Yian Yin

CONTACT INFORMATION

Northwestern University
Center for Science of Science and Innovation
Northwestern Institute on Complex Systems
600 Foster Street, Evanston, IL 60208

Email: yianyin@u.northwestern.edu
Website: https://www.yianyin.net
Voice: 425-209-5518
Updated May 2022

ACADEMIC POSITIONS

Cornell University, Ithaca, NY, USA
Assistant Professor, Jul 2023 –
Information Science, Bowers College of Computing & Information Science

Northwestern University, Evanston, IL, USA
Research Assistant Professor, Jul 2022 – Jun 2023
Management & Organizations, Kellogg School of Management

Research Fellow, Sep 2019 –
Center for Science of Science & Innovation

Researcher in Residence, Aug 2016 –
Northwestern Institute on Complex Systems

Microsoft Research, Redmond, WA, USA
Visiting Researcher, Oct 2018 – Nov 2018
Microsoft Academic Graph Analytics

Pennsylvania State University, University Park, PA, USA
Visiting Scholar, Jul 2015 – Oct 2015
College of Information Sciences & Technology

Peking University, Beijing, China
Undergraduate Research Assistant, May 2014 – Jun 2016
Center for Information Sciences

EDUCATION

Northwestern University, Evanston, IL, USA
Ph.D., Industrial Engineering & Management Sciences Expected 2022
McCormick School of Engineering & Applied Sciences
Committee: Noshir Contractor[chair], Dashun Wang[co-chair], Jorge Nocedal
M.Sc., Industrial Engineering & Management Sciences Dec 2017

Peking University, Beijing, China
B.Sc., Statistics Jun 2016
School of Mathematical Sciences
B.Ec., Economics Jun 2016
National School of Development

SELECTED AWARDS

- Top 25 Papers in Social Sciences and Human Behaviour, Nature Communications 2022
- Rising Star in Data Science (Spotlight), University of Chicago 2021
- Complex Systems Scholarship, Young Researchers in Complex Systems Society 2021
- Best Reviewer, ICWSM: International AAAI Conference on Web and Social Media 2021
- Best Reviewer, AOM Technology and Innovation Management 2021
- Top 100 Most-discussed Papers across All Sciences, Altmetric.com 2020
- Conference Scholarship, Network Science Society Conference 2020
- Young Network Scientist Award, Society of Young Network Scientists 2017
- Graduate Fellowship, Northwestern University 2016

PUBLICATIONS

¶: equal contributions. ‡: students I have mentored.

JOURNAL PUBLICATIONS

[1] Jian Gao, **Yian Yin**, Kyle R. Myers, Karim R. Lakhani & Dashun Wang (2021)
Potentially long-lasting effects of the pandemic on scientists
Nature Communications, **1**, 12: 6188. 10.1038/s41467-021-26428-z

[2] **Yian Yin**¶, Jian Gao¶, Benjamin F. Jones & Dashun Wang (2021)
Coevolution of policy and science during the pandemic
Science, **371**, 6525: 128–130. 10.1126/science.abe3084

[3] Kyle R. Myers, Wei Yang Tham, **Yian Yin**, Nina Cohodes, Jerry G. Thursby, Marie C. Thursby, Peter Schiffer, Joseph T. Walsh, Karim R. Lakhani & Dashun Wang (2020)
Unequal effects of the COVID-19 pandemic on scientists
Nature Human Behaviour, **4**, 9: 880–883. 10.1038/s41562-020-0921-y

[4] Jichao Li‡, **Yian Yin**, Santo Fortunato & Dashun Wang (2020)
Scientific elite revisited: Patterns of productivity, collaboration, authorship and impact
Journal of the Royal Society Interface, **17**, 165: 20200135. 10.1098/rsif.2020.0135

[5] **Yian Yin**, Yang Wang, James A. Evans & Dashun Wang (2019)
Quantifying the dynamics of failure across science, startups and security
Nature, **575**, 7781: 190–194. 10.1038/s41586-019-1725-y

[6] Jichao Li‡, **Yian Yin**, Santo Fortunato & Dashun Wang (2019)
Nobel laureates are almost the same as us
Nature Reviews Physics, **1**, 5: 301–303. 10.1038/s42254-019-0057-z

[7] Jichao Li‡, **Yian Yin**, Santo Fortunato & Dashun Wang (2019)
A dataset of publication records for Nobel laureates
Scientific Data, **6**, 1: 33. 10.1038/s41597-019-0033-6

[8] **Yian Yin** & Dashun Wang (2017)
The time dimension of science: Connecting the past to the future
Journal of Informetrics, **11**, 2: 608–621. 10.1016/j.joi.2017.04.002

WORKING PAPERS

[9] **Yian Yin**, Yuxiao Dong, Kuansan Wang, Dashun Wang & Benjamin F. Jones (2022)
Public use and public funding of science
NBER Working Paper w28748, in principle accepted by ***Nature Human Behaviour***

[10] Ryan R. Hill¶, **Yian Yin**¶, Carolyn Stein¶, Dashun Wang & Benjamin F. Jones (2022)
Adaptability and the pivot penalty in science and technology
SSRN 3886142, in submission to ***Proceedings of the National Academy of Sciences***

[11] Zihang Lin‡, **Yian Yin**, Lu Liu & Dashun Wang (2022)
SciSciNet: A large-scale open datalake for the science of science
In submission to *Scientific Data*

SELECTED WORK IN PROGRESS

[12] **Yian Yin** & Dashun Wang
Quantifying punctuated record-breaking dynamics

[13] **Yian Yin** & Dashun Wang
Universal limits of learning

[14] Yang Wang, **Yian Yin**, Lu Liu & Dashun Wang
Funding and the end of hot streaks in scientific careers

[15] Alexander C. Furnas, Jian Gao, **Yian Yin** & Dashun Wang
The political mobilization of scientists in the United States

PATENTS

[16] Dashun Wang, **Yian Yin**, Yang Wang & James A. Evans
System and method to predict success based on analysis of failure
US Patent Application 17/061,112

GRANTS

[1] SICSS Seed Research Grant, **$2,000** — *Principal Investigator*
Structures and dynamics of package ecosystems — 2018/08

[2] Minerva Research Initiative, **$309,562** — *Proposal lead writer*
Quantifying the effects of COVID-19 pandemic on scientific workforce — 2020/05

[3] Social Science Research Council, **$8,200** — *Organizer*
4th Summer Institute in Computational Social Science Chicago — 2021/02

[4] Peter G. Peterson Foundation, **$150,000** — *Proposal lead writer*
Developing a quantitative framework to track and assess
state-level policy responses to the COVID-19 pandemic — 2021/04

[5] Schmidt Futures Foundation, **Pending** — *Proposal lead writer*
Understanding the early signals of exceptional careers — 2022/03

TEACHING

Summer Institute in Computational Social Science (SICSS), Chicago, IL — *Instructor*

Lectures in Computational Social Science
- SICSS-Chicago 2021, 30 students from social and computational science.

Northwestern University, Evanston, IL — *Teaching Assistant*

Social Dynamics & Networks (MORSX 945)
- Winter 2022, EMBA course at Kellogg School of Management.

Social Dynamics and Network Analytics (MORS 457)
- 9 sessions (2017-2022), MBA course at Kellogg School of Management.

Human and Machine Intelligence (MORS 950)
- Spring 2021, MBA course at Kellogg School of Management.

Statistical Decision Analysis (MECNX 434)
- Winter 2018, EMBA core course at Kellogg School of Management.

Data Science and Programming Workshops
- Summer 2018, serial workshop by Northwestern Research Computing.

TALKS

1. Invited talk, INFORMS Annual Meeting
Indianapolis, IN — Forthcoming

2. International Conference on the Science of Science and Innovation (ICSSI)
Washington, DC — Forthcoming

3. Invited talk, School of Public Policy
Georgia Institute of Technology (online) — 2022/04

4. Invited talk, School of Computer Science Seminar
Carnegie Mellon University, Pittsburgh, PA — 2022/03

5. Invited talk, Data Science Seminar
University of California San Diego (online) — 2022/03

6. Invited talk, Institute for Computational and Data Sciences Seminar
Pennsylvania State University (online) — 2022/03

7. Invited talk, Information Science Colloquium
   Cornell University, Ithaca, NY 2022/03

8. Invited talk, Interactive Computing Seminar
   Georgia Institute of Technology (online) 2022/02

9. Invited talk, Information Sciences Seminar
   University of Illinois at Urbana-Champaign (online) 2022/02

10. Invited talk, Computational Social Science Seminar
    University of Pittsburgh (online) 2022/02

11. Invited talk, Engineering Management and Systems Engineering Seminar
    George Washington University (online) 2022/02

12. Invited talk, Industrial Engineering Seminar
    Purdue University (online) 2022/01

13. Invited talk, Mechanical and Industrial Engineering Seminar
    University of Toronto (online) 2022/01

14. Invited talk, System Dynamics Group Seminar
    MIT Sloan School of Management, Cambridge, MA 2021/12

15. Invited talk, Sociology Department Colloquium
    University of Chicago, Chicago, IL 2021/11

16. Invited talk, Mangement & Organizations Seminar
    NYU Stern School of Business (online) 2021/11

17. Invited talk, Sociology Department Seminar
    Purdue University (online) 2021/11

18. INFORMS Annual Meeting
    Anaheim, CA 2021/10

19. Harvard Business School Digital Doctoral Workshop
    Boston, MA (online) 2021/09

20. Minerva Research Network Workshop
    Wautoma, WI 2021/08

21. International Conference on Computational Social Science (IC^2S^2)
    Zürich, Switzerland (online) 2021/07

22. Networks 2021: A Joint Sunbelt and NetSci Conference
    Washington, DC (online) 2021/07

23. Seminar, Stanford METRICS International Forum
    Meta-research Innovation Center, Standford University (online) 2021/04

24. Invited talk, Webinar, Saving Curies Series 2021/03

25. Invited talk, Webinar, Swarma Club 2021/01

26. Spotlight speaker, Rising Stars in Data Science Workshop, Data Science Institute
    University of Chicago (online) 2021/01

27. The 7^{th} Satellite on Quantifying Success, NetSci 2020 2020/09

28. Invited talk, Webinar ML Collective 2020/09
29. International Conference on Computational Social Science (IC^2S^2)
Boston, MA (online) 2020/07
30. Seminar, Northwestern Institute on Complex Systems 2020/06
31. Invited talk, Webinar, Aggregate Intellect (ai.science) 2020/02
32. Invited talk, Northwestern Data Science Night 2020/02
33. Invited talk, Michigan Institute for Data Science Symposium
University of Michigan, Ann Arbor, MI 2019/11
34. Seminar, Northwestern Institute on Complex Systems 2019/10
35. Invited talk, Institute for Research on Innovation & Science Summit
University of Michigan, Ann Arbor, MI 2019/09
36. Invited talk, Great Lakes Data Science Workshop
University of Notre Dame, Notre Dame, IN 2019/09
37. International Conference on Computational Social Science (IC^2S^2)
Amsterdam, Netherlands 2019/07
38. NetSci 2019: International Workshop and Conference on Network Science
Burlington, VT 2019/05
39. Invited talk, Seminar, Center for Neuroscience, Zhejiang University
Hangzhou, Zhejiang, China 2018/12
40. International Conference on Computational Social Science (IC^2S^2)
Evanston, IL 2018/07
41. Summer Institute in Computational Social Science (SICSS)
Chicago, IL 2018/06
42. Seminar, Northwestern IEMS-OM Collaborative Workshop 2018/04
43. Speaker, Northwestern Computational Research Day 2018/04
44. Seminar, Northwestern SIAM Bridging the Gap 2017/11
45. Speaker, Northwestern Current Research & Future Careers Symposium 2017/08
46. Invited speaker, AI & Public Policy Symposium
Tsinghua University, Beijing, China 2017/07
47. Invited participant, Kaifeng Institute on Geometry and Statistical Learning
Swarma Club, Beijing, China 2017/07
48. Symposium for the Society of Young Network Scientists, NetSci 2017
Indianapolis, IN 2017/06
49. NetSci 2017: International Workshop and Conference on Network Science
Indianapolis, IN 2017/06
50. Seminar, Northwestern Institute on Complex Systems 2017/05
51. Seminar, Kellogg MORS Macro Brown Bag 2017/05
52. Speaker, Kellogg-Booth Student Symposium, Chicago, IL 2017/04
53. Speaker, Chicago Area SIAM Student Conference, Chicago, IL 2017/04

Academic Service

Organizer

- Summer Institute in Computational Social Science (SICSS), Chicago site 2021

Program Committee

- International ACM Conference on Web Science (WebSci) 2022
- International World Wide Web Conference (TheWebConf) 2021-2022
- International AAAI Conference on Web and Social Media (ICWSM) 2021-2022
  Best Program Committee Member Award (2021)

Referee

- Scientific Reports 2017
- PLOS One 2017-2021
- Europhysics Letters 2018-2019
  Distinguished Reviewer Award (2018)
- Physica A: Statistical Mechanics and its Applications 2018
- Journal of Informetrics 2017-2019
  Outstanding Reviewer Award (2018)
- Scientometrics 2021
- Journal of the Association for Information Science and Technology 2021
- Science and Engineering Ethics 2022
- EPJ Data Science 2021-2022
- PeerJ Computer Science 2019-2020
- Social Network Analysis and Mining 2019-2020
- AI & Society: Knowledge, Culture and Communication 2020
- IEEE Transactions on Network Science and Engineering 2018
- IEEE Transactions on Big Data 2020
- ACM Web Science Conference 2020
- International Conference on Computational Social Science 2020
- Annual Meeting of the Academy of Management 2020-2021
  Best Reviewer Award, Technology and Innovation Management (2021)

In the Press

List of selected media coverage

Adaptability and the pivot penalty in science and technology

- *New things under the sun*: Building a new research field

Potentially long-lasting effects of the pandemic on scientists

- *Forbes*: The bad news, good news, bad news about COVID's impact on scientific research
- *Science*: The pandemic's slowing of research productivity may last years
- *Nature*: The COVID pandemic has harmed researcher productivity – and mental health
- *Scientific American*: A high-speed scientific hive mind emerged from the COVID pandemic
- *Physics World*: New non-COVID research projects plunge by a third since the start of the pandemic
- *GenomeWeb*: Pandemic, productivity, and optimism
- Other coverages include ScienMag, Lab Manager, Medical News, and Scitech Daily.

Coevolution of policy and science during the pandemic

- *The Scientist*: WHO leads in using solid science to draft COVID-19 policy
- *EurekAlert*: Policymakers draw heavily from highly cited COVID-19 science
- *Kellogg Insight*: How well does COVID public policy align with science?
- Other coverages include Science Policy News, ScienMag, Lab Manager, Tyee and FROMTBOT.

Unequal effects of the COVID-19 pandemic on scientists

- *Forbes*: COVID's surprising toll on careers of women scientists
- *Forbes*: COVID-19's effects on women in science intensify disparities
- *The Atlantic*: How science beat the virus
- *Times Higher Ed*: Pandemic lockdown holding back female academics, data show
- *Times Higher Ed*: Childcare the key limit on scientists' pandemic working hours
- *Inside Higher Ed*: University research: a time of disparate change
- *Inside Higher Ed*: Keeping COVID-19 from sidelining equity
- *Inside Higher Ed*: Implementing pandemic equity measures for faculty
- *Scientific American*: Women in science may suffer lasting career damage from COVID-19
- *Scientific American*: COVID has laid bare the inequities that face mothers in STEM
- *Science*: Pandemic hits scientist parents hard
- *The Scientist*: Pandemic pressures may drive young scientists away from autism research
- *AAAS*: Institutions must support minority researchers impacted by COVID-19
- *Wire*: COVID-19 changed scientists' research methods, will this change science itself?
- *EurekAlert*: Pandemic disproportionately affects scientists with young children
- *Kellogg Insight*: The pandemic has slashed scientists' productivity
- Other coverages include Medium, Spectrum News, Science Policy News, ThePaper.cn, Deccan Herald, Lab Manager, ScienMag, Oxford Student, Phys.org, Psychology Today, ASBMB Today, Marketplace, Chemistry Views and Chemistry World.

Scientific elite revisited: Patterns of productivity, collaboration, authorship and impact

- *Daily Mail*: The Nobel curse is REAL
- *The Times*: Scientists fall foul of Nobel curse
- Other coverages include Phys.org and Chemistry World.

Quantifying the dynamics of failure across science, startups and security

- *Inc.*: 5 ways to avoid startup failure by increasing your team's learning speed
- *Fast Company*: Science reveals the tipping point between success and failure
- *Global Advisors*: Why failing fast is critical if you want to eventually win
- *Washington Post*: The lasting lesson of this Super Bowl: failure is necessary
- *Forbes*: Don't fail fast – fail smart
- *MIT Technology Review*: How the data mining of failure could teach us the secrets of success
- *Harvard Business Review*: The tipping point between failure and success
- *Scientific American*: Failure found to be an "essential prerequisite" for success?
- *Medium*: Ignite success sooner: 2 ways to fail better
- *Science Daily*: Failure prognosis: Data science predicts which failures will ultimately succeed
- *Business Insider*: Researchers found a key reason certain people succeed while others fall behind, and it starts with learning from past mistakes
- *Communications of ACM*: How the data mining of failure could teach us the secrets of success
- *Lancet*: Offline: It's time to prepare your anti-CV
- *Kellogg Insight*: Why do some people succeed after failing while others continue to flounder?
- Other coverages include Science Policy News, Lab Manager, YCombinator Hacker News, China.org, Xinhua, News Ghana, Slate France, internetactu, ZAP, Sohu News and Phys.org.

Nobel laureates are almost the same as us

- *Physics Today*: The Nobel Prize in physics: The papers
- *Kellogg Insight*: Nobel Prize winners – They're just like us!
- *Inside Science*: Getting ready for the 2019 Nobel Prizes