

# Yi-Jiao (Joyce) Zhang

---

CONTACT      Email: [yijiaozhang94@gmail.com](mailto:yijiaozhang94@gmail.com)

INFORMATION      Homepage: [yijiaozhang.me](http://yijiaozhang.me)

Google scholar: <https://scholar.google.com/citations?user=nSC6BWUAAAAJ&hl=en>

RESEARCH      Network Science; Network embedding; Network evolution; Epidemic spreading on complex  
INTERESTS      networks

ACADEMIC      SUSTech Presidential Postdoctoral Fellow      07/2022 — 07/2024

POSITION      *Department of Statistics and Data Science, Southern University of Science and Technology (China)*

EDUCATION      Ph.D., Theoretical Physics, Lanzhou University (China)      09/2015 — 06/2022

*Advisor: Zhi-Xi Wu*

*Dissertation: "The spreading dynamics of multicomponent viruses on complex networks" (in Chinese)*

*Awarded for Outstanding Ph.D. Dissertation of Lanzhou University*

Visiting scholar, Indiana University (USA)

09/2019 — 09/2021

*Advisor: Filippo Radicchi*

B.S., Theoretical Physics, Lanzhou University (China)

09/2011 — 06/2015

*Advisor: Zhi-Xi Wu*

HONORS AND      Outstanding Ph.D. Dissertation, Lanzhou University      2022

AWARDS      Outstanding Graduate Student, Lanzhou University      2022

China National Scholarship for graduate students (¥30,000)      2019

China Scholarship Council award (\$22,800)      2019

GRANTS      PI, China Postdoctoral Science Foundation 73rd General Grant, *Detection of Coordinated Cam-*  
*paings on Social Media* (in Chinese, ¥80,000)      06/2023 — 07/2024

## PUBLICATIONS      **Journal Articles**

J1. Wang, J., **Zhang, Y.-J.**, Hu, Y. & et al. Reconstructing the evolutionary history of networked complex systems. *Nature Communications* **15**, 2849. <https://doi.org/10.1038/s41467-024-47248-x> (Co-first author, Apr. 2024).

J2. **Zhang, Y.-J.**, Yang, K.-C. & Radicchi, F. Model-free hidden geometry of complex networks. *Phys. Rev. E* **103**, 012305. <https://link.aps.org/doi/10.1103/PhysRevE.103.012305> (Jan. 2021).

J3. **Zhang, Y.-J.**, Yang, K.-C. & Radicchi, F. Systematic comparison of graph embedding methods in practical tasks. *Phys. Rev. E* **104**, 044315. <https://link.aps.org/doi/10.1103/PhysRevE.104.044315> (Oct. 2021).

- J4. **Zhang, Y.-J.**, Wu, Z.-X., Holme, P. & Yang, K.-C. Advantage of Being Multicomponent and Spatial: Multipartite Viruses Colonize Structured Populations with Lower Thresholds. *Phys. Rev. Lett.* **123**, 138101. <https://link.aps.org/doi/10.1103/PhysRevLett.123.138101> (Editors' Suggestion, Sept. 2019).

#### PRESENTATIONS **Talks**

- Reconstructing the evolutionary history of networked complex systems.  
*Chinese Physical Society Fall Meeting, Shenzhen, China* 11/2022
- Systematic comparison of graph embedding methods in practical tasks.  
*NetSci 2021, Washington DC, USA (virtual)* 07/2021
- Advantage of Being Multicomponent and Spatial: Multipartite Viruses Colonize Structured Populations with Lower Thresholds.  
*National Statistical Physics & Complex Systems Conference (SPCSC), Hefei, China* 07/2019

#### **Posters**

- Restore the evolution history of networked complex systems.  
*NetSci 2023, Vienna, Austria* 07/2023
- Model-free hidden geometry of complex networks.  
*NetSci 2020, Rome, Italy (virtual)* 09/2020
- SLIR Model for the Spread of Multicomponent Viruses in Complex Networks.  
*NetSci-X 2018, Hangzhou, China* 01/2018

#### SKILLS

##### **Computational**

Python (PyTorch, Pandas, Matplotlib, Scikit-learn, NetworkX, etc.), C, and Mathematica.

##### **Language**

Chinese and English

Last updated: December 12, 2024