

Postdoctoral Research Associate in Computational Social Science

School of Public Policy and Development of Environmental Conservation

University of Massachusetts Amherst

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EDUCATION

- 2020-2024 **Ph.D. in Land Management** — Commons Governance
Technical University of Munich, Munich, Germany (Supervisor: Prof. Walter Timo de Vries)
Thesis title: Beyond the Traditional: Voluntary Collective Action Initiatives in China's Rural Land Development
Thesis committee: Liqiu Meng(chair), Walter Timo de Vries(examiner), Helen Bao(examiner)
- 2015-2018 **MSc in Geography** GPA:90.8/100
Peking University, Beijing, China (Supervisor: Prof. Jian Lin)
- 2011-2015 **BScMgt**— Land Resource Management GPA:90.4/100 (Top Rank)
Nanjing Agriculture University, Nanjing, China (Supervisor: Prof. Xianlei Ma)
- Short-term Program
- 2023 **Visiting Scholar** — Department of Land Economy
University of Cambridge, Cambridge, United Kingdom (Supervisor: Prof. Andreas Kontoleon)
- 2019 **Research Assistant** — School of Urban Planning and Design
Peking University Shenzhen Graduate School, Shenzhen, China (Supervisor: Prof. Wenjia Zhang)
- 2017 **Exchange Student** — Department of Land Economics
National Chengchi University, Taiwan, China (Supervisor: Prof. Taiming Ben) GPA:92.5/100

RESEARCH INTERESTS

Computational Social Science, Commons Governance, Policy Analysis, Spatial Equity, Multi-stakeholder Interest Game, Megaregion and City Network

TEACHING EXPERIENCES

- Teaching Assistant: Social Network Analysis Spring 2019
Teaching Assistant: Big Data, Machine Learning, and Urban Planning & Design Fall 2018

PUBLICATIONS

Peer-reviewed Journal Articles

1. **Zhou, L.**, de Vries, W.T., Guo, G., Gao, F., Fang, C*. (2024). The Effectiveness of Voluntary Collective Action in China's Rural Land Development. *Habitat International*, 150,103121.
<https://doi.org/10.1016/j.habitatint.2024.103121>
2. **Zhou, L.***, Zhou, Y., de Vries, W.T., Liu, Z., Sun, H. (2024). Collective Action Dilemmas of Sustainable Environmental Management: A Case Study on Land Marketization in Rural China. *Journal of Cleaner*

3. **Zhou, L.**, Fang, C., Chen, R., & Liu, S. (2024). From Conflict to Consensus: Agent-Based Modeling for Collective Decision-Making in China's Rural Land Management. Available at SSRN 5058380. <http://dx.doi.org/10.2139/ssrn.5058380>
4. Fang, C., Gu, X., **Zhou, L.***, Zhang, W., Liu, X., Liu, S. (2024). Exploring Spatial Complexity: Overlapping Communities in South China's Megaregion with Big Geospatial Data. *Computers, Environment and Urban Systems*, 112, 102143. <https://doi.org/10.1016/j.compenvurbsys.2024.102143>
5. Liu, Z.*, Fang, C., Li, H., Wu, J., **Zhou, L.**, & Werner, M. (2024). Efficiency and equality of the multimodal travel between public transit and bike-sharing accounting for multiscale. *Sustainable Cities and Society*, 101, 105096. <https://doi.org/10.1016/j.scs.2023.105096>
6. **Zhou, L.***, de Vries, W. T., Panman, A., Gao, F., & Fang, C. (2023). Evaluating Collective Action for Effective Land Policy Reform in Developing Country Contexts: The Construction and Validation of Dimensions and Indicators. *Land*, 12(7), 1401. <https://doi.org/10.3390/land12071401>
7. **Zhou, L.***, & de Vries, W. T. (2022). Collective Action for the Market-Based Reform of Land Element in China: The Role of Trust. *Land*, 11(6), 926. (Feature Paper) <https://doi.org/10.3390/land11060926>
8. Gao, F., Du, Z.*, Fang, C., **Zhou, L.**, Werner, M. (2022). A spatial-temporal cognitive framework for individual route choice in outdoor evacuation scenario. *ISPRS International Journal of Geo-Information*, 11, 605. <https://doi.org/10.3390/ijgi11120605>
9. Zhang, W., Xie, S., Zhao, P., Zhao, Y., Yin, J. (2022). Spatial Analysis Methodology and Application Research of Village and Town Settlements. Beijing: Science Press. (Book) (Principal author of Chapter 9)
10. **Zhou, L.**, Zhang, W.*, Fang, C., Sun, H., & Lin, J. (2020). Actors and network in the marketization of rural collectively-owned commercial construction land (RCOCCCL) in China: A pilot case of Langfa, Beijing. *Land Use Policy*, 99, 104990. <https://doi.org/10.1016/j.landusepol.2020.104990>
11. Zhang, W.*, Fang, C., **Zhou, L.**, & Zhu, J. (2020). Measuring megaregional structure in the Pearl River Delta by mobile phone signaling data: A complex network approach. *Cities*, 104, 102809. <https://doi.org/10.1016/j.cities.2020.102809>
12. Lin, J.*, **Zhou, L.**, Du, C. (2018). Strategy Thinking on Using Land for Collective Construction from Perspective of Rural Revitalization [J]. *Agricultural Economics and Management*, (05):5-10. <https://doi.org/10.3969/j.issn.1674-9189.2018.05.001>
13. Lin, J.*, **Zhou, L.**, Zhang, Y., Ye, Z. (2017). Review of the Development of Land Use Science in Recent Three Decades -On the Possibility of this Discipline Being a Secondary Discipline and the Originality of China's Land Use Research[J]. *China Land Sciences*, 2017,31(09):24-33. <https://doi.org/10.11994/zgtdkx.20171027.155240>
14. Lin, J.*, Zhang, Y., **Zhou, L.**, Ye, Z. (2017). Review of the Development of Land Use Science in Recent Three Decades -On the Possibility of this Discipline Being a Secondary Discipline and the Originality of China's Land Use Research [J]. *China Land Sciences*, 31(10):15-22+97. <https://doi.org/10.11994/zgtdkx.20171027.155240>
15. Lin, J.*, Fu, M., Qiao, Z., **Zhou, L.**, Li, J.(2016). Progress Review on Land Science Research in 2015 and Prospects for 2016: Sub-report of Land Resources and Land Use Planning[J]. *China Land Sciences*, 2016,30 (03):78-87. <https://doi.org/10.11994/zgtdkx.20160317.142815>
16. **Zhou, L.*** (2014). Spatial and Temporal Differences Analysis of Urban Land Intensive Use Based on ‘Land

Consumption' Index—A Case Study of Main Functional-oriented zones[J]. *Journal of Anhui Agricultural Sciences*, 24:8374-8376.

17. **Zhou, L.*** (2014). Effects of Economic Development Level on Agricultural Plastic Film Pollution Treatment [J]. *Journal of Anhui Agricultural Sciences*, 19:6353-6355.<https://doi.org/10.13989/j.cnki.0517-6611.2014.19.089>
18. Ma, X., **Zhou, L.**, Zhao, A.* (2014). Sustainable Urban Land Intensive Use Evaluation and Its Impacting Factors—A Modification of Traditional Land Intensive Use. *China Land Sciences*, 12:32-38.
<https://doi.org/10.13708/j.cnki.cn11-2640.2014.12.005>
19. Tang, Y., **Zhou, L.**, Guan, C.* (2014). Changes and Policy Choices of Housing Security System in China-A Literature Review. *Chinese Public Administration*, 08:97-100.<https://doi.org/10.3782/j.issn.1006-0863.2014.08.22>

Articles Under Review

20. **Zhou, L.**, Gu, X., Fang, C.* Spatial Rescaling through Webometric Analysis with Inter-Village Connectivity in Co-City Region. (The 1st round revision to *Annals of the American Association of Geographers*).
21. Zhang, W., Li, Y., **Zhou, L.**, Fang, C*. Quasi-experimental analysis of COVID-19 impacts on older adults' travel behavior: Implications for age-friendly neighborhood planning. (The 2nd round revision to *Journal of Planning Education and Research*).
22. Zhang, W., Geng, Y., **Zhou, L.**, Fang, C.* Associations between online and offline shopping and travel behaviors before and after the outbreak of COVID-19. (Under review in *Transportation Research Interdisciplinary Perspectives*).
23. Fang, C., Liu, S., **Zhou, L.***, Chen, R., Werner, M. HDCBC: A Robust Clustering Algorithm for Data with Noise, Heterogeneous Densities, and Weak Connectivity. (The 2nd round revision to *International Journal of Geographical Information Science*).
24. Fang, C. *, **Zhou, L.**, Liu, X., Werner, M. Data-Driven City: An Innovative Approach to Urban Area Delineation. (The 2nd round revision to *Scientific Report*).
25. Fang, C., Chen, R., **Zhou, L.*** Comparing Variant Megaregional Complex Networks in the China Great Bay Area- A Multi-Scale Analysis Based on Mobile Phone Signaling Data. (The 1st round revision to *Habitat International*).
26. Feng, Y., Fang, C., Jia, X., Song, P., **Zhou, L.**, Xue, X., Wang, K., He, R., Guo, N., Ge, S.* Dual Pathways of Carbon Neutrality in urban green spaces: Assessment and Regulatory Strategies. (The 1st round revision to *Sustainable Cities and Society*).
27. Jia, X., Song, P., Fang, C., **Zhou, L.**, Wang, K., Guo, N., Tan, X., He, R., Wan, H., Xu, X., Liu, Y., Tian, G., Lei, Y. Unlocking carbon sequestration potential in urban parks by optimizing environmental variables: insights from Zhengzhou, China. (Under review in *Remote Sensing of Environment*).

Ongoing Work

28. **Zhou, L.**, Fang, C., Chen, R., & Liu, S. From Conflict to Consensus: Large Language Model (LLM)-empowered Agent-Based Modeling for Collective Decision-Making in China's Rural Land Management.
29. **Zhou, L.**, Wang, T., Fang, C. * From Data to Policy: Understanding Multi-Stakeholder Perceptions of Land Policy through Text Mining
30. **Zhou, L.**, Pan, S., Fang, C. * Does the land marketization policy for rural China undermine the equity of regional development?

31. Fang, C., Kwan, M.*, **Zhou, L.**, Liu, S., Chen, R. Measuring Accessibility and Equity of Residential Parks and Green Spaces for Variant Neighborhoods Based on TB-i2SFCA and SHAP.
32. Fang, C., Kwan, M.*, Zhao, J., **Zhou, L.** Accessibility and its Determinants in Urban Green Spaces: A Megaregional Analysis in the Pearl River Delta

*Asterisk Indicates corresponding author

RESEARCH EXPERIENCE

Peer-reviewed Presented Conference

1. The 20th Biennial Conference of the International Association for the Study of the Commons, University of Massachusetts Amherst, USA, June 16-20, 2025 (accepted)
2. The 7th Workshop on the Ostrom Workshop (WOW7) conference, Indiana University, Bloomington, USA, June 19-21, 2024 (accepted)
3. International Research Society for Public Management, Tampere, Finland, April 16-18, 2024 (accepted)
4. 18th Annual Planning, Law, and Property Rights (PLPR) Conference 2024, Munich, Germany, March 18-22, 2024
5. Cambridge Centre for Environment, Energy and Natural Resource Governance (CEENRG) Seminar, Cambridge, United Kingdom, October 26, 2023
6. International Workshop on Geography and Sustainability 2023, Beijing, China, October 26-29, 2023
7. Green Sustainable Development Forum, Cambridge, United Kingdom, August 25, 2023.
8. The Commons We Want: Between Historical Legacies and Future Collective Actions, XIX Biennial IASC Conference, Nairobi, Kenya, June 19-24, 2023.
9. Overview Publications and Research in Land Management Session - 2022-2023, Munich, Germany, October 24, 2022-January 30, 2023
10. 13th PostDoc and PhD seminar of DGK Section Land and Real Estate Management in Dresden, Germany, June 29-30, 2022.
11. (Post-)doctoral colloquium on land management and spatial development, Bonn, Germany, November 18-19, 2021.
12. Optimizing territorial and spatial planning: Principles, Method, and Application, Wuhan University, Wuhan, 2018.
13. The 25th Land Academic Seminar on Both Sides of the Taiwan Strait, Taipei, 2016.
14. Global Chinese Real Estate Congress 2014 Annual Conference, Nanjing University, Nanjing, 2014.
15. The Eighth Session of Symposium of Land in Cross-Strait, National Chengchi University, Taipei, 2014.

Project Experience

1. The Evolution and Mechanism of the Guangdong-Hong Kong-Macao Greater Bay Area Pattern from the Perspective of Big Data and Complex City Networks
2. Spatial Reconstruction of Villages and Towns Settlement--Digital Simulation and Evaluation Model
3. Development Strategy of Collective Construction Land in Key Towns

4. Land Space Planning in Shandong Province
5. Land Urbanization Quality Evaluation in Liaoning Province
6. Analysis of Regional Difference of Urban Land Use Intensity Based on Land Consumption Index
7. The Impact of Economic Development Levels on the Use of Agricultural Plastic Film
8. Evaluation of Intensive Land Use in Lhasa Development Zone
9. Key Reviews on Land Science Research
10. Project on the Analysis of Ecological and Environmental Impacts of Land Use Change

AWARDS & HONORS

National Fellowship (0.4%, 1/245)	Postgraduate Scholarship of Peking University
University-level Outstanding Graduates	First Class Scholarship for Merit Student
Top Ten Students of the University (0.1%, 1/976)	Outstanding Student Leader
First Class Scholarship for Merit Student	Jiangyin Pivot Scholarship
State-level Student Research Training Project Certificate	Credit Reward Certificate I / II / III
University-level Student Research Training Project Certificate	Star of Scientific Research
Outstanding Member of the Communist Youth League	University-level Excellent League Member
Outstanding Undergraduate Graduation Thesis	University-level Outstanding Student Cadres

SERVICE AND LEADERSHIP

Peer Review Services

1. Peer Reviewer of <i>Land</i>	2025-
2. Peer Reviewer of <i>Cities</i>	2024-
3. Peer Reviewer of <i>Resources Policy</i>	2023-
4. Peer Reviewer of <i>Computational Urban Science</i>	2023-
5. Peer Reviewer of <i>Humanities & Social Sciences Communications</i>	2023-

Professional and Scholarly Affiliation

1. Membership of International Association for the Study of the Commons (IASC)
2. Member of IASC Early Career Network
3. Member of the International Academic Association on Planning, Law, and Property Rights (PLPR)
4. Member of China-America Association for Public Affairs (CAAPA)

Leadership Experience

1. China International College Students' Innovation Competition 2023 (Bronze Award)
2. 'Challenge Cup' National College Student Curricular Academic Science and Technology Works Competition (Second Prize at National Level)

3. 'Challenge Cup' College Student Curricular Academic Science and Technology Works Competition (First Prize at Provincial Level)
4. 'Challenge Cup' College Student Curricular Academic Science and Technology Works Competition (First Prize at University Level)
5. National-Level Student Research Training Project: Analysis of Regional Difference of Urban Land Use Intensity Based on Land Consumption Index (No.201310307054) (0.6%) (PI)
6. Research topic: Effects of Economic Development Level on Agricultural Plastic Film Pollution Treatment
7. Mathematical Contest in Modeling Competition (Second Prize at University Level)
8. Three-dimensional Environmental Protection Creative Competition (Second Prize at University Level)
9. Network Simulation Operation Competition (Third Prize at University Level)
10. The 4th Humanities and Social Science Knowledge Competition (Excellence Award at provincial level)

REFERENCES AVAILABLE UPON REQUEST

Potential Referees (alphabetically sorted)

Prof. Charles Schweik, University of Massachusetts Amherst (cschweik@umass.edu)

Prof. Helen X.H. Bao, University of Cambridge (hxb20@cam.ac.uk)

Prof. Andreas Kontoleon, University of Cambridge (ak219@cam.ac.uk)

Prof. Walter Timo de Vries, Technical University of Munich (wt.de-vries@tum.de)

Prof. Liqiu Meng, Technical University of Munich (liqiu.meng@tum.de)

Prof. Bing Zhu, Technical University of Munich (b.zhu@tum.de)

Prof. Jian Lin, Peking University (jlin@urban.pku.edu.cn)

Prof. Wenjia Zhang, Peking University Shenzhen Graduate School (zhangwj@pkusz.edu.cn)

Prof. Jing Meng, University College London (jing.j.meng@ucl.ac.uk)

Prof. Ning Zhang, Shandong University at Weihai; University of Cambridge (zn928@naver.com)

Dr. Daoping Wang, King's College London, (daoping.wang@kcl.ac.uk)

Prof. Shimou Yao, Chinese Academy of Sciences (Wechat: wxid_lqr48lqtzh5d22)

Prof. Shougeng Hu, China University of Geosciences (Wuhan) (husg2009@gmail.com)

Prof. Guancheng Guo, Nanjing Agricultural University (ggc@njau.edu.cn)

Prof. Xianlei Ma, Nanjing Agricultural University (maxianlei@njau.edu.cn)