Yifan Qian

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Short Bio

I am currently a postdoctoral fellow at the Center for Science of Science and Innovation (CSSI), Kellogg School of Management at Northwestern University, United States. My research is broadly concerned with computational social science and combines theories and methods from network science, sociology, machine learning and data science. The general goal of my work is to better understand the structure, functioning and consequences of complex large-scale networks across a number of empirical domains including citation networks, social networks and collaboration networks.

Research Interests

Science of Science, Innovation, Network Science, Computational Social Science, Machine Learning

Academic Positions

- **Northwestern University** — Evanston, IL, US
  Postdoc at CSSI, Kellogg School of Management — *Nov. 2021 - Present*
  Mentor: Prof. Dashun Wang

Education

- **Queen Mary University of London (QMUL)** — London, UK
  PhD in Computational Social Science — *Sep. 2017 - Nov. 2021*
  Supervisors: Prof. Pietro Panzarasa & Prof. Mauricio Barahona
  Thesis title: Network science, big data analytics, and deep learning: An interdisciplinary approach to the study of citation, social and collaboration networks
  Thesis examiners: Prof. Renaud Lambiotte & Dr. Guven Demirel

- **Beihang University** — Beijing, China
  MSc. in Computer Science — *Sep. 2014 - Mar. 2017*
  Supervisor: Prof. Wenge Rong

- **École Centrale de Nantes** — Nantes, France
  MSc. in Engineering — *Sep. 2013 - Aug. 2015*

- **Beihang University** — Beijing, China
  BSc. in Information and Computing Sciences — *Sep. 2010 - Aug. 2014*

Publications

[†]: Corresponding author

- **Yifan Qian**, Paul Expert, Pietro Panzarasa[†], and Mauricio Barahona[†]. Geometric graphs from data to aid classification tasks with graph convolutional networks. ***Cell Patterns*** 2, no. 4 (2021): 100237.
  doi: `https://doi.org/10.1016/j.patter.2021.100237`

- **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*** (2021).
  doi: `https://doi.org/10.1109/TNNLS.2020.3043196`

- **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, no. 3 (2017): 1351-1374.
  doi: `https://doi.org/10.1007/s11192-016-2235-4`

Selected Working Papers

- **Yifan Qian**, Luca Verginer, Xiancheng Li, Massimo Riccaboni, and Pietro Panzarasa[†]. Network foundations of scientific impact and innovation of cities.

- **Yifan Qian** and Pietro Panzarasa[†]. Intra- and inter-brokerage in social networks.

- Xiancheng Li, **Yifan Qian**, Mauricio Barahona, and Pietro Panzarasa[†]. Publishing the first patent boosts scientists' performance.

- Hongwei Peng, Xiancheng Li, **Yifan Qian**, and Pietro Panzarasa[†]. The relationship between scientists' early-career interdisciplinarity and long-term success.

Peer-reviewed Conference Proceedings (Abstracts)

- "Teams with unexpected collaboration between institutions are associated with higher impact". IC2S2 (2021), Talk.

- "Geometric graphs from data to aid classification tasks with graph convolutional networks". NetSci (2020), Talk; IC2S2 (2020), Poster.

- "Network foundations of scientific productivity of cities in internal and external collaboration networks". NetSci (2021), Talk; NetSci (2020), Poster; IC2S2 (2020), Poster; IC2S2 (2019), Talk.

- "Intra- and inter-brokerage in social networks". IC2S2 (2019), Poster.

- "Quantifying the alignment of graph and data features in deep learning". IC2S2 (2019), Poster; Data Natives (2019), Talk; UK Network Science workshop (2018), Talk; IC2S2 (2018), Poster; NetSci Satellite on Machine Learning in Network Science (2018), Talk; NetSci (2018), Poster.

NetSci: International School and Conference on Network Science.
IC2S2: International Conference on Computational Social Science.

Presentations

- IC2S2 2021. (Talk, ETH Zurich, Switzerland)   July. 2021
- Networks 2021. (Talk, Indiana University Network Science Institute, US)   July. 2021
- NetSci 2020. (Talk&Poster, Rome, Italy)   Sep. 2020
- IC2S2 2020. (Poster, MIT, US)   Jul. 2020
- SBM PhD Symposium. (Talk, QMUL, UK)   Oct. 2019
- IC2S2 2019. (Talk&Poster, University of Amsterdam, The Netherlands)   Jul. 2019
- Data Natives 2019. (Talk, City, University of London, UK)   Mar. 2019
- 2nd UK Network Science Workshop. (Talk, University of Greenwich, UK)   Oct. 2018
- SBM PhD Symposium. (Talk, QMUL, UK)   Oct. 2018
- IC2S2 2018. (Poster, Northwestern University, US)   Jul. 2018
- PhD 9-Month Progression. (Talk, QMUL, UK)   Jun. 2018
- NetSci 2018 Satellite: Machine Learning in Network Science. (Talk, Paris, France)   Jun. 2018
- NetSci 2018. (Poster, Paris, France)   Jun. 2018

Grants, Awards and Scholarships

- PI, Summer Institutes in Computational Social Science Research Grant ($2,428)   2021
- PI, Summer Institute on Computational Social Science (Chicago) Grant ($1,068)   2021
- NetSci 2020 Registration Support (€130)   2020
- Beihang University Outstanding Graduate Dissertation Award (acceptance rate: 2%)   2017
- Beihang University Outstanding Graduate (acceptance rate: 5%)   2017
- First-class Graduate Scholarship from Beihang University (¥10,000)   2014 - 2015
- Scholarship from École Centrale de Nantes (€1,000)   2014

Service

Reviewer:

- Physics&Mathematics: Advances in Complex Systems; Applied Network Science; European Physical Journal B
- General Audience: Nature Scientific Reports

Membership:

- Society of Young Network Scientists
- The Network Science Society

Teaching

- Innovation and Entrepreneurship (2021), Teaching Associate (Level 6 in Bachelor, QMUL)

- Quantitative Analysis for Business (2021), Teaching Associate (Level 4 in Bachelor, QMUL)

- Social Network Analysis (2019, 2020), Teaching Associate (Level 6 in Bachelor, QMUL)

Computer Skills

- Python, Matlab, R, Latex, Bash/shell scripting, HTML, SQL.

- Operating systems: MacOS, Linux, Windows.

Languages

English (Proficient), French (Professional), Chinese (Native)