

Shaoqing Dai

Postdoc

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🏫 School of Resource and Environmental Sciences, Wuhan University



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🏢 Working Experience

- 📅 2025.01- **Key-funded Postdoctoral Researcher**, Geography Postdoctoral Program, School of Resource and Environmental Sciences, Wuhan University
Co-mentor: Prof. Peng Jia

🎓 Education

- 📅 2020.01-2024.06 **Ph.D.**, Faculty of Geo-information Science and Earth Observation (ITC), University of Twente
Supervised by Prof. Peng Jia and Prof. Alfred Stein
Thesis: **Improving obesogenic environmental assessments with advanced geospatial methods**
Major in Geoinformatics 📍 Enschede, Netherlands
- 📅 2016.09-2019.06 **M.Sc.**, Institute of Urban Environment, Chinese Academy of Sciences, University of Chinese Academy of Sciences
Supervised by Prof. Yin Ren
Thesis: **Creating a Carbon Source and Sink Map by Coupling an Ecological Process Model with an Emission Inventory to Study a Carbon Balance**
Major in Ecology 📍 Xiamen, China
- 📅 2012.09-2016.06 **B.Sc.**, School of Geographical Sciences, Fujian Normal University
Supervised by Prof. Huixian Jiang
Thesis: **The Planning Location and Design of Smart Campus Based on BIM and GIS: A Case Study of Fujian Normal University**
Major in Geographical Science (National Talents Training Base) 📍 Fuzhou, China

🔍 Research Interests

Health Geography; Urban Visual Intelligence; Spatial Lifecourse Health; Spatial Statistics; GeoAI; Spatial-Temporal Big Data

📖 Publications

* corresponding author, # co-first author.

📖 Peer-Reviewed Journal Articles (First/corresponding author)

- Yue Ying, **Shaoqing Dai**^{*}, Mila Koeva, Monika Kuffer, Claudio Persello, Wen Zhou, Jaap Zevenbergen (2025). Toward 3D hedonic price model for vertically developed cities using street view images and machine learning methods. *Habitat International* 156: 103288. doi:10.1016/j.habitatint.2025.103288. [SSCI, IF=6.5, Q1].
- Manyao Li[#], **Shaoqing Dai**[#], Yuanyuan Shi[#], Kun Qin[#], Ross Brownson, Yan Kestens, Miyang Luo, Shiyong Liu, Jing Su, Gordon G. Liu, Shujuan Yang^{*}, Peng Jia^{*} (2025). Heterogeneous impacts of and vulnerabilities to the COVID-19 pandemic. *Landscape Ecology* 40: 32. doi:10.1007/s10980-024-02039-z. [SCI, IF=4.0, Q2, Landscape Ecology top journal].
- Shaoqing Dai**, Yuchen Li, Alfred Stein, Shujuan Yang, Peng Jia^{*} (2024). Street view imagery-based built environment auditing tools: a systematic review. *International Journal of Geographical Information*

- Science* 38(6): 1136-1157. doi:10.1080/13658816.2024.2336034. [SCI/SSCI, IF=4.3, Q1, GIS top journal].
4. Kun Qin[#], Zhanpeng Wang[#], **Shaoqing Dai[#]**, Yuchen Li, Manyao Li, Chen Li, Ge Qiu, Yuanyuan Shi, Chun Yin, Shujuan Yang, Peng Jia^{*} (2024) Spatiotemporal patterns of air pollutants over the epidemic course: a national study in China. *Remote Sensing* 16(7): 1298. doi:10.3390/rs16071298. [SCI, IF=4.2, Q2].
 5. **Shaoqing Dai**, Ge Qiu, Yuchen Li, Shuhan Yang, Shujuan Yang, Peng Jia^{*} (2024). State of the art of lifecourse cohort establishment. *China CDC Weekly* 6(14): 300–304 doi:10.46234/ccdcw2024.058. [SCI/SSCI, IF=4.3, Q4, China CDC Journal].
 6. **Shaoqing Dai**, Wufan Zhao^{*}, Yanwen Wang, Xiao Huang, Zhidong Chen, Jinghan Lei, Alfred Stein, Peng Jia (2023). Assessing spatiotemporal bikeability using multi-source geospatial big data: a case study of Xiamen, China. *International Journal of Applied Earth Observation and Geoinformation* 125: 103539. doi:10.1016/j.jag.2023.103539. [SCI, IF=7.6, Q1].
 7. **Shaoqing Dai[#]**, Xiaoman Zheng[#], Lei Gao, Chengdong Xu, Shudi Zuo, Qi Chen, Xiaohua Wei, Yin Ren^{*} (2021). Improving plot-level model of forest biomass: a combined approach using machine learning with spatial statistics. *Forests* 12(12): 1663. doi:10.3390/f12121663. [SCI, IF=2.4, Q2].
 8. **Shaoqing Dai[#]**, Yin Ren[#], Shudi Zuo^{*}, Chengyi Lai, Jiajia Li, Shengyu Xie, Bingchu Chen (2020). Investigating the uncertainties propagation analysis of CO₂ emissions gridded maps at the urban scales: a case study of Jinjiang city, China. *Remote Sensing* 12(23): 3932. doi:10.3390/rs12233932. [SCI, IF=4.2, Q2].
 9. **Shaoqing Dai**, Jiajia Li, WeiXu Yang, Fangyu Chen, Huixian Jiang^{*} (2020). The evaluation of health effect of short-term exposure to PM_{2.5} during spring festival: a case study of 25 cities in the Yangtze River Delta. *Shanghai Urban Planning Review* 05: 22-29. doi:10.11982/j.supr.20200504. [C journal, in Chinese, T3 Journal in urban planning].
 10. **Shaoqing Dai**, Shudi Zuo, Yin Ren^{*} (2020). A spatial database of CO₂ emissions, urban form fragmentation and city-scale effect related impact factors for the low carbon urban system in Jinjiang city, China. *Data in Brief* 29: 105274. doi:10.1016/j.dib.2020.105274. [ESCI, IF=1.0].
 11. **Shaoqing Dai**, Huixian Jiang^{*}, Jiajia Li, Xian Su, Juan Wu, Yin Ren (2018). Influence of walking environment on robbery, snatch and theft crime in urban area, H city, China. *Scientia Geographica Sinica* 38(8): 1235-1244. doi:10.13249/j.cnki.sgs.2018.08.005. [C journal, CSSCI, CSCD, in Chinese, T1 Journal in geography].
 12. **Shaoqing Dai[#]**, Xiaoman Zheng[#], Shudi Zuo, Yin Ren^{*} (2018). Improving the prediction accuracy of forest aboveground biomass benchmark map by integrating machine learning and spatial statistics. *Proceedings of Spatial Accuracy 2018*. 80-83. [EI].
 13. **Shaoqing Dai**, Shudi Zuo, Yin Ren^{*} (2018). High-resolution mapping of direct CO₂ emissions and uncertainties at the urban scale. *Proceedings of Spatial Accuracy 2018*. 88-90. [EI].
 14. **Shaoqing Dai**, Jiajia Li, Shudi Zuo, Yin Ren, Huixian Jiang (2017). Landscape-scale simulation analysis of waterlogging and sponge city planning for a central urban area in Fuzhou city, China. *International Low Impact Development Conference China 2016 : LID Applications in Sponge City Projects*. 251-260. doi:10.1061/9780784481042.028. [EI].

Peer-Reviewed Journal Articles(Key author)

1. Shujuan Yang, Bin Yu, Wanqi Yu, **Shaoqing Dai**, Chuanteng Feng, Ying Shao, Xing Zhao, Xiaoqing Li, Tianjing He, Peng Jia^{*} (2023). Development and validation of an age-sex-ethnicity-specific metabolic syndrome score in the Chinese adults. *Nature Communications* 14(1): 6988. doi:10.1038/s41467-023-42423-y. [SCI, IF=14.7, Q1].
2. Peng Jia^{*}, Yuanyuan Shi, Qi Jiang, **Shaoqing Dai**, Bin Yu, Shuhan Yang, Ge Qiu, Shujuan Yang (2023). Environmental determinants of childhood obesity: a meta-analysis. *The Lancet Global Health* 11: S7. doi:10.1016/S2214-109X(23)00092-X. [SCI, IF=20.0, Q1].

3. Shudi Zuo*, **Shaoqing Dai**, Jiaheng Ju, Fanxin Meng, Yin Ren, Yunfeng Tian, Kaide Wang (2022). The importance of the functional mixed entropy for the explanation of residential and transport CO₂ emissions in the urban center of China. *Journal of Cleaner Production*: 380, 134947. doi:10.1016/j.jclepro.2022.134947. [SCI, IF=9.7, Q1].
4. Peng Jia*, **Shaoqing Dai**, Tong Wu, Shujuan Yang (2021). New approaches to anticipate the risk of reverse zoonosis. *Trends in Ecology & Evolution* 36(7): 580-590. doi:10.1016/j.tree.2021.03.012. [SCI, IF=16.7, Q1].
5. Shujuan Yang, **Shaoqing Dai**, Yuling Huang, Peng Jia* (2021). Pitfalls in Modeling Asymptomatic COVID-19 Infection. *Frontiers in Public Health* 9: 593176. doi:10.3389/fpubh.2021.593176. [SCI, IF=3.0, Q3].
6. Lulu Song, **Shaoqing Dai**, Zhi Cao, Yupeng Liu, Weiqiang Chen* (2021). High spatial resolution mapping of steel resources accumulated above ground in mainland China: Past trends and future prospects. *Journal of Cleaner Production* 297: 144609. doi:10.1016/j.jclepro.2021.126482. [SCI, IF=9.7, Q1].
7. Peng Jia*, **Shaoqing Dai**, Kristen. E. Rohli, Robert V. Rohli, Yanan Ma, Chao Yu, Xiongfeng Pan, Weiqi Zhou* (2020). Natural environment and childhood obesity: a systematic review. *Obesity Reviews* 22: e13097. doi:10.1111/obr.13097. [SCI, IF=8.0, Q2].
8. Shudi Zuo, **Shaoqing Dai**, Yin Ren* (2019). More fragmentized urban form more CO₂ emissions? An comprehensive relationship from the combination analysis across different scales. *Journal of Cleaner Production* 244: 118659. doi:10.1016/j.jclepro.2019.118659. [SCI, IF=9.7, Q1].
9. Shudi Zuo, **Shaoqing Dai**, Xiaodong Song, Chengdong Xu, Yilan Liao, Weiyin Chang, Qi Chen, Yaying Li, Jianfeng Tang, Wang Man, Yin Ren* (2018). Determining the mechanisms that influence the surface temperature of urban forest canopies by combining remote sensing methods, ground observations, and spatial statistical models. *Remote Sensing* 10(11): 1814. doi:10.3390/rs10111814. [SCI, IF=4.2, Q2].
10. Shudi Zuo, **Shaoqing Dai**, Yaying Li, Jianfeng Tang, Yin Ren* (2018). Analysis of heavy metal sources in the soil of riverbanks across an urbanization gradient. *International Journal of Environmental Research and Public Health* 15(10): 2175. doi:10.3390/ijerph15102175. [SCI, IF=4.6, Q3].

Peer-Reviewed Journal Articles (other author)

1. Chun Yin*, Zhe Zhang, **Shaoqing Dai**, Yiyi Chen* (2025). Built environments and obesity: A framework considering residences, commute routes, and workplaces. *Cities* 160: 105842. doi:10.1016/j.cities.2025.105842. [SSCI, IF=6.0, Q1, City top journal].
2. Changwei Cai[#], Shuzhen Zhu[#], Mingfang Qin[#], Xiaoqing Li[#], Chuanteng Feng, Bin Yu, **Shaoqing Dai**, Ge Qiu, Yuchen Li, Tingting Ye, Wenling Zhong, Ying Shao, Lan Zhang, Peng Jia*, Shujuan Yang* (2024). Long-term exposure to PM_{2.5} chemical constituents and diabetes: evidence from a multi-center cohort study in China. *The Lancet Regional Health–Western Pacific* 47: 101100. doi:10.1016/j.lanwpc.2024.101100. [SCI, IF=7.6, Q1].
3. Weiwei Zhang, Zixi Liu, Kun Qin, **Shaoqing Dai**, Huiyuan Lu, Miao Lu, Jianwan Ji, Zhaohui Yang, Chao Chen, Peng Jia* (2024). Long-term dynamic monitoring and driving force analysis of eco-environmental quality in China. *Remote Sensing* 16(6): 1028 doi:10.3390/rs16061028. [SCI, IF=4.2, Q2].
4. Chun Yin, Jiaheng Liu, **Shaoqing Dai**, Bindong Sun* (2024). Mixed land use has opposite associations with subjective well-being through social capital: spatial heterogeneity in residential and workplace neighborhoods. *Travel Behaviour and Society* 35: 100724. doi:10.1016/j.tbs.2023.100724. [SSCI, IF=5.1, Q2].
5. Yunfeng Tian, Shudi Zuo*, Jiaheng Ju, **Shaoqing Dai**, Yin Ren, Panfeng Dou (2024). Local carbon emission zone construction in the highly urbanized regions: application of residential and transport CO₂ emissions in Shanghai, China. *Building and Environment* 247: 111007. doi:10.1016/j.buildenv.2023.111007. [SCI, IF=7.1, Q1].

6. Pengxin Zhang[#], Shuhan Yang[#], **Shaoqing Dai**, Darren How Jin Aik, Shujuan Yang, Peng Jia^{*} (2022). Global spreading of Omicron variant of COVID-19. *Geospatial Health* 17. doi:10.4081/gh.2022.1083. [SCI, IF=1.0, Q4].
7. Yupeng Liu[#], Jiajia Li[#], Weiqiang Chen^{*}, Lulu Song, **Shaoqing Dai** (2022). Quantifying urban mass gain and loss by a GIS-based material stocks and flows analysis. *Journal of Industrial Ecology* 26(3): 1051-1060. doi:10.1111/jiec.13252. [SCI, IF=4.9, Q3, Industrial Ecology top journal].
8. Weichao Wang[#], Xian Liu[#], Changwen Zhang, Fei Sheng, Shanjun Song, Penghui Li, **Shaoqing Dai**, Bin Wang, Dawei Lu, Luyao Zhang, Xuezhi Yang, Zhihong Zhang, Sijin Liu, Aiqian Zhang, Qian Liu^{*}, Guibin Jiang (2022). Identification of two-dimensional copper signatures in human blood for bladder cancer with machine learning. *Chemical Science* 13(6): 1648-1656. doi:10.1039/D1SC06156A. [SCI, IF=7.6, Q1].
9. Panfeng Dou, Shudi Zuo^{*}, Yin Ren^{*}, Manuel J. Rodriguez, **Shaoqing Dai** (2021). Refined water security assessment for sustainable water management: a case study of 15 key cities in the Yangtze River Delta, China. *Journal of Environmental Management* 290: 112588. doi:10.1016/j.jenvman.2021.112588. [SCI, IF=8.0, Q2].
10. Shudi Zuo, Lianping Yang^{*}, Panfeng Dou, Hung Chak Ho, **Shaoqing Dai**, Wenjun Ma, Yin Ren, Cunrui Huang (2021). The direct and interactive impacts of hydrological factors on bacillary dysentery across different geographical regions in central China. *Science of the Total Environment* 764: 144609. doi:10.1016/j.scitotenv.2020.144609. [SCI, IF=8.2, Q1].
11. Peng Jia[#], Xinxi Cao[#], Hongxi Yang, **Shaoqing Dai**, Pan He, Ganlin Huang, Tong Wu, Yaogang Wang^{*} (2021). Green space access in the neighbourhood and childhood obesity. *Obesity Reviews* 22: e13100. doi:10.1111/obr.13100. [SCI, IF=8.0, Q2].
12. Miyang Luo, Hanqi Li, Xiongfeng Pan, Teng Fei, **Shaoqing Dai**, Ge Qiu, Yuxuan Zou, Heleen Vos, Jiayou Luo, Peng Jia^{*} (2021). Neighbourhood speed limit and childhood obesity. *Obesity Reviews* 22: e13052. doi:10.1111/obr.13052. [SCI, IF=8.0, Q2].
13. Xiongfeng Pan, Li Zhao, Jiayou Luo, Yinhao Li, Lin Zhang, Tong Wu, Melody Smith, **Shaoqing Dai**, Peng Jia^{*} (2021). Access to bike lanes and childhood obesity: a systematic review and meta-analysis. *Obesity Reviews* 22: e13042. doi:10.1111/obr.13042. [SCI, IF=8.0, Q2].
14. XiaoFang Pan, Hu Li, Lixin Zhao, Xiaoru Yang, Jianqiang Su, **Shaoqing Dai**, Jing Ning, Chunxing Li, Guanqing Cai, GeFu Zhu^{*} (2021). Response of syntrophic bacterial and methanogenic archaeal communities in paddy soil to soil type and phenological period of rice growth. *Journal of Cleaner Production* 278: 123418. doi:10.1016/j.jclepro.2020.123418. [SCI, IF=9.7, Q1].
15. Shengyu Xie, Guangwei Yu^{*}, Chunxing Li, Jie Li, Gang Wang, **Shaoqing Dai**, Yin Wang^{*} (2020). Treatment of high-ash industrial sludge for producing improved char with low heavy metal toxicity. *Journal of Analytical and Applied Pyrolysis* 150: 104866. doi:10.1016/j.jaap.2020.104866. [SCI, IF=5.8, Q2].
16. Panfeng Dou, Shudi Zuo^{*}, Yin Ren, **Shaoqing Dai**, Guoliang Yun (2019). The impacts of climate and land use/land cover changes on water yield service in Ningbo region. *Acta Scientiae Circumstantiae* 39(7): 2398-2409. doi:10.13671/j.hjkxxb.2019.0122. [C Journal, CSCD, in Chinese].
17. Qing Yang^{*}, Tianyue Huang, Saige Wang^{*}, Jiashuo Li^{*}, **Shaoqing Dai**, Sebastian Wright, Yuxuan Wang, Huaiwu Peng (2019). A GIS-based high spatial resolution assessment of large-scale PV power generation potential and associated CO₂ emission reduction in China. *Applied Energy* 247: 254-269. doi:10.1016/j.apenergy.2019.04.005. [SCI, IF=10.1, Q1].
18. Guoliang Yun, Yuanrong He^{*}, Yuantong Jiang, Panfeng Dou, **Shaoqing Dai** (2019). PM2.5 spatiotemporal evolution and drivers in the Yangtze River Delta between 2005 and 2015. *Atmosphere* 10(2): 55. doi:10.3390/atmos10020055. [SCI, IF=2.5, Q4].
19. Guoliang Yun, Shudi Zuo, **Shaoqing Dai**, Xiaodong. Song, Chengdong Xu, Yilan Liao, Peiqiang Zhao, Weiyin Chang, Qi Chen, Yaying Li, Jianfeng Tang, Wang Man, Yin Ren^{*} (2018). Individual and interactive influences of

anthropogenic and ecological factors on forest PM_{2.5} concentrations at an urban scale. *Remote Sensing* 10(4): 521. doi:10.3390/rs10040521. [SCI, IF=4.2, Q2].

20. Qin Ye, Gang Zeng*, **Shaoqing Dai**, Fenglong Wang (2018). Research on the effects of different policy tools on China's emissions reduction innovation. *China Population, Resources and Environment* 28(02): 115-122. doi:10.12062/cpre.20170915. [C journal, CSCD, in Chinese].
21. Qin Ye, **Shaoqing Dai**, Gang Zeng* (2017). Research on the effects of command-and-control and market-oriented policy tools on China's energy conservation and emissions reduction innovation. *Chinese Journal of Population Resources and Environment* 16(1): 1-11. doi:10.1080/10042857.2017.1418273. [ESCI, IF=3.9].
22. Miaoyi Li, **Shaoqing Dai**, Jingyuan Wang, Zhenjiang Shen* (2016). The analysis of urban spatial development pattern in Beijing based on the big data of government. *Journal of Spatio-temporal Information (Geomatics World)* 23(3): 20-26. doi:10.3969/j.issn.1672-1586.2016.03.004. [JST, in Chinese].

Book Chapter

1. Yuanyuan Shi, **Shaoqing Dai**, Peng Jia (2025). Healthcare service allocation and planning & Emerging fields in health geography. In *Health Geography(in Chinese)* edited by Peng Jia, Beijing: China Higher Education Press. ISBN:978-7-04-063403-7.
2. **Shaoqing Dai**, Zhidong Chen, Jinghan Lei, Yanwen Wang (2022). Assessing bicycle-sharing riding friendliness by fusing multi-source heterogeneous spatio-temporal big data. In *Planning Decision Support Model Design Compilation 2021(in Chinese)* edit by Beijing Municipal Institute of City Planning and Design, Beijing Chengyuan Digital Technology Co. Ltd., World Urban Planning Education Network, Beijing Planning Institute Hongdu Planning and Architectural Design Research Institute Co. Ltd., Beijing: China Architecture & Building Press. ISBN: 9787112270439.
3. Guoliang Yun, Shudi Zuo, **Shaoqing Dai**, Xiaodong. Song, Chengdong Xu, Yilan Liao, Peiqiang Zhao, Weiyin Chang, Qi Chen, Yaying Li, Jianfeng Tang, Wang Man, Yin Ren (2019). Individual and interactive influences of anthropogenic and ecological factors on forest PM_{2.5} concentrations at an urban scale. In *Advances in Quantitative Remote Sensing in China-In Memory of Prof. Xiaowen Li*, edited by Shunlin Liang, Guangjian Yan, Jiancheng Shi, Remote Sensing, MDPI, 2019, 316-332. ISBN: 978-3-03897-276-1. <https://doi.org/10.3390/books978-3-03897-277-8>.

Patent

1. Yin Ren, Xiaoman Zheng, **Shaoqing Dai**, Qi Chen, Shudi Zuo. Improving the accuracy of forest biomass estimate using source analysis and machine learning. CN111814397A. (2020).
2. Yin Ren, **Shaoqing Dai**, Shudi Zuo, Xiaoman Zheng. A biomass estimation method by fusing plot data and forest inventory data. CN110162872A. (2019).
3. Qi Chen, Yin Ren, Xiaoman Zheng, Shudi Zuo, **Shaoqing Dai**. A prediction method of subtropical forest biomass. CN108959705A. (2018).

Software Copyright

1. A water safety monitoring system based on environmental IOT data and InVEST model. V1.0. RN: 2019SR0517519. (2019).
2. A water conservation service monitoring system based on environmental IOT data. V1.0. RN: 2018SR745897. (2018).

Scientific and Technological Achievements

1. Yin Ren, Shudi Zuo, Lizhong Hua, **Shaoqing Dai**. (2023). Scaling up of carbon sequestration for Eucalyptus plantations based on ETKF-3DVAR hybrid data assimilation. *Institute of Urban Environment, Chinese Academy of Sciences and Xiamen University of Technology*, 90000890-2349, Xiamen Municipal Bureau of Science and Technology.

Open Dataset & Code

1. **Shaoqing Dai**, Alfred Stein, Yuchen Li, Shujuan Yang, Peng Jia. (2024). Code and data to support 'Street view imagery for built environment auditing: a systematic review' (Version 5). Zenodo. doi:10.5281/zenodo.10724305.
2. **Shaoqing Dai**. (2020). GISerDaiShaoqing/3dmodelFJNU 1.0 (Version 1.0). Zenodo. doi:10.5281/zenodo.4277977.
3. **Shaoqing Dai**, Shudi Zuo, Yin Ren. (2020). GISerDaiShaoqing/Urban-Carbon-Dioxide-sources-gridded-maps-and-its-determination-in-Jinjiang-city 0.6 (Version 0.6) . Zenodo. doi:10.5281/zenodo.3566072.

Awards & Honors

-  2025.01 Special Program for the Introduction of Overseas Postdoctoral Talents
-  2022.03 Outstanding contributions to COVID-19 epidemic prevention and control(From the health commission of Tumot Left Banner, Inner Mongolia autonomous region)
-  2021.07 The National 2nd Prize in the 5th Planning Decision Support Model Design Contest(Chengyuan Cup)
-  2019.06 China Scholarship Council(CSC[201904910428])
-  2019.06 The 2nd Grade Scholarship of Yonker Environmental Protection Scholarship
-  2019.06 The 1st Grade Scholarship of Institute of Urban Environment, Chinese Academy of Sciences
-  2019.01 The Scientific and Technological Innovation Award of Outstanding Graduate Students of the Ecological Society of China
-  2018.11 National Scholarship for M.Sc[*top 2-3%*]
-  2018.10 The National 3rd Prize in Urban Big Data Special Committee, Chinese Society for Urban Studies the 2nd Big Data Support Spatial Planning and Design Competition
-  2018.07 "Applied Energy" 2018 Summer School Certification
-  2018.06 Merit Students in the academic year 2017-2018, University of Chinese Academy of Sciences
-  2018.06 The 2nd Grade Scholarship of Institute of Urban Environment, Chinese Academy of Sciences
-  2018.06 The 1st Scholarship of Institute of Urban Environment, Chinese Academy of Sciences
-  2018.03 The National Winning Award in National Science & Technology Infrastructure Center, 2017 "Sharing Cup" College Student Science and Technology Resource Sharing Service Innovation Contest
-  2017.10 "Excellent Volunteer" award of 15th User Conference of Esri China
-  2017.06 Merit Students in the academic year 2016-2017, University of Chinese Academy of Sciences
-  2015.11 The National Winning Award in 2015 Esri Cup National Collegiate Developed Contest in GIS · 3D Modeling and Design
-  2015.11 Inovation Scholoarships in the academic year 2014-2015, Fujian Normal University
-  2015.07 The National 3rd Prize in the Smart City Special Event Contest, the 14th Challenge Cup National College Students' Extracurricular Academic Science and Technology Works Contest
-  2015.05 The First Annual Fujian Normal University Student Selection, Scientific and Technological Innovation award and Nomination
-  2015.03 The School Wining Award during the 9th Challenge Cup National College Students' Extracurricular Academic Science and Technology Works Contest
-  2014.11 Inovation Scholoarships in the academic year 2013-2014, Fujian Normal University
-  2014.07 The National 3rd Prize in 2014 MathorCup Global Collegiate Mathematical Contest in Modeling
-  2014.05 "Excellent League Cadres" in the academic year 2013-2014, Fujian Normal University
-  2014.05 "Excellent League Leader" in the academic year 2013-2014, School of Geographical Sciences, Fujian Normal University

- 📅 2013.05 "Excellent League Leader" in the academic year 2012-2013, School of Geographical Sciences, Fujian Normal University

📁 Developed Open Software & Project

- 📅 from 2017 Note of Applied Statistics with R
<http://gisersqdai.top/Note-of-Applied-Statistics-with-R-Book/>
- 📅 from 2018 D3L Tool of NASA Satellite
The program provides a graphical interface to download satellite imagery from NASA, such as MODIS products, MERIS and more information can see <http://gisersqdai.top/D3LTool/>
- 📅 from 2018 Geographical detector in R
The geographical detector software based on R.
- 📅 from 2018 GitHub Paper Notebook
The software for notebook of papers.
- 📅 from 2019 rgeoda
rgeoda is a R package for spatial data analysis based on libgeoda and GeoDa(contributor).
- 📅 from 2020 COVID-19 Dashboard shiny app
A developed dashboard shiny app about COVID-19. <https://gisersqdai.shinyapps.io/COVID19VIS/>
- 📅 from 2020 Awesome COVID-19
Resources of COVID-19 research. <http://covid19.gisersqdai.top/en-us/>
- 📅 from 2023 MetS score calculator shiny app
A shiny app to calculate MetS score. https://gisersqdai.shinyapps.io/mets_severiity_calculator/

🏛️ Research Projects

- 📅 2025-2028 "The precise monitoring and analysis for residential environment risk factors and health effects among vulnerable populations", Special Program for the Introduction of Overseas Postdoctoral Talents **PI**
- 📅 2024-2026 "Early Identification and Screening of Risk Factors for Chronic Complications in Diabetes Patients by Combining Traditional Chinese and Western Medicine", Research Project of Collaborative Chronic Disease Management by Traditional Chinese and Western Medicine **Investigator**
- 📅 2023-2026 "Evaluation and prevention of health risks in the community home environment for the elderly and children, and development of appropriate products", National Key Research and Development Plan(2023YFC3604704) **Investigator**
- 📅 2022-2025 "The mechanism of the impact of urban neighborhood-level walkability on child obesity", National Natural Science Foundation of China(42271433) **Investigator**
- 📅 2021-2021 "Investigating the Changes of Residents' Daily Behaviors, Lifestyles, and Built Environment During the COVID-19 Pandemic", WeSpace Academic Support Plan in 2020: "Tsinghua-Tencent" Emerging Technologies Future Urban Space project **PI**
- 📅 2018-2019 "The construction of Typhoon Disaster Assessment Index Based on GIS and Multi-source Remote Sensing Data in Fujian Province", Open Fund of the Big Data Institute of Digital Natural Disaster Monitoring in Fujian (NDMBD2018001) **Investigator**
- 📅 2016-2020 "Research on the key technology research and integration demonstration of urban agglomeration ecological security in the Yangtze River Delta", National Key Research and Development Plan(2016YFC0502704) **Investigator**
- 📅 2015-2018 "Scaling up of carbon sequestration for Eucalyptus plantations based on ETKF-3DVAR hybrid data assimilation", National Natural Science Foundation of China(31470578) **Investigator**
- 📅 2014-2015 "The Optimization Model of High Education Staff's Refuge Space Under Earthquake Disaster", The Technological Innovation Plan of University Students, Fujian Normal University(cxsl-2014137) **PI**

🗨️ Presentations

- 📅 2024.07.28 **Development of the frequently used built environmental auditing and simulation tools in health domain**, *4th International Symposium on Spatial Lifecourse Health*
📍 Wuhan, China
- 📅 2024.05.26 **Development of the frequently used environmental exposome observation tools in health domain**, *2024 Health Geography Youth Scholars Forum*
📍 Zhuhai, China
- 📅 2024.05.24 **Bridging environment and human health: from earth observation to human-center observation(invited)**, *AI 4D City lab, Hong Kong University of Science and Technology (Guangzhou)*
📍 Guangzhou, China
- 📅 2024.05.19 **Assessment of physical activity opportunities based on multi-source geospatial data**, *9th Youth Geoscience Forum*
📍 Xiamen, China
- 📅 2024.05.12 **The frequently used built environmental auditing tools in the health domain**, *1st National Remote Sensing and Geographic conference*
📍 Nanjing, China
- 📅 2024.01.17 **Health geography studies based on spatial lifecourse epidemiology framework(invited)**, *Institute of Urban Environment, Chinese Academy of Sciences*
📍 Xiamen, China
- 📅 2023.05.19 **Seeking your interest and going ahead will contribute to success(invited)**, *Xiamen No.1 High School of Fujian*
📍 Xiamen, China
- 📅 2022.08.18 **Do neighborhood boundaries matter for examining the associations between environmental factors and obesity**, *The 29th International Conference on Geoinformatics in 2022 session 10-2 GIScience for Public Health*
📍 Beijing, China
- 📅 2020.12.12 **The Evaluation of Health Effect of Short-term Exposure to PM2.5 during Spring Festival: A Case Study of 25 Cities in the Yangtze River Delta(invited)**, *The Workshop of 16th Spatial Behavior and Planning & Digitalization and Fine-Grained Governance*
📍 Xiamen, China
- 📅 2020.08.07 **What is geography? From coronavirus disease 2019 to Bei Dou Systems(invited)**, *Tong An No.1 High School of Fujian*
📍 Xiamen, China
- 📅 2018.05.27 **The Scale Effect, Zoning Effect of Geographical Features, the Modified Areal Unit Problem and the Chanlleges of Spatial Stastistics**, *11th Chinese R Language Conference*
📍 Beijing, China
- 📅 2018.05.22 **High-Resolution Mapping of Direct CO₂ Emissions and Uncertainties at the Urban Scale**, *13th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences(Spatial Accuracy 2018)*
📍 Beijing, China
- 📅 2017.11.11 **The Environmental Effect of Urban Form on PM2.5: A Case Study of Beijing-Tianjin-Hebei Urban Agglomeration**, *9th Chinese Landscape Ecology workshop*
📍 Guangzhou, China
- 📅 2017.09.28 **The Assement Platform of Urban Forest Ecosystem Servcie Based on InVEST model and IOT(invited)**, *2rd urban environment long-term monitor and sustainable development workshop*
📍 Shanghai, China
- 📅 2016.11.27 **The Criminal Geographical Analysis about Walking Environment of Urban**, *The Workshop of 12th Spatial Behavior and Planning & Spatial-Temporal Behavior and Social Planning Research*
📍 Beijing, China

📅 2016.07.01 **Transportation Planning of Smart City on the Basis of Data Augmentation Design Under the Perspective of Humanism: A Case Study of Fuzhou's Cangshan District**, *10th annual conference of International Association of China Planning*

📍 Beijing, China

Selected Posters

📅 2017.12.10 **Quantifying the linear and nonlinear relations between the urban form fragmentation and the carbon emission distribution**, *2017 AGU Fall Meeting*

📍 New Orleans, USA.

📅 2017.05.16 **The relationship between the fragmented urban form landscape and the carbon emission distribution at different resolutions**, *9th Lecture of Modern Ecology*

📍 Shanghai, China

📅 2016.06.26 **The Simulation Analysis of Waterlogging and the Sponge City Planning Control of Central Urban Area in Fuzhou City**, *2016 International Low Impact Development Conference*

📍 Beijing, China

Academic Service & Affiliations

📅 from 2024	UrbanParty	Lecturer
📅 from 2024	International Society for Photogrammetry and Remote Sensing Student Consortium	Member
📅 from 2024	AI 4D City lab, Hong Kong University of Science and Technology (Guangzhou)	Visiting Scholar
📅 from 2019	International Institute of Spatial Lifecourse Health (ISLE)	Fellow
📅 from 2019	GeoDa Center, rgeoda, libgeoda Github Organizations	Contributor
📅 from 2015	The Organizations "Sustainable Cities & Mobility"	Volunteer
📅 2024	2nd World Congress of Geography, "Research on Global Health Wellbeing and Health Geography" session	Convener
📅 2024	4th International Symposium on Spatial Lifecourse Health, "Application of System Simulation Models in Health Domain" session	Convener
📅 2024	4th International Symposium on Spatial Lifecourse Health Workshop	Lecturer
📅 2024	Heywhale Community and GISphere, 'Python x GIS' GeoAI Workshop	Lecturer
📅 2024	Training course on 'Spatial Epidemiology Analysis Methods and Applications'	Lecturer
📅 2020-2023	GISphere	Editor Board, Council Member, Editor in Chief of Wechat
📅 2018-2020	Aliyunqi Community	Expert
📅 2017-2019	International Association of Landscape Ecology of China (IALE-China)	Member
📅 2016-2017	Green Bike-Transit	Volunteer
📅 2013-2017	The Geographical Tribune of Youth	Founder, Editor in Chief, Associate Editor, Assistant Editor in Chief
📅 from 2019	European Heart Journal, Resources, Conservation and Recycling, Sustainable Cities and Society, International Journal of Geographical Information Science, Cities, Information Processing & Management, Methods in Ecology and Evolution, International Journal of Digital Earth, GIScience & Remote Sensing, Carbon Management, City and environment interactions, Frontiers in Public Health, Frontiers in Environmental Science, Frontiers in Earth Science, Scientific Reports, Data in Brief, The Journal of Open Source Software, Shanghai Urban Planning Review	Reviewer

Teaching Experience

📅 from 2024 "Applications of 3S technology, ICT, LBS and AI in Health Geography", summer undergraduate course 'Health Geography', School of Resource and Environmental Science & School of Public Health & ISLE, Wuhan University **60 students, 4 class hours**

- 📅 from 2024 "Applications of Remote Sensing technology in Public Health and Diseases Prevention", China CDC National Institute of Parasitic Diseases **60 students, 1 class hours**
- 📅 from 2024 "Applications of 3S technology, ICT, LBS, AI, and Complex System Science in Health Geography", fall postgraduate course 'Health Geography', School of Resource and Environmental Science, Wuhan University **16 students, 9 class hours**