

CONTACT INFORMATION	Yifan Qian Research Assistant Professor Center for Science of Science and Innovation Northwestern Innovation Institute Ryan Institute on Complexity Kellogg School of Management Northwestern University Evanston, IL 60208, USA E-mail: yifan.qian1@kellogg.northwestern.edu WWW: yifanqian.com Updated: August 13, 2026
RESEARCH INTERESTS	My research is broadly concerned with the science of science and combines theories and methods from network science, machine learning, data science, and sociology. My work aims to measure and predict innovations in research institutions with large-scale data sets on scientific funding, publications, and their broad impacts on various facets of human society. Keywords: Science of Science, Innovation, Network Science, Computational Social Science, Machine Learning.
ACADEMIC POSITIONS	Northwestern University, Evanston, IL, USA - Research Lead, NSF APTO Bridge Initiative July 2024 to present Kellogg School of Management - Research Assistant Professor November 2023 to present Center for Science of Science and Innovation, Kellogg School of Management Mentors: Prof. Dashun Wang & Prof. Benjamin F. Jones - Postdoctoral Fellow November 2021 to October 2023 Kellogg School of Management Mentors: Prof. Dashun Wang & Prof. Benjamin F. Jones Imperial College London, London, UK - Visiting Scholar, Department of Mathematics September 2017 to August 2021 Mentors: Prof. Mauricio Barahona & Dr. Paul Expert
EDUCATION	Ph.D. in Business and Management, Queen Mary University of London, London, UK, November 2021 - Thesis: <i>Network Science, Big Data Analytics, and Deep Learning: An Interdisciplinary Approach to the Study of Citation, Social and Collaboration Networks</i> - Supervisors: Prof. Pietro Panzarasa & Prof. Mauricio Barahona - Examiners: Prof. Renaud Lambiotte & Dr. Guven Demirel M.Sc. in Computer Science, Beihang University, Beijing, China, March 2017 <i>Supervisor:</i> Prof. Wenge Rong M.Sc. in Engineering, École Centrale de Nantes, Nantes, France, August 2015 B.Sc. in Information and Computing Sciences, Beihang University, Beijing, China, August 2014
SELECTED HONORS & AWARDS	- IEEE VIS Best Paper Honorable Mentions Award, 2023. - Outstanding Graduate Dissertation Award, Beihang University, 2017. - Outstanding Graduate, Beihang University, 2017. - First-class Graduate Scholarship, Beihang University, 2014–2015. - Scholarship from École Centrale de Nantes, 2014.

GRANTS

- Senior Personnel, “Measuring, Understanding, Predicting, and Accelerating Technology Outcomes,” NSF TIP APTO, PI: Dashun Wang, \$20,000,000, 2024–2029.
- Key Personnel (Proposal Lead Writer), “Breakthroughs in science: The role of funding approaches and investment balance across Stokes’ quadrants,” Wellcome LEAP, PI: Dashun Wang, \$360,000, 2023–2024.
- Key Personnel (Proposal Lead Writer), “Understand early-career signals for exceptional people,” Schmidt Futures, PI: Dashun Wang, \$350,000, 2023–2024.
- Key Personnel (Proposal Lead Writer), “Northwestern Innovation Index — Phase II,” Future Wanxiang Foundation, PI: Dashun Wang, \$300,000, 2022–2023.
- PI, “Scientists in computational social science: Demographics and interactions,” Summer Institutes in Computational Social Science, \$4,000, 2021.

PUBLICATIONS

†: equal contribution

1. **Yifan Qian**, Zhe Wen, Alexander C. Furnas, Yue Bai, Erzhuo Shao, Dashun Wang, The Rise of Large Language Models and the Direction and Impact of US Federal Research Funding, *Proceedings of the National Academy of Sciences (PNAS)*, 2026. [doi:10.1073/pnas.2601439123]
Selected coverage: *Nature*, *Nature*, *NBER*, *Northwestern Now*, *KelloggInsight*.
2. Erzhuo Shao, Yifan Wang†, **Yifan Qian**†, Zhenyu Pan, Han Liu, Dashun Wang, SciSciGPT: Advancing Human–AI Collaboration in the Science of Science, *Nature Computational Science*, 2025.
[doi:10.1038/s43588-025-00906-6] [Cover Article]
Selected coverage: *Nature Computational Science*, *KelloggInsight*, *NBER*.
3. Giorgio Tripodi†, Xiang Zheng†, **Yifan Qian**†, Dakota Murray, Benjamin F. Jones, Chaoqun Ni, Dashun Wang, Tenure and Research Trajectories, *Proceedings of the National Academy of Sciences (PNAS)*, 2025.
[doi:10.1073/pnas.2500322122]
Selected coverage: *Nature*, *NBER*, *Forbes*, *Inside Higher Ed*, *Physics World*, *Tencent News*, *KelloggInsight*.
4. Yifan Wang, **Yifan Qian**, Xiaoyu Qi, Nan Cao, and Dashun Wang, InnovationInsights: A Visual Analytics Approach for Understanding the Dual Frontiers between Science and Technology, *IEEE Transactions on Visualization and Computer Graphics*, 2023.
[doi:10.1109/TVCG.2023.3327387] [Best Paper Honorable Mentions Award]
5. **Yifan Qian**, Paul Expert, Pietro Panzarasa, and Mauricio Barahona, Geometric Graphs from Data to Aid Classification Tasks with Graph Convolutional Networks, *Patterns*, 2(4):100237, 2021. [doi:10.1016/j.patter.2021.100237]
6. **Yifan Qian**, Paul Expert, Tom Rieu, Pietro Panzarasa, and Mauricio Barahona, Quantifying the Alignment of Graph and Features in Deep Learning, *IEEE Transactions on Neural Networks and Learning Systems*, 33(4):1663–1672, 2021. [doi:10.1109/TNNLS.2020.3043196]
7. **Yifan Qian**, Wenge Rong, Nan Jiang, Jie Tang, and Zhang Xiong, Citation Regression Analysis of Computer Science Publications in Different Ranking Categories and Subfields, *Scientometrics*, 110(3):1351–1374, 2017.
[doi:10.1007/s11192-016-2235-4]

SELECTED WORKING PAPERS

†: equal contribution

1. **Yifan Qian**, Jian Gao, Yian Yin, Peter Schiffer, Dashun Wang, Diversification and Convergence in Research Outputs by US Universities, 2026.
2. **Yifan Qian**, Binglu Wang, Zihang Lin, Sirag Erkol, Zhe Wen, Jian Gao, Alicia Loffler, Benjamin F. Jones, Dashun Wang, Untapped Innovation Potential of University Research, 2026.
Selected coverage: *Nature*, *Science*.
3. Yifang Wang, **Yifan Qian**, Xiaoyu Qi, Yian Yin, Shengqi Dang, Ziqing Qian, Benjamin F. Jones, Nan Cao, Dashun Wang, Funding the Frontier: Visualizing the Broad Impact of Science and Science Funding, 2025.
[arXiv:2509.16323] [Under Review at *Nature Human Behaviour*, 2nd Round]
Selected coverage: *Nature*, *Digital Science*.
4. Yifang Wang, Rui Sheng, Erzhuo Shao, **Yifan Qian**, Haotian Li, Nan Cao, Dashun Wang, Figures as Interfaces: Toward LLM-Native Artifacts for Scientific Discovery, 2026. [arXiv:2604.08491]
5. Erzhuo Shao, Giorgio Tripodi, **Yifan Qian**, Dashun Wang, Shared Leadership in Science, 2026.
6. Zihang Lin, **Yifan Qian**, Sirag Erkol, Benjamin F. Jones, Dashun Wang, Quantifying the Translational Layer of Science, 2026.

PATENTS

1. Dashun Wang, Benjamin F. Jones, **Yifan Qian**, Systems and Methods to Identify Commercialization and Partnership Potential for Research Institutions, [US20250328973A1](#), US Patent Application, 2025.
2. Dashun Wang, Benjamin F. Jones, **Yifan Qian**, Systems and Methods to Identify Commercialization and Partnership Potential for Research Institutions, [WO2024097988A1](#), WIPO (PCT), 2024.

PRESENTATIONS

1. IC2S2, Burlington, VT	2026/07
2. NBER Summer Institute, SciSci Funding, Cambridge, MA	2026/07
3. ICSSI 2026, Boulder, Colorado	2026/07
4. NetSci 2026, Boston, MA	2026/06
5. NSF TIP APTO Meeting, virtual	2026/01
6. NBER I3 Working Group Meeting, Cambridge, MA	2025/12
7. NBER Summer Institute, SciSci Funding, Cambridge, MA	2025/07
8. ICSSI 2024, National Academy of Sciences, Washington, DC	2024/07
9. ICSSI 2023, Northwestern University	2023/06
10. NetSci 2022, Shanghai, China	2022/07
11. ICSSI 2022, National Academy of Sciences, Washington, DC	2022/06
12. IC2S2 2021, ETH Zurich, Switzerland	2021/07
13. NetSci 2021, Indiana University Network Science Institute	2021/07
14. NetSci 2020, Rome, Italy	2020/09
15. IC2S2 2020, MIT	2020/07
16. IC2S2 2019, University of Amsterdam, The Netherlands	2019/07
17. Data Natives 2019, City, University of London	2019/03
18. 2nd UK Network Science Workshop, University of Greenwich	2018/10
19. IC2S2 2018, Northwestern University	2018/07
20. NetSci 2018, Paris, France	2018/06

Conference abbreviations: NetSci (International School and Conference on Network Science); IC2S2 (International Conference on Computational Social Science); ICSSI (International Conference on the Science of Science and Innovation); NBER (National Bureau of Economic Research); I3 (Innovation Information Initiative).

SERVICE

Reviewer

- *General Audience:* Nature, Science, Science Advances, Proceedings of the National Academy of Sciences (PNAS), Nature Medicine, Nature Communications, Scientific Reports.
- *Social Sciences:* Quarterly Journal of Economics, Research Policy.
- *Data Sciences:* Harvard Data Science Review, Joint Conference on Digital Libraries (JCDL).
- *Physics & Mathematics:* Advances in Complex Systems; Applied Network Science; European Physical Journal B.
- *Funding Agency:* Luxembourg National Research Fund.

Memberships

- The Society for the Science of Science and Innovation (SSSI).
- The International Society for Computational Social Science.
- Society of Young Network Scientists.
- The Network Science Society.

TEACHING	Northwestern University , Evanston, IL, USA, <i>Teaching Associate</i>	
	• Winning with Networks (MORS-457-0)	2024
	• Social Dynamics & Networks (MORSX-945-0)	2022
	Queen Mary University of London , London, UK, <i>Teaching Associate</i>	
	• Innovation and Entrepreneurship (Undergraduate, BUS300)	2021
IN THE PRESS	• Quantitative Analysis for Business (Undergraduate, BUS135)	2021
	• Social Network Analysis (Undergraduate, BUS346)	2019, 2020
	• Large language models reduce originality of research proposals , <i>Times Higher Education</i> , August 12, 2026.	
	• Chatbots are changing who wins research grants , <i>Northwestern Now</i> , August 12, 2026.	
	• AI Could Help Researchers Get Funding—but at What Cost? , <i>KelloggInsight</i> , August 11, 2026.	
	• Responses to the AI grant flood must prioritize fairness as part of excellence , <i>Nature</i> , May 05, 2026.	
	• Grant proposals drafted with AI help more likely to win NIH funding , <i>Nature</i> , February 12, 2026.	
	• Can a New GPT Accelerate Human–AI Collaboration in Science? , <i>KelloggInsight</i> , January 16, 2026.	
	• AI has supercharged scientists—but may have shrunk science , <i>Science</i> , January 14, 2026.	
	• Tenure is under fire in SC. Defenders say it safeguards academic freedom and fuels the economy , <i>The Post and Courier</i> , November 2, 2025.	
	• Will Your Study Change the World? This AI Tool Predicts the Impact of Your Research , <i>Nature</i> , October 1, 2025.	
	• Is Gaining Tenure Just a Ticket to Slack Off? A Large-Scale Study of Over 10,000 Academics Tells a Different Story , <i>Tencent News</i> , September 2, 2025.	
	• Tenured Scientists in the US Slow Down and Produce Less Impactful Work, Finds Study , <i>Physics World</i> , August 23, 2025.	
	• Time Well Spent: Productivity with Purpose in Research , <i>Spectroscopy</i> , August 13, 2025.	
	• The Impact of Faculty Tenure on Research Output Explored in New Study , <i>Forbes</i> , July 28, 2025.	
	• Study: Tenure Doesn’t Slow Average Research Output , <i>Inside Higher Ed</i> , July 28, 2025.	
	• Tenure Disrupts Research, Publishing Patterns—Study , <i>University World News</i> , July 26, 2025.	
	• Is Tenure a Golden Age for Research? , <i>KelloggInsight</i> , July 24, 2025.	
	• How Getting Tenure Changes Researchers’ Publication Habits—and Citations? , <i>Nature</i> , July 22, 2025.	
COMPUTER SKILLS	<i>Programming and tools:</i> Python, MATLAB, R, L ^A T _E X, Bash/shell scripting, HTML, SQL. <i>Operating systems:</i> macOS, Linux, Windows.	
LANGUAGES	English (Proficient), French (Professional), Chinese (Native).	

REFERENCES

Available upon request.