Jiawei Feng

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Education

Peking University Feb 2025 – Present

- Jointly Trained Student at College of Engineering (Supervisor: Wenjun Mei)
- Research field: Network Control

National University of Defense Technology Sept 2023 – Present

- Master of Engineering in Management Science & Engineering (Supervisor: Xin Lu)
- GPA: 86.89/100
- Core courses (centesimal): Network Data Mining & Visualization (99), Multivariate Statistical Analysis (90), Deep Learning (93), Complex Systems Theory & Methods (87), Systems Science (87), Mathematical Physics (89)

Northeastern University Sept 2019 – June 2023

- Bachelor of Engineering in Electric Commerce
- GPA: 89.37/100 (rank 1/57)
- Core courses (centesimal): C Language Programming (99), Operations Research (95), Probability Theory & Mathematical Statistics (94), Advanced Mathematics (94), Data Communication & Computer Network (97)

Research Interests

- **Network science**: complex network theory in urban science, contact/mobility network construction & analysis, statistical physics in real-world networks (e.g. brain networks, social networks and economic networks)
- **Systems dynamics**: cascading propagation, compartment models, agent-based models, deep-learning models for network dismantling, epidemic modeling

Publications

1. **J Feng**, M Cai, F Dai, S Liu, T Bu, X Zhang, H Zheng, X Lu, Data-driven supply chains mapping and disruption analysis: The case of automotive SoC enterprises in China, ***Computers & Industrial Engineering***, 2025, 201, 110897, doi: 10.1016/j.cie.2025.110897
2. **J Feng**, B Dai, T Bu, X Zhang, C Ou, X Lu, A Study of Multi-scale Modeling and Disintegrating Strategies on Terrorist Organization Cooperation Network, ***Journal of Systems Science and Mathematical Sciences***, 2024, doi: 10.12341/jssms240058
3. X Lu, **J Feng**, S Tan, Perspectives on modelling epidemics with human mobility, ***Europhysics Letters***, 2025, 149(4), 41002, doi: 10.1209/0295-5075/adad94 (Co-first author)
4. X Zhang, W Yang, **J Feng**, B Dai, T Bu, X Lu, GSpect: Spectral filtering for cross-scale graph classification, ***IEEE Transactions on Network Science and Engineering***, 2024, 12(1), 547-558, doi: 10.1109/TNSE.2024.3513456
5. X Zhang, P Yang, **J Feng**, K Wen, G Yan, Q Luo, W Lin, X Lu, Network Structure Governs Drosophila Brain Functionality, ***Fundamental Research***, 2025, doi: 10.1016/j.fmre.2025.01.017
6. T Bu, K Yang, W Yang, **J Feng**, X Zhang, X Lu, DRAM-like Architecture with Asynchronous Refreshing for Continual Relation Extraction, ***WWW'24: Proceedings of the ACM Web Conference 2024***, 2024, 2216-2225, doi: 10.1145/3589334.3645621
7. X Lu, **J Feng**, P Holme, X Yuan, X Zhang, S Liu, S Tan, S Lai, Y Li, Z Du, H Yu, M Ajelli, Human mobility in Epidemic Modeling, 2025 (Co-first Author, Invited Paper, Preparing to submit to ***Physics Report***)
8. **J Feng**, F Dai, X Yuan, Y Han, W Mei, L Huang, T Bu, X Lu, Spatiotemporal Evolution of China's EV Charge Stations, 2025 (Preparing to submit to ***Nature Cities***)
9. M Cai, **J Feng**, Y He, X Lu, Research on Modeling and Risk Analysis of Complex Supply Chain Networks Based on Knowledge Graphs, ***Tsinghua University Press (Pending)***, 2025 (Book)

Academic Achievements

- Reviewer for ***Scientific Report***, 2025
- **J Feng**, X Lu, M Cai, X Yuan, A Method and System for Constructing an Entity Network Based on a Knowledge Graph, *China National Intellectual Property Administration (Pending)*, 2025 (**Patent**)
- X Lu, X Zhang, P Yang, **J Feng**, A Three JS-Based 3D Visualization Method and System for Brain Neural Networks, *China National Intellectual Property Administration*, 2025, CN119540428A (**Patent**)
- **J Feng**, V plus e-commence platform (V1.0), *China National Copyright Administration*, 2021, 2021SR1109156 (**Computer software copyright**)
- **J Feng**, M Cai, T Bu, X Zhang, H Zheng, X Lu, Modeling Supply Chain Interaction and Disruption: Insights from Real-world Data and Complex Adaptive System, ***CNetSci, Beijing***, 2024 (**Oral**)
- **J Feng**, M Cai, F Dai, S Liu, T Bu, X, Zhang, H Zheng, X Lu, Data-driven Supply Chains Mapping: The Case of Automotive SoC Enterprises in China, ***The 5th Chinese Conference of Network Science, Zhoushan***, 2024 (**Best paper**)
- **J Feng**, B Dai, T Bu, X Zhang, C Ou, X Lu, A Study of Multi-scale Modeling and Disintegrating Strategies on Terrorist Organization Cooperation Network, ***2023 Chinese High Education Research Annual Forum, Dalian***, 2023 (**Best paper**)

Projects

National Science Fund for Creative Research Groups (PI - Xin Lu) Jan 2025 – Dec 2029

- *Intelligent Decision-Making in Adversarial Complex Systems* (**Grant No. 72421002, participant**)

National Science Fund for Distinguished Young Scholars (PI - Xin Lu) Jan 2021 – Dec 2025

- *Public Welfare Applications of Big Data: Data Models for Addressing Poverty, Disease, and Disasters* (**Grant No. 72025405, participant**)

Internships & Social Practice Experience

Technical Competitor Analysis Intern, R&D, Volkswagen – Beijing, CN Nov 2022 – May 2023

Data Support for technical route & automobile industry analysis. Prediction of future vehicle models and requirements from customers via machine learning methods. This experience significantly enhanced my skills in technical strategy evaluation and industry forecasting, enabling me to integrate cross-disciplinary insights for effective decision-making in specific industries. Combing the complex network theories and knowledge graph with the knowledge from this internship, I published the paper: "Data-driven supply chains mapping and disruption analysis: The case of automotive SoC enterprises in China" in the 1st year of my postgraduate.

Data Analysis Intern, Netease – Beijing, CN Apr 2022 – July 2022

Responsible for analyzing, verifying, pre-processing multi-year, multi-area grade data for the 2022 Youdao reporting system of Chinese National College Entrance Examination. This experience not only improved my teamwork skills, but also significantly enhanced my ability to process and analyze real-world geographic data.

Volunteer for Ceremony Support, 24th Winter Olympic Games – Beijing, CN Nov 2021 – Mar 2022

Ensuring seamless event operations while demonstrating exceptional teamwork, adaptability, and dedication in a high-pressure international setting. The exceptional performance led to me being awarded for the outstanding volunteer of 2022 Beijing Winter Olympic Games.

Undergraduate Assistant Tutor, Northeastern University – Qinhuangdao, CN June 2021 – June 2022

Led a class of 30 undergraduates alongside two other assistant tutors, taking full responsibility for their daily lives, academic support, and mental well-being. I gained the respect of these younger students, and their trust in me motivated me to give even more. This experience gave me a sense of fulfillment and helped me develop strong problem-solving skills.

Honors & Awards

- National Scholarship (**College percentile 1%**) — Dec 2021, Dec 2022
- Model Merit Student (**University percentile 1%**) — Nov 2021, Nov 2022
- The 1st Outstanding Winner in National E-commence Innovation, Creativity & Entrepreneurship Provincial Competition (**leader, 10 teams per year**) — Aug 2021, July 2022
- Innovation & Entrepreneurship Scholarship (**University percentile 5%**) — June 2021, June 2022
- Postgraduate Freshmen Scholarship (**College percentile 5%**) — Dec 2023
- Provincial Outstanding Graduate (**University percentile 3%**) — May 2023
- China Telecom Scholarship (**1500 people per year nationwide**) — Nov 2022
- Self-improvement Star (**10 people per year university-wide, talented self-motivated ability**) — Nov 2022
- The 14th Provincial Outstanding Volunteer (**Cumulative volunteer time for 500+ hours, 400 people per year province-wide**) — Aug 2022
- The 2nd prize in "Challenge Cup" National College Student Business Plan Provincial Competition (**leader**) — July 2022
- Outstanding Volunteer in 24th Beijing Olympic Games (**Team percentile 1%**) — Apr 2022
- Star of Innovation & Entrepreneurship (**10 people per year university-wide, prominent entrepreneurial ability**) — Mar 2022
- Model Student Leader (**University percentile 1%**) — Nov 2021
- The 3rd prize in Asia and Pacific Mathematical Contest in Modeling — Nov 2021
- Bronze Prize in China College Students "Internet+" Innovation and Entrepreneurship Provincial Competition (**leader**) — Oct 2021
- National Encouragement Scholarship (**College percentile 5%**) — Dec 2020

Skills & Hobbies

Languages: Chinese (native), English (proficient)

Programming Languages: Python, R, SQL, Javascript, JAVA

Softwares: R Studio, Pycharm, VsCode, ArcGIS, Neo4j, Latex, Mathtype, MGWR, Gephi, Zotero, MySQL, Anaconda, Adobe series (PS, PR, AI), Office seriers (PPT, EXCEL, WORD)

Hobbies: Cooking, Painting, Photography, Skiing, Badminton, Swimming, Traveling, Video games (LoL, Zelda)