenhagen
- 06/2025 International Conference on the Science of Science & Innovation (ICSSI), University of Copenhagen
- 05/2025 **Expert commentary**, Science
- 09/2024 **Invited talk**, School of Economics and Management, University of Electronic Science and Technology of China
- 07/2024 **ICSSI**, Washington, DC
- 05/2024 **Invited talk**, Northwestern Institute on Complex Systems (NICO), Northwestern University
- 02/2024 **Invited talk**, Department of Information Science, Cornell University (online)
- 01/2024 **Invited talk**, The Computational Culture Lab, Stanford and Berkeley (online)
- 12/2023 **Invited talk**, Department of Statistics and Data Science, Southern University of Science and Technology
- 09/2023 **Invited talk**, School of International and Public Affairs, Shanghai Jiao Tong University
- 06/2023 **ICSSI**, Northwestern University
- 06/2022 **ICSSI**, Washington, DC
- 03/2022 Women in Data Science (**WIDS**), Boston (online)
- 07/2021 International Conference on Computational Social Science (**IC²S²**), ETH (online)
- 10/2021 Workshop on Natural Language Processing for Scientific Text (**SciNLP**), Irvine (online)
- 07/2021 **Invited talk**, Department of Information Management, Peking University.
- 06/2021 The Annual Interdisciplinary Graduate Conference, MAPSS and MACSS, University of Chicago.
- 03/2021 **Invited talk**, Institute for Software Research, Carnegie Mellon University.

- 11/2020 **Invited talk**, School of Information, University of Texas at Austin.
- 11/2020 **Invited talk**, Department of Communication, Michigan State University.
- 08/2020 **Invited talk**, Swarna Club-Kaifeng Academic Meeting.

GRANTS & SCHOLARSHIPS

Grants

- **2025-, Research Grants on Education: Large, Spencer Foundation**
Senior personnel, “The Lost Curie? Linking Doctoral Training to Scientific Innovation and Opportunity” (Under Review)
- **2023-2028, National Science Foundation: Science of Science Program (CAREER)**
Senior personnel, “How Does Core Scientific Knowledge Advance? Understanding Team Innovation at the Foundations of Sciences.” \$565,087

Scholarships

- 2021-2025, UPitt PhD Graduate Student Researcher
- 2020, UChicago Social Science Scholarship
- 2019, UChicago Social Science Scholarship

Travel Grant

- 2025, ICSSI

ACADEMIC SERVICE

Organizer

- Workshop of The Science of Team Science and Innovation, PittCSS, Pittsburgh, 2022

Academic Journal Reviewer and Sub-Reviewer

- General Audience: Nature (2025-), Science (2024-), PNAS (2024-), Nature Human Behaviour (2023-), Scientific Reports (2023-), PLOS One (2021-), Frontiers in Big Data (2024-), Humanities and Social Sciences Communications (2023-), EPJ Data Science (2023-)
- Science of Science: Aslib Journal of Information Management (2025-), Journal of Informetrics (2024-), Applied Network Science (2024-)
- Physics: Physical Review X (2024-)

Grant Sub-Reviewer and Consultant

- Swiss National Science Foundation
- John Templeton Foundation

Open Science

- Wu, Lingfei (2023). Remote Collaboration Fuses Fewer Breakthrough Ideas. figshare. Dataset.

- Lin, Yiling, Carl Benedikt Frey, and Lingfei Wu. 2025. “Replication Data for: Remote Collaboration Fuses Fewer Breakthrough Ideas.” Harvard Dataverse.
- Li, Linzhuo, Yiling Lin, and Lingfei Wu. 2025. “D-Index Datasets and Code.” Harvard Dataverse.

TEACHING & MENTORING

Co-Instructor

- Information Visualization, INFSCI 1520, University of Pittsburgh, Spring 2025.

Mentor

- Mentor, Vikram Nagarajan, High school student, lab visitor, 2021–2022

SELECTED MEDIA COVERAGE

Remote Collaboration Fuses Fewer Breakthrough Ideas

- **Scientific American:** Collaborating in Person May Spark More Innovative Research.
- **Forbes:** Remote Work Reduces Innovation. How To Increase Innovation Wherever You Work.
- **Fortune:** The CEO of a major co-working company says bosses need to create a ‘third place’ for employees if they want a meaningful office culture.
- **The Hill:** Do we really need shared physical offices to collaborate at work?
- **Aviation Week:** Why Boeing Headquarters Should Move Back to Seattle.
- **Nature News:** What science says about hybrid working—and how to make it a success.
- **Physics World:** Get offline and meet in person to make breakthroughs, claims study.
- **Physics Magazine:** Disruptive Discoveries More Likely between Scientists Who Meet Face to Face.
- **University of Oxford News:** Remote collaborations deliver fewer scientific breakthroughs.
- **The Tribune (India):** Scientists working remotely less likely to make breakthroughs than those onsite.
- **Times Higher Education:** Remote collaboration leads to less innovative science.
- **Axios:** Remote collaborators don’t generate as many breakthrough scientific ideas.
- **New Things Under the Sun:** Remote breakthroughs.

SKILLS ***Languages:*** English-proficient, Mandarin-native.
& ***Methodology:*** Network Science, Natural language processing.
KNOWLEDGE ***Programming Languages:*** Python, Processing, Stata, Matlab, SQL.