Shaoqing Dai

Graduate Student

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Education

2016-2019	**M.S** in Ecology Institute of Urban Environment,Chinese Academy of Sciences, Xiamen, China
2012-2016	**B.S.** in Geographical Sciences(National Base) Fuajian Normal University, Fuzhou, China

Expertise & Skills

Major	GIScience, Remote Sensing, Spatial Statistics, Urban Studies, Environments, Ecological Modelling.
Programming	CGA, Python, Fortran, R, Shell, LaTeX, Makrdown, Github.
Expertise	QGIS, ArcGIS, ENVI, Erdas Image, PostGIS, City Engine.

Research Interests

- Urban Computing
- Spatial-Temporal Big Data
- Ecological Modeling and Ecoinformatics
- Intergration of Ecology, GIS and RS
- Spatial Statistics

Languages

Chinese	mother tongue
English	first forign language

Open Software

*Year indicates when the project was started. All projects are currently ongoing.

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. https://giserdaishaoqing.github.io/D3LTool/
2018	**geographical detector in R** – The geographical detector software based on R.

Research Projects

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 fxation for Eucalyptus plantations based on ETKF-3DVAR mixedassimilation",National Natural Science Foundation of China(31470578), **Investigator**
2015 - 2016	"The Spatiotemporal Difference of Tourism in Fujian Province Based on Spatial Mismatch Theory", The Tecnological Innovation Plan of University Students, Fujian Normal University(cxxl-2015137), **Investigator**
2015 - 2016	"The Spatial Optimization Evaluation of Medical Facility Based on GIS in Cangshan District, Fuzhou", The Tecnological Innovation Plan of University Students, Fujian Normal University(cxxl-2015146), **Investigator**
2014 - 2015	"The Optimization Model of High Education Staff's Refuge Space Under Earthquake Disater", The Tecnological Innovation Plan of University Students, Fujian Normal University(cxxl-2014137), **PI**

Awards & Honors

2018	Merit Students, University of Chinese Academy of Sciences, China.
2018	The Second Scholarship, Institute of Urban Environment, Chinese Academy of Sciences, China.[*top 15%*]
2018	The National Winning Award in 2017 "Sharing Cup" College Student Science and Technology Resource Sharing Service Innovation Contest, China.
2017	Merit Students, University of Chinese Academy of Sciences, China.
2015	The National Winning Award in 2015 Esri Cup National Collegiate Developed Contest in GIS · 3D Modeling and Design, China.
2015	The National Third Prize in the "Smart City" Special Competition of 14th "Challenge Cup" National College Student Curricular Academic Science and Technology Works Competition, China.
2015	The First Annual Fujian Normal University Student Selection, Scientifc and Technological Innovation award and Nomination, China.
2015	Scientifc and Technological Inovation Scholoarships of Fujian normal University, China.
2014	The School Wining Award during the 9th "Challenge Cup" Fujian Normal University College Student Curricular Academic Science and Technology Works Competition, China.
2014	The National Third Prize in 2014 MathorCup Global Collegiate Mathematical Contest in Modeling Certifcate of Achievement, China.
2014	"Excellent League Cadres" award of Fujian Normal University, China.
2014	Scientifc and Technological Inovation Scholoarships of Fujian normal University, China.
2014	"Outstanding communist Youth League cadres" award of Fujian Normal University, China.
2013	"Outstanding communist Youth League cadres" award of Fujian Normal University, China.

Professional Societies & Activities

2015 - present	Volunteer of The Subscription Accounts "Sustainable City · Transportation"
2017 - present	Member of International Association of Landscape Ecology of China(IALE-China)
2016 - 2017	Volunteer of Green Bike-Transit
2013 - 2017	Founder, Chief Editor, Subeditor, Assistant Chief Editor of The Geographical Tribune of Youth

Publications

*corresponding author, [#]co-first author.

Peer-Reviewed Journal Articles

5. **SQ, Dai.**, HX. Jiang, JJ. Li, X. Su, J. Wu, Y. Ren.(2018). Influence of walking environment on robbery, snatch and theft crime in urban area, H city, China. *Scientia Geographica Sinica.* [in Chinese] (*accepted*)

4. GL. Yun, SD. Zuo, **SQ, Dai.**, XD. Song, CD. Xu, YL. Liao, PQ. Zhao, WY. Chang, Q. Chen, YY. Li, JF. Tang, W. Man, Y. Ren. (2018). Individual and Interactive Influences of Anthropogenic and Ecological Factors on Forest PM2.5 Concentrations at an Urban Scale. *Remote Sensing. 10*(4), 521-538 doi:10.3390/rs10040521.

3. Q. Ye, G. Zeng, **SQ, Dai.**, FL. Wang. (2018). Research on the effects of different policy tools on China's emissions reduction innovation. *China Population, Resources and Environment. 210*(02), 115-122. doi:10.12062/cpre.20170915.[in Chinese]

2. Q. Ye, **SQ, Dai.**, G. 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.

1. ML. Li, **SQ, Dai.**, JY. Wang, ZJ. Shen. (2016). The Analysis of Urban Spatial Development Pattern in Beijing Based on the Big Data of Government. *Geomatics World. 23*(3), 20-26. doi:10.3969/j.issn.1672-1586.2016.03.004. [in Chinese]

Book Chapter

1. **SQ, Dai.**, JJ. Li, SD. Zuo, Y. Ren, HX. 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.

Papers submitted/under revision

5. **SQ, Dai.**, SD. Zuo, & Y. Ren. High-resolution mapping of direct CO_2 emissions and uncertainties at the urban scale. (*under review*).

4. **SQ, Dai.**[#], XM. Zheng, SD. Zuo, & Y. Ren. Improving the Prediction Accuracy of Forest Aboveground Biomass Map by Integrating Machine Learning and Spatial Statistics. (*submitted*).

3. SD. Zuo, **SQ, Dai.**, Y. Ren, & ZW. Yu. Quantifying the relationship between the fragmentation of the urban form and the carbon dioxide emission distribution at different spatial resolutions. (*submitted*).

2. ZF. Wu, **SQ, Dai.**, W. Man, Q. Chen, SD. Zuo, JF. Tang, YY. Li, Y. Ren. Interactive effects of human activity and environmental factors on variation in urban forest surface temperature. (*submitted*).

1. LY. Cai, SD. Zuo, ZF. Wu, GL. Yun, XM. Zheng, **SQ, Dai.**, Y. Ren. Effects of different green spaces on air PM2.5 in the winter in Southeast China at landscape scales. (*submitted*).

Meeting Abstracts & Papers

9. **SQ, Dai.**, SD. Zuo, & Y. Ren. (2018). High-Resolution Mapping of Direct CO_2 Emissions and Uncertainties at the Urban Scale. Abstract 37 presented at 13th International Symposium of Spatial Accuracy, Spatial Accuracy 2018, Beijing, China.

8. **SQ, Dai.**[#], XM. Zheng, SD. Zuo, & Y. Ren. (2018). Improving the Prediction Accuracy of Forest Aboveground Biomass Map by Integrating Machine Learning and Spatial Statistics. Abstract 35 presented at 13th International Symposium of Spatial Accuracy, Spatial Accuracy 2018, Beijing, China.

7. SD. Zuo, **SQ, Dai.**, Y. Ren, & ZW. Yu. (2017). Quantifying the linear and nonlinear relations between the urban form fragmentation and the carbon emission distribution. Abstract GC21G-1007 presented the poster at 2017 AGU Fall Meeting, New Orleans, LA, USA.

6. **SQ, Dai.**, Y. Ren, SD. Zuo, M. Dai, P. Chen, Z. Wang, LX. Xu, JW. Qi, GL. Yun. (2017). The environmental effect of urban form on PM2.5: a case study of Beijing-Tianjing-Hebei agglomeration. Presented at 9th Chinese Landscape Eoclogy workshop, Guangzhou, China.

5. Q. Ye, G. Zeng, **SQ, Dai.**, FL. Wang. (2017). Research on the Effects of Different Policy Tools on China's Energy Conservation and Emissions Reduction Innovation Based on the Panel Data of 285 prefectural-level municipalities. Presented at 2017 annual conference of the Chinese geographical society, economic geography and Specialized Committee.Sichuan, China.

4. SD. Zuo, **SQ, Dai.**, Y. Ren, & ZW. Yu. (2017). Quantifying the linear and nonlinear relations between the urban form fragmentation and the carbon emission distribution. Presented the poster at 9th Lecture of Modern Ecology, Shanghai, China.

3. **SQ, Dai.**, HX. Jiang, JJ. Li, X. Su, J. Wu. (2016). The Criminal Geographical Analysis about Walking Environment of Urban. Presented at The Workshop of 12th Spatial Behavior and Planning & Spatial-Temporal Behavior and Social Planning Research, Beijing, China.

2. **SQ, Dai.**, HX. Jiang, JJ. Li, QW. Xu. (2016). 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. Abstract 1813-2948-1 presented at The 10th annual conference of International Association of China Planning, Beijing, China.

1. **SQ, Dai.**, HX. Jiang, JJ. Li. (2016). The Simulation Analysis of Waterlogging and the Sponge City Planning Control of Central Urabn Area in Fuzhou City. Abstract 391 presented the poster at 2016 International Low Impact Development Conference, Beijing, China.

Talks

6. **SQ, Dai.** The Scale Effect, Zoning Effect of Geographical Features, the Modified Areal Unit Problem and the Chanlleges of Spatial Stastistics. *11th Chinese R Language Conference, Renmin University of China*, Beijing, China. May. 27, 2018.

5. **SQ, Dai.** High-Resolution Mapping of Direct CO_2 Emissions and Uncertainties at the Urban Scale. *13th International Symposium of Spatial Accuracy, Spatial Accuracy 2018, China National Convention Center*, Beijing, China. May. 22, 2018.

4. **SQ, Dai.** The Environmental Effect of Urban Form on PM2.5. *The 9th Chinese Landscape Eoclogy workshop, Sanyu Hotel*, Guangzhou, China. Nov. 11, 2017.

3. **SQ, Dai.** The Assement Platform of Urban Forest Ecosystem Servcie Based on InVEST model and IOT. *The 2rd urban environment long-term monitor and sustainable development workshop, Shanghai Normal University*, Shanghai, China. Sep. 28, 2017. [**invited**]

2. **SQ, Dai.** 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 Union University*, Beijing, China. Nov. 27, 2016.

1. **SQ, Dai.** 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. *The 10th annual conference of International Association of China Planning, Peking University*, Beijing, China. July. 2, 2016.