

Lili Miao

| | | |
|---------------------|---|---|
| CONTACT INFORMATION | Luddy School of Informatics, Computing, and Engineering Luddy Center for Artificial Intelligence, 1015 E 11th st. Indiana University Bloomington Bloomington, IN 47408 | ✉ miaoli@iu.edu ☎ (930) 333-1364 🌐 Lili Miao 📺 LiliMiaohub |
| EDUCATION | Ph.D. Informatics, Indiana University, Bloomington, IN, USA • Advisor: Professor Yong-Yeol Ahn; Professor Cassidy R. Sugimoto August 2018-present M.S. Informatics, Indiana University, Bloomington, IN, USA • Advisor: Professor Cassidy R. Sugimoto August 2016-August 2018 B.S. Computer Science, University of Electronic Science and Technology of China, Chengdu, China • Advisor: Professor Tao Zhou August 2010-August 2014 | |
| RESEARCH INTERESTS | Computational Social Science, Science Policy, Science of Science, Causal Inference | |
| WORKING EXPERIENCE | Indiana University, Bloomington, IN, USA Research Assistant, Department of Informatics July 2016–present Centre for Science and Technology Studies, Leiden, Netherlands Visiting Student June 2018–July 2018 University of Electronic Science and Technology of China, Chengdu, China Researcher June 2015–May 2016 New England Complex Systems Institute, Boston, MA, USA Researcher June 2014–May 2015 | |
| PUBLICATIONS | Articles [A1] Lili Miao, Dakota Murray, Woo-Sung Jung, Vincent Larivière, Cassidy R. Sugimoto, and Yong-Yeol Ahn. “The latent structure of global scientific development”. In: <i>Nature Human Behaviour</i> 6 (2022), pp. 1206–1217. DOI: 10.1038/s41562-022-01367-x. arXiv: 2104.10812 [cs.SI]. [A2] Lili Miao, Vincent Larivière, Feifei Wang, Yong-Yeol Ahn, and Cassidy R. Sugimoto. “Cooperation and interdependence in global science funding”. (Under review in <i>Nature Communications</i>). 2023. arXiv: 2308.08630 [econ.GN]. [A3] Zaida Chinchilla-Rodríguez, Lili Miao, Nicolás obinson-García Dakota Murray, Rodrigo Costas, and Cassidy R. Sugimoto. “A global comparison of scientific mobility and collaboration according to national scientific capacities”. In: <i>Frontiers in Research Metrics and Analytics</i> 3 (2018), p. 17. [A4] Zaida Chinchilla-Rodríguez, Lili Miao, Nicolás obinson-García Dakota Murray, Rodrigo Costas, and Cassidy R. Sugimoto. “Networks of international collaboration and mobility: a comparative study”. In: <i>Proceedings of the Sixteenth International Conference on Scientometrics Informetrics</i> . Wuhan, China, Oct. 2017. | |

- [A5] **Lili Miao**, Dakota Murray, Zaida Chinchilla-Rodríguez, Vincent Larivière, and Cassidy R. Sugimoto. “Glass Boundaries: Differences in Interdisciplinarity Between Men and Women”. In: *22st International Conference on Science and Technology Indicators, STI2017*. Paris, France, 2017, pp. 6–8.
- [A6] Jing Zhao, **Lili Miao**, Jian Yang, Haiyang Fang, Qian-Ming Zhang, Min Nie, Petter Holme, and Tao Zhou. “Prediction of links and weights in networks by reliable routes”. In: *Scientific Reports* 5.1 (2015), p. 12261.
- [A7] **Lili Miao**, Qian-Ming Zhang, Dacheng Nie, and Shimin Cai. “Whether information network supplements friendship network”. In: *Physica A: Statistical Mechanics and its Applications* 419 (2015), pp. 301–306.

Selected ongoing projects

- [B1] **Lili Miao**, Cassidy R. Sugimoto, and Yong-Yeol Ahn. *The scientific cost of nationalism: evidence from the Brexit*.
- [B2] Mengxue Zheng, Yi Bu, and **Lili Miao**. *Knowledge production inequality in today’s China*.
- [B3] **Lili Miao**, Byungkyu Lee, Vincent Larivière, Cassidy R. Sugimoto, and Yong-Yeol Ahn. *Perpetual power imbalance in contemporary scientific international collaboration*.
- [B4] Chenjiao Gong, Yuxin Zheng, Chao Min, Yi Bu, and **Lili Miao**. *From lab to market: assess the disruptiveness of research in science and patent domains*.

Patents

- [P1] Filipi Nascimento Silva, Sadamori Kojaku, **Lili Miao**, and Yong Yeol Ahn. *Embedding visualization tools for science*. In patent review. 2023.

GRANT

PARTICIPATION

- Primary developer and lead author, (PI: Yong-Yeol Ahn), NSF SOS:DCI: The scientific cost of isolationism: an analysis of disruptions in the global science system, (USD 625,000), 9/1/2024-8/31/2027
- Key Personnel, (PI: Erica Fuchs), NSF TIP: A National Network for Critical Technology Assessment: A First-Year Pilot, (USD 3,998,952), 10/1/2022-9/30/2023

SELECTED TALKS

Conference talks

- [C1] **Lili Miao**, Vincent Larivière, Feifei Wang, Cassidy R. Sugimoto, and Yong-Yeol Ahn. *Cooperation and interdependence in global science funding*. Boston, USA: TMP Consortium, 2024.
- [C2] Sarah Bratt, Sarah Stueve, Danushka Bandara, Charles Gomez, Jina Lee, and **Lili Miao**. *Helicopter Science and Datasets: Disproportionate Use of Distant Datasets by Global North Researchers*. Washington, DC, USA: 3rd International Conference on the Science of Science and Innovation, 2024.
- [C3] **Lili Miao**, Vincent Larivière, Feifei Wang, Cassidy R. Sugimoto, and Yong-Yeol Ahn. *Changing landscape of global science funding*. Atlanta, USA: ATLC2023, 2023.
- [C4] **Lili Miao**, Dakota Murray, Woo-Sung Jung, Vincent Larivière, Cassidy R. Sugimoto, and Yong-Yeol Ahn. *The latent structure of global scientific development*. Atlanta, USA: ATLC2023, 2023.
- [C5] **Lili Miao**, Dakota Murray, Woo-Sung Jung, Vincent Larivière, Cassidy R. Sugimoto, and Yong-Yeol Ahn. *The Scientific Development of Nations*. virtual: NetSci2020, 2020.
- [C6] **Lili Miao**, Dakota Murray, Woo-Sung Jung, Vincent Larivière, Cassidy R. Sugimoto, and Yong-Yeol Ahn. *The Scientific Development of Nations*. Burlington, Vermont, USA: NetSci2019, 2019.

- [C7] **Lili Miao**, Dakota Murray, Zaida Chinchilla-Rodríguez, Vincent Larivière, and Cassidy R. Sugimoto. *Glass boundaries: Differences in interdisciplinarity between men and women*. Paris, France: STI2017, 2017.
- [C8] Zaida Chinchilla-Rodríguez, **Lili Miao**, Nicolás Robinson-García, Dakota Murray, Rodrigo Costas, and Cassidy R. Sugimoto. *A large-scale comparison of the position of countries in international collaboration and mobility according to their scientific capacities*. Paris, France: STI2017, 2017.

Conference posters

- [O1] **Lili Miao**, Byungkyu Lee, Vincent Larivière, Cassidy R. Sugimoto, and Yong-Yeol Ahn. *Persistent Colonialism in Contemporary International Collaboration*. Washington, DC, USA: 3rd International Conference on the Science of Science and Innovation, 2024.
- [O2] **Lili Miao**, Byungkyu Lee, Vincent Larivière, Cassidy R. Sugimoto, and Yong-Yeol Ahn. *The hierarchical structure in international collaboration*. Chicago, USA: 2nd International Conference on the Science of Science and Innovation, 2023.
- [O3] **Lili Miao**, Byungkyu Lee, Vincent Larivière, Cassidy R. Sugimoto, and Yong-Yeol Ahn. *The hierarchical structure in international collaboration*. Copenhagen, Denmark: 9th International Conference on Computational Social Science, 2023.
- [O4] Filipi Nascimento Silva, Sadamori Kojaku, **Lili Miao**, and Yong-Yeol Ahn. *A Fine-Grained Map of All Sciences: Visualizing Nations' Scientific Production*. Copenhagen, Denmark: 9th International Conference on Computational Social Science, 2023.
- [O5] **Lili Miao**, Dakota Murray, Woo-Sung Jung, Vincent Larivière, Cassidy R. Sugimoto, and Yong-Yeol Ahn. *The Scientific Development of Nations*. virtual: 6th International Conference on Computational Social Science, 2020.
- [O6] **Lili Miao**, Cassidy R. Sugimoto, and Rodrigo Costas. *Behaviors and relationships among global universities on Twitter*. Rome, Italy: 17th International Conference on Scientometrics and Informetrics, 2019.

Invited seminars and lectures

- The Growth Lab, Harvard Kennedy School 06/20/2024
- Causal Inference, Indiana University 11/01/2023
- NNCTA Equity & Labor Workshop, Georgia Institute of Technology 06/14/2023
- JiZhi center for Natural Science Research, China 10/14/2022
- Knowledge Lab, University of Chicago 10/04/2022

TEACHING

INFO I101

Co-instructor (Major tasks: Grading assignments and exams) Spring 2019

INFO I101 (online)

Co-instructor (Major task: Leading the lab session) Spring 2019

Computer and Information Ethics

Assistant Instructor (Major tasks: Grading assignments and exams) Fall 2018

MENTORING

Ph.D. students

Mengxue Zheng (Wuhan University) 2023–

M.S. students

Atuahene Godwin (Indiana University Bloomington) 2024–

Chenjiao Gong (Nanjing University) 2024–

Yuxin Zheng (Nanjing University) 2024–

AWARDS AND
FELLOWSHIPS

List of awards and fellowships

- **Humane Studies Fellowship**, Institute for Humane Studies, 2024
- **Excellence in Research**, Luddy School of Informatics, Computing, and Engineering, 2021-2022
- **Best Poster Award**, International Conference on the Science of Science & Innovation, 2022
- **National Science Foundation Research Traineeship Fellowship**, Complex Networks and System, Indiana University, 2019
- **The People's Scholarship in China**, University of Electronic Science and Technology of China, 2012

SERVICE

Reviewer

- Nature Human Behaviour, Quantitative Science Studies, Humanities and Social Sciences Communications, PLoS ONE, Complexity, Scientometrics, Technovation, ISSI: 2023, Chinese Journal of Sociology

IN THE PRESS

Media coverages

- "The latent structure of global scientific development" (*Nature Human Behaviour*, 9, 1206, 2022)
 - The ChosunMedia (08/06/2022)
 - JiZhi News (08/06/2022)