

# Curriculum Vitae

## Xin (Selena) Feng

### Contact Details

Department of Geography and Environmental Sustainability  
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### Teaching and Research Interests

Geographic information science; geospatial data science; spatial optimization; location modeling; urban, regional, and natural resource planning and development; emergency response; infrastructure and transportation systems; public policy; and techniques to support interactive planning and decision making.

### Education

Ph.D., Geography (Spatial analysis and modeling) University of California, Santa Barbara, USA	2019
M.A., Geographical Sciences and Urban Planning Arizona State University, USA	2015
M.S., Remote Sensing & GIS Peking University, China	2013
B.S., Cartography and Geographical Information System Wuhan University, China	2010

### Academic Appointments

2021-present	Assistant Professor, Department of Geography and Environmental Sustainability, University of Oklahoma
2020-2021	Postdoctoral Scholar, Center of Geospatial Sciences, University of California, Riverside
2015-2019	Research Assistant and Lab Lecturer, Department of Geography, University of California, Santa Barbara
2013-2015	Research Assistant and Teaching Assistant, School of Geographical Sciences and Urban Planning, Arizona State University
2010-2013	Research Assistant, Institute of Remote Sensing and Geographic Information System, Peking University

## Publications

### *Refereed Articles and Proceedings*

- 2022 R. Wei, **X. Feng**, S. Rey, & E. Knaap. Reducing racial segregation of public school district. *Socio-Economic Planning Sciences*, 101415.
- 2022 **X. Feng**, G. Barcelos, J. D. Gaboardi, E. Knaap, R. Wei, L.J. Wolf, ... & S. J. Rey. spopt: a python package for solving spatial optimization problems in PySAL. *Journal of Open Source Software*, 7(74).
- 2022 **X. Feng**, S. Rey, & R. Wei. The max-p-compact-regions problem. *Transactions in GIS*, 26(2), 717-734.
- 2021 **X. Feng**, A. Murray, R. Church. "Drone service response: Spatiotemporal heterogeneity implications." *Journal of Transport Geography* 93, 103074.
- 2021 **X. Feng**, S. Wang, A. Murray, Y. Cao, S. Gao. "MOTO: A multi-objective trajectory optimization method for finding sequential activity locations over space and time." *Environment and Planning B-Urban Analytics and City Science*, 2399808320913300.
- 2020 **X. Feng**, A. Murray. "Spatiotemporal Heterogeneous Allocation to Support Service Area Response." *Computers, Environment, and Urban Systems*, 82, 101503.
- 2020 A. Murray, R. Church, **X. Feng**. "Single facility siting involving allocation decisions." *European Journal of Operational Research*, 284 (3), 834-846.
- 2018 **X. Feng**, A. Murray. "Allocation Using a Heterogeneous Space Voronoi Diagram." *Journal of Geographical Systems*, 20(3), 207-226.
- 2018 A. Murray, **X. Feng**, Ali Shokoufandeh. "Heterogeneous Skeleton for Summarizing Continuously Distributed Demand in a Region." In *Proceedings of 10<sup>th</sup> International Conference on Geographic Information Science*, vol. 114.
- 2018 S. Wang, S. Gao, **X. Feng**, A. Murray, Y. Zeng. "A context-based geoprocessing framework to find optimal spatiotemporal meetup location on road networks for multiple moving objects." *International Journal of Geographical Information Science*, 32(7), 1368-1390.
- 2018 **X. Feng**, A. Murray. "Spatial analytics for enhancing street light coverage of public spaces." *LEUKOS*, 14(1): 13-23.
- 2016 A. Murray, **X. Feng**. "Public street lighting service standard assessment and achievement." *Socio-Economic Planning Sciences* 53: 14-22.
- 2016 **X. Feng**, S. Myint. "Exploring the effect of neighboring land cover pattern on land surface temperature of central building objects." *Building and Environment*, 95: 346-354.
- 2014 J. Song, S. Du, **X. Feng** and L. Guo. "The relationships between landscape compositions and land surface temperature: Quantifying their resolution sensitivity with spatial regression models." *Landscape and Urban Planning*, 123: 145-157.
- 2013 **X. Feng**, S. Du, F. Zhang and S. Wang. "Urban land classification of high-resolution images based on multi-scale fusion." *Journal of Geography and Geo-Information Science* 29(3): 43-47.
- 2011 **X. Feng**, S. Du, H. Shu. "The effect of spatial weight matrices on spatial autocorrelation - a cased study of hemorrhagic fever with renal syndrome (HFRS) in China." *Geomatics and Information Science of Wuhan University*, 36(12): 1410-1413.
- 2011 **X. Feng**, S. Du, H. Shu. "Spatial regression analysis in hemorrhagic fever with renal syndrome (HFRS) in China." *Proceedings of 2011 IEEE International Conference on Spatial Data Mining and Geographical Knowledge Services*, 77-80.

## Courses Taught

- GIS 2023 Introduction to Spatial Thinking (2021, 2022)
- GIS 4970 Environmental Spatial Modeling (2021, 2022)

## Students Advised

### Doctoral (advisor)

- Bikram Parajuli

### Doctoral (committee member)

- Jay (Joshua) Wimhurst
- Lawrence Burkett

### Doctoral (external reviewer)

- Kevin Thiel

### Master's (advisor)

- M. Shahriyar Parvez

### Master's (committee member)

- David Conn – The University of Oklahoma, 2022

## Meetings and Conference Presentations

- 2020 X. Feng, Sergio Rey, Ran Wei. "Max-p-Compact-regions Problem". *67<sup>th</sup> North American Meetings of the Regional Science Association International*, Virtual meeting, November 9-13, 2020.
- 2019 X. Feng, A. Murray, R. Church. "Medical Drone Service Response: Spatiotemporal Heterogeneity Implications." *American Association of Geographers Annual Meeting*, Washington, DC, April 3-7, 2019.
- 2018 X. Feng and A.T. Murray. "Addressing Spatial Allocation: Planning for Drone-based Emergency Medical Service." *Western Regional Science Association 57<sup>th</sup> Annual Meeting*, Pasadena, California, USA, February 11-14, 2018.
- 2017 X. Feng, S. Wang, S. Gao, and Y. Cao. "Spatial analytics for supporting meetup location." *64<sup>th</sup> North American Meetings of the Regional Science Association International*, Vancouver, British Columbia, Canada, November 8-11, 2017.
- 2017 X. Feng and A.T. Murray. "Heterogeneous Voronoi diagram." *2017 Annual Meeting of the American Association of Geographers*, Boston, Massachusetts, USA, April 5-9, 2017
- 2016 X. Feng and A.T. Murray. "Heterogeneous space facility siting in order to maximize coverage." *63<sup>rd</sup> North American Meetings of the Regional Science Association International*, Minneapolis, Minnesota, USA, November 9-12, 2016.
- 2016 X. Feng and A.T. Murray. "Spatial analytics for enhancing street light coverage of public spaces." *2016 Annual Meeting of the American Association of Geographers*, San Francisco, California, USA, March 29- April 2, 2016.
- 2015 X. Feng and S. Myint. "The effect of spatial heterogeneity of land cover types on land surface temperatures within different land use categories." *2015 Annual Meeting of the American Association of Geographers*, Chicago, Illinois, USA, April 21-25, 2015.
- 2014 A.T. Murray and X. Feng. "Street light coverage optimization." *61<sup>st</sup> North American Meetings of the Regional Science Association International*, Washington, D.C., USA, November 12-15, 2014.

- 2014 Xin Feng. “Understanding the effect of neighboring land cover pattern on land surface temperature of central building patch in Beijing. 2014 *Annual Meeting of the American Association of Geographers*, Tampa, US, April 8-12, 2014.
- 2011 Xin Feng, Shihong Du, Hong Shu. “Spatial regression analysis in hemorrhagic fever with renal syndrome (HFRS) in China.” IEEE International Conference on Spatial Data Mining and Geographical Knowledge Services & 8th Beijing International Workshop on Geographical Information Science. Fuzhou, China, July 6-8, 2011.

## **Honors and Awards**

- 2022 TRELIS Fellow, selected through a competitive process to participate in an intensive program of professional development for academic women in the geospatial sciences. Program funded by the US National Science Foundation (Award #1660400).
- 2021 Finalist, William L. Garrison Award for Best Dissertation in Computational Geography, American Association of Geographers.
- 2019 Excellence in Research Award, Department of Geography, University of California, Santa Barbara.
- 2019 2<sup>nd</sup> Place, Student Paper Competition, Geographic Information Science and Systems Specialty Group (GISS-SG), American Association of Geographers Annual Meeting, Washington, DC, April 3-7.
- 2018 Finalist (2<sup>nd</sup> Place), Tiebout Prize, Best Graduate Student Paper Award Western Regional Science Association 57<sup>th</sup> Annual Meeting, USA, February 11-14.
- 2016-2018 Dangermond Travel Grant, Department of Geography, UCSB. (Winter 2018, Spring 2018, Spring 2017, Fall 2017, Fall 2016)
- 2014 Lounsbury Student Travel Fellowship, Arizona State University,
- 2013 Second Prize Scholarship, Peking University, China.
- 2012 Wusi Individual Scholarship, Peking University, China.
- 2012 First Prize Scholarship, Peking University, China.
- 2011 2<sup>nd</sup> Place, Best Student Paper Award IEEE International Conference on Spatial Data Mining and Geographical Knowledge Services, Fuzhou, China, July 6-8.
- 2010 Excellent B. S. Dissertation, Hubei Province, China.

## **Invited Lectures**

- 2020 School of Geosciences, University of South Florida, USA. “Optimization in Geospatial Data Science.”
- 2020 Department of Urban & Regional Planning, San Jose State University, USA. “F(X): my function of GIScience.”
- 2019 Department of Geography, Environment and Society, University of Minnesota, USA. “Spatial Optimization in Geography.”
- 2018 Department of Geography, University of Florida, USA. “Optimizing meetup locations along road networks.”

## **Professional Service**

## **Journal Reviewer**

*Annals of GIS*  
*Building and Environment*  
*Cities*  
*Computational Urban Science*  
*Computers, Environment and Urban Systems*  
*Construction and Building Materials*  
*Environment and Planning B: Urban Analytics and City Science*  
*IEEE Access*  
*International Journal of Geographical Information Science*  
*Journal of Geographical Systems*  
*Journal of Transport Geography*  
*LEUKOS*  
*Socio-Economic Planning Sciences*  
*Sustainable Cities and Society*  
*Transportation Research Part E: Logistics and Transportation Review*

### **Professional Society Service**

#### Boards

2022 - Spatial Analysis and Modeling Specialty Group, American Association of Geographers, Board of Officers.

### **University and Department Committees**

#### University of Oklahoma

Colloquium Committee (2021, 2022)

Technology Committee (2021)

Faculty Evaluation Committee (2022)

#### University of California, Santa Barbara

Events Committee, Department of Geography (2017, 2018)

Outreach Committee, Department of Geography (2016, 2017)

### **Professional Society Membership**

American Association of Geographers

Regional Science Association International