CURRICULUM VITAE

Chuanrong (Cindy) Zhang

Department of Geography
Center for Environmental Sciences and Engineering (CESE)
University of Connecticut
215 Glenbrook Rd., Unit 4148
Storrs, CT 06269-4148
Office: (860) 486-2196; cindy.zhang@uconn.edu
Website: http://gis.geog.uconn.edu/personal/

Personal

Born: 1970
Citizenship: United States
Marital Status: Married with one child

Education:

PhD in Geography. Department of Geography, University of Wisconsin, Milwaukee. 2004. Dissertation topic: GIS, Remote Sensing and Spatial Modeling for Conservation of Karst Landscape

Masters in GIS. National Laboratory of Resources & Environment Information System. Chinese Academy of Sciences. 1995 Thesis topic: Design an Integrated Disaster Monitoring and Evaluation Information System

Bachelor in Geography. Department of Geography, Shandong Normal University. 1992

Academic Positions:

2018-present	Department Head, Dept. of Geography, University of Connecticut
2016-present	Professor, Dept. of Geography & Center for Environmental Sciences and Engineering, University of Connecticut
2011-2016	Associate Professor, Dept. of Geography & Center for Environmental Sciences and Engineering, University of Connecticut
2008- 2011	Assistant Professor, Dept. of Geography & Center for Environmental Sciences and Engineering, University of Connecticut
2006- 2008	Assistant Professor, Dept. of Geography, Kent State University
2004- 2006	Assistant Professor, Dept. of Geography & Geology, University of Wisconsin-Whitewater.

Research Interests:

Geographical Information Science and Systems, GIS Cyberinfrastructure, Markov Chain Geostatistics, Conventional Geostatistics, Remote Sensing, Spatial Analysis, Land use/cover

Change, Landscape Ecology and Conservation, Environmental Modeling, Natural Resource Management.

Teaching Interests:

Introductory and Advanced courses in GIS, Spatial Statistics, Spatial programming, and their applications in natural resource management, and environmental geography. Introductory courses in Physical geography and Human geography.

Honors and Awards:

1. NCSA (National Center for Supercomputing Applications) CyberGIS Fellowship, 2014.
2. CPGIS (The International Association of Chinese Professionals in Geographic Information Sciences) Excellent Group Service award (Chair of Social Event Committee), June 15, 2012.
3. UCGIS/ESRI (University Consortium for Geographic Information Science/Environmental Systems Research Institute) Junior Faculty Award, 2009.
4. University of Wisconsin-Whitewater Grant Scholar 2005-2006 Award.
5. UCGIS (University Consortium for Geographic Information Science) Summer Assembly 2003 Travel Awards.
6. UCGIS Student Paper Award, June 2003, Pacific Grove, California.
7. Best Graduate Paper, 57th Annual Meeting of the Wisconsin Geographical Society, Sep. 2003, Eau Clair, Wisconsin.
8. First Place, Student GIS Project 2003 Award from the University of Wisconsin-Milwaukee GIS Council.
9. UCGIS (University Consortium for Geographic Information Science) Summer Assembly 2002 Travel Awards.
10. Certificate for Excellent Poster Award Presentation on UCGIS Student Poster Competition, June 2002, Athens, Georgia.
11. Mary Jo Read Travel Awards, 2002. University of Wisconsin-Milwaukee.
12. Graduate School Travel Awards, 2002. University of Wisconsin-Milwaukee.
13. Mary Jo Read Fellowship, 2001-2004. University of Wisconsin-Milwaukee.

Courses taught as instructor since I began my faculty career include:

At UConn
1. Geog-5500 Fundamentals of GIScience
2. Geog-5600 Spatial Data Analysis
3. Geog-5610 Spatial Statistics and Modeling
4. Geog-2000 Globalization
5. Geog-1100 Globalization

At Kent State University
6. Geog-4/5/70195 Internet GIS
7. Geog-4/5/79076 Spatial Programming
8. Geog-4/5/79080 Advanced Geographic Information Science
9. Geog-39002 Statistical Methods in Geography
10. Geog-17063 World Regional Geography

At UW-Whitewater
11. 722-370 Geographic Information Systems

12. 722-496 Advanced GIS
13. 722-252 Human Environmental Problems

Publications:

Monograph

- Zhang, C., T. Zhao, and W. Li. 2015. *Geospatial Semantic Web.* Springer. pp 194. ISBN: 978-3-319-17800-4 (Print) 978-3-319-17801-1 (Online).

Refereed Journal Papers

1. Wan M., M. Qu, W. Hu, W. Li, C. Zhang, H. Cheng, and B. Huang. Estimation of soil pH using PXRF spectrometry and Vis-NIR spectroscopy for rapid environmental risk assessment of soil heavy metals. *Process Safety and Environmental Protection.* (Accepted).

2. Li W. and C. Zhang. 2019. Markov chain random fields in the perspective of spatial Bayesian networks and optimal neighborhoods for simulation of categorical fields. *Computational Geosciences.* (In press).

3. Qu M, J. Chen, W. Li, C. Zhang, M. Wan, B. Huang, and Y. Zhao. 2019. Correction of in-situ portable X-ray fluorescence (PXRF) data of soil heavy metal for enhancing spatial prediction. *Environmental Pollution.* (In press).

4. Yi Y., Z. Zhang, W. Zhang, C. Zhang, W. Li, and T. Zhao. 2019. Semantic Segmentation of Urban Buildings from VHR Remote Sensing Imagery Using a Deep Convolutional Neural Network. *Remote Sensing.* 11(15), 1774; https://doi.org/10.3390/rs11151774.

5. Li X., C. Zhang, B. Zhang, and K. Liu. 2019. A comparative time series analysis and modeling of aerosols in the contiguous United States and China. *Science of the Total Environment.* 690: 799-811.

6. Lu H., G. Liu, C. Zhang, and T. Okuda. 2019. Approaches to Quantifying Carbon Emissions from Degradation in Pan-tropic Forests - Implications for Effective REDD Monitoring. *Land Degradation & Development.* https://doi.org/10.1002/ldr.3333 *(In press).*

7. Zhai, R., W. Li, C. Zhang, W. Zhang, and W. Wang. 2019. The transiogram as a graphic metric for characterizing the spatial patterns of landscapes. *Landscape Ecology.* 34(9): 2103-2121. https://doi.org/10.1007/s10980-018-0760-7

8. Li, X.-K., C. Zhang, W. Li, R.O. Anyah, and J. Tian. 2019. Exploring the trend, prediction and driving forces of aerosols using satellite and ground data, and implications for climate change mitigation. *Journal of Cleaner Production*, 223: 238-251. https://doi.org/10.1016/j.jclepro.2019.03.121.

9. Yang S., H. Zhang, C. Zhang, W. Li, L. Guo and J. Chen. 2019. Predicting soil organic matter content in a plain-to-hill transition belt using geographically weighted regression

with stratification. *Archives of Agronomy and Soil Science.* 65:12, 1745-1757, DOI: 10.1080/03650340.2019.1576171.

10. Chen, F, H. Jia, D. Pan, L. Wang, C. Zhang, Z. Zhang, and S. Qu. 2019. Spatial analysis of maize drought risk in the agro-pastoral transitional zone of North China. *Journal of Arid Land.* https://doi.org/10.1007/s40333-018-0124-9. (In press).

11. Yu, J., W. Li, and C. Zhang. 2019. A framework of experimental transiogram modelling for Markov chain geostatistical simulation of landscape categories. *Computers, Environment and Urban Systems* 73: 16-26. https://doi.org/10.1016/j.compenvurbsys.2018.07.007

12. Zhang W., W. Li, C. Zhang, and T. Zhao. 2019. Parallel computing solutions for Markov chain spatial sequential simulation of categorical fields. International Journal of Digital Earth DOI: 10.1080/17538947.2018.1464073. https://doi.org/10.1080/17538947.2018.1464073

13. Jia, H., F. Chen, D. Pan, and C. Zhang. 2018. The impact of earthquake on poverty: learning from the 12 May 2008 Wenchuan earthquake. *Sustainability.* 2018, 10(12), 4704; doi:10.3390/su10124704. https://www.mdpi.com/2071-1050/10/12/4704.

14. Zhang, W., C. Witharana, W. Li, C. Zhang, X. Li, and J. Parent. 2018. Using Deep Learning to Identify Utility Poles with Crossarms and Estimate Their Locations from Google Street View Images. *Sensors* 2018, 18, 2484. https://doi.org/10.3390/s18082484

15. Xu H., C. Zhang, W. Li, W. Zhang, and H. Yin. 2018. Economic growth and carbon emission in China: a spatial econometric Kuznets curve? *Zbornik Radova Ekonomski Fakultet u Rijeka*, 36(1), 9-26. doi:http://dx.doi.org/10.18045/zbefri.2018.1.9

16. Huang Y., Q. Yan, and C. Zhang. 2018. Spatial-Temporal Distribution Characteristics of PM2.5 in China in 2016. *Journal of Geovisualization and Spatial Analysis.* 2: 12 https://doi.org/10.1007/s41651-018-0019-5

17. Lu H., C. Zhang, G. Liu, X. Ye, and C. Miao. 2018. Mapping China's Ghost Cities through the Combination of Nighttime Satellite Data and Daytime Satellite Data. *Remote Sensing* 10, 1037; doi:10.3390/rs10071037. http://www.mdpi.com/2072-4292/10/7/1037

18. Lu H., G. Liu, T. Okuda, and C. Zhang. 2018. Marginal abatement cost curves for REDD+ in Kalimantan, Indonesia and the potential role of cost-saving plantations. *Environmental Research Letters* 13 (7), 075006 https://iopscience.iop.org/article/10.1088/1748-9326/aac83f

19. Zhang, W., W. Li, C. Zhang, D. Hanink, Y. Liu, and R. Zhai. 2018. Analyzing horizontal and vertical urban expansions in three East Asian megacities with the SS-coMCRF model. *Landscape and Urban Planning* 177, 114-127. https://doi.org/10.1016/j.landurbplan.2018.04.010.

20. Yu J., C. Zhang, J. Wen, W. Li, D. Liu, and H. Xu. 2018. Integrating Multi-agent Evacuation Simulation and Multi-criteria Evaluation for Spatial Allocation of Urban Emergency Shelters. *International Journal of Geographical Information Science* https://doi.org/10.1080/13658816.2018.1463442

21. Du Z., S. Wu, M. Kwan, C. Zhang, F. Zhang, and R. Liu. 2018. A spatiotemporal regression kriging model for space-time interpolation: A case study of chlorophyll-a

prediction in the coastal areas of Zhejiang, China. *International Journal of Geographical Information Science* 32(10): 1927-1947.

22. Lu H., G. Liu, C. Miao, C. Zhang, Y. Cui, and J. Zhao. 2018. Spatial Pattern of Residential Carbon Dioxide Emissions in a Rapidly Urbanizing Chinese City and Its Mismatch Effect. *Sustainability* 2018, 10, 827; doi:10.3390/su10030827.

23. Zhai R., C. Zhang, J. Allen, W. Li, M. Boyer, K. Segerson, and K. Foote. 2018. Predicting land use/cover change in Long Island Sound Watersheds and its effect on invasive species: a case study for glossy buckthorn. *Annals of GIS* 24(2), 83-97; DOI: 10.1080/19475683.2018.1450786.

24. Wang W., W. Li, C. Zhang, and W. Zhang. 2018. Improving Object-Based Land Use/Cover Classification from Medium Resolution Imagery by Markov Chain Geostatistical Post-Classification. *Land*, 7, 31; doi:10.3390/land7010031. http://www.mdpi.com/2073-445X/7/1/31 .

25. Li Q., S. Hu, G. Du, C. Zhang, and Y. Liu. 2018. Cultivated land use benefits under state and collective agrarian property regimes in China. *Sustainability* 2018, 10(1), 7; doi: 10.3390/su10010007. http://www.mdpi.com/2071-1050/10/1/7/pdf.

26. Du Z., Gu Y., C. Zhang, Zhang F., Liu R., and J. Sequeira. 2018. DBSTC: An effective method for discovering cluster features with different spatiotemporal densities. *International Journal of Digital Earth.* 11(6): 609-634. Doi: http://dx.doi.org/10.1080/17538947.2017.1338765.

27. Yang S., S. Hu, W. Li, C. Zhang, and José A. 2017. Spatiotemporal effects of main impact factors on residential land price in major cities of China. *Sustainability* 2017, 9, 2050; doi:10.3390/su9112050. http://www.mdpi.com/2071-1050/9/11/2050/pdf.

28. Li X., C. Zhang, W. Li, and K. Liu. 2017. Evaluating the use of DMSP/OLS nighttime light imagery in predicting PM2.5 concentrations in the Northeastern United States. *Remote Sensing,* 9, 620; doi:10.3390/rs9060620. http://www.mdpi.com/2072-4292/9/6/620/pdf.

29. Gao Y., C. Zhang, Q. He, and Y. Liu. 2017. Urban ecological security simulation and prediction using an improved CA approach—a case study for the city of Wuhan in China. *International Journal of Environmental Research and Public Health.* 14, 643; doi:10.3390/ijerph14060643. http://www.mdpi.com/1660-4601/14/6/643/pdf.

30. Li, X., C. Zhang, and W. Li. 2017. Building block level urban land use information retrieval based on Google Street View images. *GIScience & Remote Sensing.* 54(6): 819-835. Doi: http://dx.doi.org/10.1080/15481603.2017.1338389.

31. Zhao T., C. Zhang and W. Li. 2017. Adaptive and Optimized RDF Query Interface for Distributed WFS Data. *ISPRS International Journal of Geo-Information* 6, 108; doi:10.3390/ijgi6040108. http://www.mdpi.com/2220-9964/6/4/108.

32. Zhang W., W. Li, C. Zhang and W. B. Ouimet. 2017. Detecting horizontal and vertical urban growth from medium resolution imagery and its relationships with major socioeconomic factors. *International Journal of Remote Sensing*, 38(12):3704-3734.

33. Zhang W., W. Li, C. Zhang, D. Hanink, X. Li, and W. Wang. 2017. Parcel-based urban land use classification in megacity using airborne LiDAR, high resolution orthoimagery,

and Google Street View. *Computers, Environment and Urban Systems*, 64: 215-228. http://dx.doi.org/10.1016/j.compenvurbsys.2017.03.001.

34. Zhang W., W. Li, C. Zhang. D. Hanink, X. Li, and W. Wang. 2017. Parcel feature data derived from Google Street View images for urban land use classification in Brooklyn, New York City. *Data in Brief*, 12: 175-179. http://doi.org/10.1016/j.dib.2017.04.002.

35. Li W., and C. Zhang. 2017. Comments on "Spatial hidden Markov chain models for estimation of petroleum reservoir categorical variables". *Journal of Petroleum Exploration and Production Technology*, 7:905-909 DOI: 10.1007/s13202-016-0312-0.

36. Du Z., Y. Gu, C. Zhang, F. Zhang, R. Liu, J. Sequeira, W. Li. 2017 ParSymG: a parallel clustering approach for unsupervised classification of remotely sensed imagery. *International of Digital Earth,* 10(5): 471-489. DOI:10.1080/17538947.2016.1229818.

37. Ahmed K., G. Wang, L. You, R. Anyah, C. Zhang, A. Burnicki. 2017. Projecting Regional Climate and Cropland Changes Using a Linked Biogeophysical-Socioeconomic Modeling Framework: 2. Transient Dynamics. *Journal of Advances in Modeling Earth Systems*. 9(1): 377-388. DOI:10.1002/2016MS000721.

38. Zhang W., W. Li, C. Zhang, and X. Li. 2017. Incorporating Spectral Similarity into Markov Chain Geostatistical Cosimulation for Reducing Smoothing Effect in Land Cover PostClassification. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 10(3): 1082- 1095. DOI: 10.1109/JSTARS.2016.2596040.

39. Qu M., W. Li, C. Zhang, B. Huang, and Y. Zhao. 2016. Spatial assessment of soil nitrogen availability and varying effects of related main soil factors on soil available nitrogen. *Environmental Science: Processes & Impacts*, 18: 1449-1457.

40. Zhai, R., C. Zhang, W. Li, M. Boyer, and D. Hanink. 2016. Prediction of Land Use Change in Long Island Sound Watersheds Using Nighttime Light Data. *Land*, 5(4), 44; doi:10.3390/land5040044. http://www.mdpi.com/2073-445X/5/4/44.

41. Wang W., C. Zhang, J. M. Allen, W. Li, Mark A. Boyer, K. Segerson, and J. A. Silander, Jr. 2016. Analysis and Prediction of Land Use Changes Related to Invasive Species and Major Driving Forces in the State of Connecticut. *Land*. 5, 25. doi:10.3390/land5030025.

42. Li X., C. Zhang, W. Li, Y. A. Kuzovkina. 2016. Environmental inequities in terms of different types of urban greenery in Hartford, Connecticut. *Urban Forestry and Urban Greening*. 18, 163-172. doi:10.1016/j.ufug.2016.06.002.

43. Zhang, W., W. Li, and C. Zhang. 2016. Land cover postclassifications by Markov chain geostatistical cosimulation based on pre-classifications by different conventional classifiers. *International Journal of Remote Sensing*, 37(4): 926-949.

44. Li, X., W. Li, Q. Meng, C. Zhang, T. Jansco and K. Wu. 2016. Modelling building proximity to greenery in a three-dimensional perspective using multi-source remotely sensed data. *Journal of Spatial Science*, 61 (2): 389-403. http://dx.doi.org/10.1080/14498596.2015.1132642

45. Hu, S., S. Yang, W. Li, C. Zhang and F. Xu. 2016. Spatially non-stationary relationships between urban residential land price and impact factors in Wuhan city, China. *Applied Geography* 68:48-56.

46. Qu M., W. Li, C. Zhang, B. Huang, and Y. Zhao. 2015. Assessing the pollution risk of soil Chromium based on loading capacity of paddy soil at a regional scale. *Scientific Reports* 5, 18451; doi: 10.1038/srep18451.

47. Li, X., C. Zhang, W. Li, Y. Kuzovkina, and D. Weiner. 2015. Who lives in greener neighborhoods? The distribution of street greenery and its association with residents' socioeconomic conditions in Hartford, Connecticut, USA. *Urban Forestry & Urban Greening* 14(4): 751-759.

48. Li, X., C. Zhang, W. Li, R. Ricard, Q. Meng, and W. Zhang. 2015. Assessing street-level urban greenery using Google street view and a modified green view index. *Urban Forestry & Urban Greening* 14(3): 675-685, doi:10.1016/j.ufug.2015.06.006.

49. Zhang, C.T., Y. Yang, W. Li, C. Zhang, R.X. Zhang, Y. Mei, X.S. Liao, and Y.Y. Liu. 2015. Spatial distribution and ecological risk assessment of trace metals in urban soils in Wuhan, central China. *Environmental Monitoring and Assessment*. 187:556 DOI 10.1007/s10661-015-4762-5.

50. Zhao, T., C. Zhang, L. Anselin, W. Li and K. Chen. 2015. A parallel approach for improving geo-SPARQL query performance. *International Journal of Digital Earth* 8(5): 383-402.

51. Zhang, C., T. Zhao, and W. Li. 2015. Towards an interoperable online volunteered geographic information system for disaster response. *Journal of Spatial Science* 60(2): 257-275.

52. Zhang, C., T. Zhao, L. Anselin, W. Li, and K. Chen. 2015. A map-reduce based parallel approach for improving query performance in a geospatial semantic web for disaster response. *Earth Science Informatics* 8(3): 499-509, doi: 10.1007/s12145-014-0179-x.

53. Li, X., C. Zhang, and W. Li. 2015. Does the visibility of greenery increase perceived safety in urban areas? Evidence from the Place Pulse 1.0 dataset. *ISPRS International Journal of Geo-Information* 4(3): 1166-1183, doi: 10.3390/ijgi40x000x.

54. Li, W., C Zhang, M. Willig, D. Dey, G. Wang, and L. You. 2015. Bayesian Markov chain random field cosimulation for improving land cover classification accuracy. *Mathematical Geosciences* 47(2): 123-148.

55. Qu, M, B. Huang, W. Li, C. Zhang, and Y. Zhao. 2015. Spatial uncertainty of joint health risk of multiple trace metals in rice grain in Jiaxing city, China. *Environmental Science: Processes & Impacts* 17(1): 120-30. doi: 10.1039/C4EM00513A.

56. Qu, M., W. Li, C. Zhang, B. Huang, and Y. Zhao. 2014. Spatially Nonstationary Relationships between Copper Accumulation in Rice Grain and Some Related Soil Properties in Paddy Fields at a Regional Scale. *Soil Science Society of America Journal* 78(5): 1765-1774.

57. Zhang, C., W. Li, and D. Civco. 2014. Application of geographically weighted regression to fill gaps in SLC-off Landsat ETM+ satellite imagery. *International Journal of Remote Sensing* 35(22): 7650-7672.

58. Li, X., Q. Meng, W. Li, C. Zhang, T. Jansco, and S. Mavromatisd. 2014. An explorative study on the proximity of buildings to green spaces in urban areas using remotely sensed imagery. *Annals of GIS* 20(3): 193-203.

59. Wang, K., C. Zhang, W. Li, J. Lin, and D. Zhang. 2014. Mapping soil organic matter with limited sample data using geographically weighted regression. *Journal of Spatial Science* 59(1): 91-106.

60. Qu, M., W. Li, and C. Zhang. 2014. County-scale spatial variability of macronutrient availability ratios in paddy soils. *Applied and Environmental Soil Science* 2014: 689482, p.10. doi:10.1155/2014/689482. http://dx.doi.org/10.1155/2014/689482

61. Zhang, D., C. Zhang, W. Li, R. Cromley, D. Hanink, D. Civco, and D. Travis. 2014. Restoration of the missing pixel information caused by contrails in multispectral remotely sensed imagery. *Journal of Applied Remote Sensing* 8(1):083698. doi:10.1117/1.JRS.8.083698.

62. Qu, M., W. Li, C. Zhang, B. Huang, and Y. Zhao. 2014. Estimating the pollution risk of cadmium in soil using a composite soil environmental quality standard. *The Scientific World Journal* 2014: 750879, p. 9. http://dx.doi.org/10.1155/2014/750879

63. Qu, M., W. Li, C. Zhang, and B. Huang. 2014. Geographically weighted regression and its application prospect in environmental and soil sciences *Soil*s 46(1): 15–22.

64. Qu, M., W. Li, and C. Zhang, 2014. Spatial distribution and uncertainty assessment of potential ecological risks of soil heavy metals using sequential Gaussian simulation. *Human and Ecological Risk Assessment: an International Journal* 20(3): 764-778.

65. Bentley, G., D. Hanink, R. Cromley, C. Zhang, and D. Civco. 2014. Analyzing open space distributions in the context of an environmental Kuznets curve: An example from the northeastern United States. *The Northeastern Geographer* 6(1): 1-26.

66. Qu, M., W. Li, C. Zhang, Y. Zhao, B. Huang, W. Sun, and W. Hu. 2013. Comparison of three methods for soil fertility quality spatial simulation with uncertainty assessment. *Soil Science Society of America Journal* 77: 2182-2191.

67. Zhang, B., W. Li, and C. Zhang. 2013. Statistical analyses of soil heavy metal pollution in the Wuhan Donghu High-tech Development Park. *Environmental Chemistry* 32(9): 1714-1722 (in Chinese).

68. Li W., C. Zhang, D. K. Dey, and M. R. Willig. 2013. Updating categorical soil maps using limited survey data by Bayesian Markov chain cosimulation. *The Scientific World Journal* doi:10.1155/2013/587284. p. 13. http://www.hindawi.com/journals/tswj/2013/587284/.

69. Wang, K, C. Zhang, and W. Li. 2013. Predictive mapping of soil total nitrogen at a regional scale: A comparison between geographically weighted regression and cokriging. *Applied Geography* 42: 73-85.

70. Zhang, C., T. Zhao, and W. Li. 2013. Towards improving query performance of web feature services (WFS) for disaster response. *ISPRS International Journal of Geo-Information* 2: 67-81.

71. Qu, M., W. Li, and C. Zhang, 2013. Assessing the spatial uncertainty in soil nitrogen mapping through stochastic simulations with categorical land use information. *Ecological Informatics* 16: 1-9.

72. Lin J., R. Cromley, D. Civco, D. Hanink, and C. Zhang. 2013. Evaluating the use of publicly available remotely sensed land cover data for areal interpolation. *GIScience & Remote Sensing* 50(2): 212-230.

73. Qu, M., W. Li, C. Zhang, B. Huang, and W. Hu. 2013. Source apportionment of soil heavy metal Cd based on the combination of receptor model and geostatistics. *China Environmental Science* 33(5): 854-860.

74. Li, W., and C. Zhang. 2013. Some further clarification on Markov chain random fields and transiograms. *International Journal of Geographical Information Science* 27(3): 423-430.

75. Qu, M., W. Li, and C. Zhang. 2013. Assessing the risk costs in delineating soil nickel contamination using sequential Gaussian simulation and transfer functions. *Ecological Informatics* 13: 99-105.

76. Qu, M., W. Li, C. Zhang, S. Wang, Y. Yang and L. He. 2013. Source apportionment of heavy metals in soils using multivariate statistics and geostatistics. *Pedosphere* 23(4): 437-444.

77. Wang, K., C. Zhang, and W. Li. 2012. Comparison of geographically weighted regression and regression kriging for estimating the spatial distribution of soil organic matter. *GIScience & Remote Sensing* 49(6): 915-932.

78. Li, W. and C. Zhang. 2012. Comments on 'Combining spatial transition probabilities for stochastic simulation of categorical fields' with communications on some issues related to Markov chain geostatistics, *International Journal of Geographical Information Science* 26(10): 1725-1739.

79. Zhang, D., C. Zhang, R. Cromley, D. Travis, and D. Civco. 2012. An object-based method for contrail detection in AVHRR satellite images. *GIScience & Remote Sensin* 49(3):412-427.

80. Qu, M., W. Li, C. Zhang, and S. Wang. 2012. Effect of land use types on the spatial prediction of soil nitrogen. *GIScience & Remote Sensing* 49(3): 397-411.

81. Li, W., and C. Zhang. 2012. Comments on 'An efficient maximum entropy approach for categorical variable prediction' by D. Allard, D. D'Or & R. Froidevaux. *European Journal of Soil Science* 63(1): 120-124.

82. Li, W., C. Zhang, and D.K. Dey. 2012. Modeling experimental cross-transiograms of neighboring landscape categories with the gamma distribution. *International Journal of Geographical Information Science* 26(4): 599-620.

83. Li, W., and C. Zhang. 2011. A Markov Chain Geostatistical Framework for Land-Cover Classification With Uncertainty Assessment Based on Expert-Interpreted Pixels From Remotely Sensed Imagery. *IEEE Transactions on Geoscience and Remote Sensing* 49(8): 2983-2992.

84. Lin, J., R. Cromley, and C. Zhang. 2011. Using geographically weighted regression to solve the areal interpolation problem. *Annals of GIS* 17(1): 1-14.

85. Zhang, C., T. Zhao, and W. Li. 2010. Automatic search of geospatial features for disaster and emergency management. *International Journal of Applied Earth Observation and Geoinformation* 12(6): 409-418.

86. Li, W., C. Zhang, D.K. Dey, and S. Wang. 2010. Estimating threshold-exceeding probability maps of environmental variables with Markov chain random fields. *Stochastic Environmental Research and Risk Assessment* 24:1113-1126.

87. Zhang, C., T. Zhao, W. Li, and J. Osleeb. 2010.Towards logic-based geospatial feature discovery and integration using web feature service and geospatial semantic web. *International Journal of Geographical Information Science* 24(6): 903-923.

88. Zhang, C., T. Zhao, and W., Li. 2010. The framework of a geospatial semantic web-based spatial decision support system for Digital Earth. *International Journal of Digital Earth* 3(2): 111-134.

89. Li, W., and C. Zhang. 2010. Linear Interpolation and joint model fitting of experimental transiograms for Markov chain simulation of categorical spatial variables. *International Journal of Geographical Information Science* 24(6): 821-839.

90. Li, W., and C. Zhang. 2010. Simulating the spatial distribution of clay layer occurrence depth in alluvial soils with a Markov chain geostatistical approach. *Environmetrics* 21: 21-32. doi: 10.1002/env.981.

91. Zhang, C., W. Li, and D. Travis. 2009. Restoration of clouded pixels in multispectral remotely sensed imagery with cokriging. *International Journal of Remote Sensing* 30(9): 2173-2195.

92. Zhang, C., Z.-R. Peng, T. Zhao, and W. Li. 2008. Transformation of Transportation Data Models from Unified Modeling Language to Web Ontology Language. *Journal of the Transportation Research Board: Transportation Research Record* 2064:81-89.

93. Zhang, C., and W. Li. 2008. Regional-scale modelling of the spatial distribution of surface and subsurface textural classes in alluvial soils using Markov chain geostatistics. *Soil Use and Management* 24: 263-272.

94. Zhang, C., and W. Li. 2008. A comparative study of nonlinear Markov chain models for conditional simulation of multinomial classes from regular samples. *Stochastic Environmental Research and Risk Assessment* 22(2): 217-230.

95. Li, W., and C. Zhang. 2008. A single-chain-based multidimensional Markov chain model for subsurface characterization. *Environmental and Ecological Statistics* 15: 157-174.

96. Zhao, T., C. Zhang, M. Wei, and Z.-R. Peng. 2008. Ontology-based geospatial data query and integration. *Lecture Notes in Computer Science LNCS5266: Geographic Information Science* 5266: 370-392.

97. Zhang, C., W. Li, and D. Travis. 2007. Gaps-fill of SLC-off Landsat ETM+ satellite image using a geostatistical approach. *International Journal of Remote Sensing* 28(22): 5103-5122.

98. Zhang, C., and W. Li. 2007. Comparing a fixed-path Markov chain geostatistical algorithm with sequential indicator simulation in categorical variable simulation from regular samples. *GIScience and Remote Sensing* 44(3): 251-266.

99. Zhang, C., W. Li, and T. Zhao. 2007. Geospatial data sharing based on geospatial semantic web technologies. *Journal of Spatial Science* 52(2): 11-25.

100. Li, W., and C. Zhang. 2007. A random-path Markov chain algorithm for simulating categorical soil variables from random point samples. *Soil Science Society of America Journal* 71(3): 656-668.

101. Zhang, C., W. Li, and M. Day. 2006. Towards rationalizing protected-area designation in China using a Web-based spatial decision support system. *Journal of Spatial Science* 52(2): 33-46.

102. Li, W., and C. Zhang. 2006. A generalized Markov chain approach for conditional simulation of categorical variables from grid samples. *Transactions in GIS* 10(4): 651-669.

103. Zhang, C., and W. Li. 2005. The roles of Web Feature Service and Web Map Service in real time geospatial data sharing for time-critical applications. *Cartography and Geographic Information Science* 32(4): 269-283.

104. Li, W., and C. Zhang. 2005. Application of Transiograms to Markov Chain Simulation and Spatial Uncertainty Assessment of Land-Cover Classes. *GIScience and Remote Sensing* 42(4): 297-319.

105. Li W., C. Zhang, J. E. Burt, and A.X. Zhu. 2005. A Markov chain-based probability vector approach for modeling spatial uncertainties of soil classes. *Soil Science Society of America Journal* 69(6): 1931-1942.

106. Zhang C., W. Li, and M. Day. 2005. Towards establishing effective protective boundaries for the Lunan Stone Forest using an online spatial decision support system. *Acta Carsologica* 34(1): 178-193.

107. Zhang C., and W. Li. 2005. Markov chain modeling of multinomial land-cover classes. *GIScience and Remote Sensing* 42(1): 1-18.

108. Li, W., C. Zhang, J.E. Burt, A.X. Zhu, and J. Feyen. 2004. Two-dimensional Markov chain simulation of soil type spatial distribution. *Soil Science Society of America Journal* 68: 1479-1490.

109. Peng, Z.-R., and C. Zhang. 2004. The roles of geography markup language (GML), scalable vector graphics (SVG), and Web feature service (WFS) specifications in the development of Internet geographic information systems (GIS). *Journal of Geographical Systems* 6(2): 95-116.

110. Zhang, C., W. Li, Z.-R. Peng, and M. Day. 2003. GML-based interoperable geographical databases. *Cartography* 32(2): 1-16.

111. Zhang, C., M. Day, and W. Li. 2003. Land use and land cover change in the Lunan Stone Forest, China. *Acta Carsologica* 32(2): 161-174.

Book Chapters and Magazine Publications:

112.   Zhang, C., T. Zhao, and W. Li. 2017. Big Geospatial Data and Geospatial Semantic Web: Current State and Future Opportunities. In: Y. Wu, F. Hu, G. Min, and A. Zomaya (Eds.), Big Data and Computational Intelligence in Networking. Taylor & Francis LLC, CRC Press. pp. 43-64.

113.   Zhang, C. and W. Li. 2014. Geospatial Semantic Web for Spatial Data Sharing. In: M. Khosrow-Pour (Ed.), Encyclopedia of Information Science and Technology (3rd Ed.), IGI Global. pp 551-559. DOI: 10.4018/978-1-4666-5888-2.ch736.

114.   Peng, Z.-R., T. Zhao, and C. Zhang. 2011. Geospatial Semantic Web Services: A case for transit trip planning systems. In: P. Zhao and L. Di (Eds.), Geospatial web Services: Advances in Information Interoperability, IGI Global. pp 169-188.

115.   Zhang, C. 2010. Web Service Architecture for GIS. In: B. L. Warf (Ed.), Encyclopedia of Geography, SAGE Publications. pp 3089-3092.

116.   Zhang, C. 2010. Data and Information Interoperability. In: C. Yang, D. Wong, Q. Miao, and R. Yang (Eds.), Advanced GeoInformation Science, Taylor & Francis. pp 213-219.

117.   Zhang, C. 2010. Develop a Spatial Decision Support System Based on Service-Oriented Architecture. In: C. S. Jao (Ed.), Decision Support System. pp 165-184.

118.   Li, W. and C. Zhang. 2009. Markov Chain Analysis. In: R. Kitchin, and N. Thrift (Eds.), International Encyclopedia of Human geography, Elsevier. pp 455-460.

119.   Peng, Z.-R., and C. Zhang. 2005. A New Trend of Internet GIS Development: Geospatial Semantic Web Based on Services-Oriented Architecture. *GIS@development*. Vol. 9, No.10, pp34-37.

120.   Peng, Z.-R. and C. Zhang. 2004. GML, WFS, SVG and the Future of Internet GIS. *GIS@development.* Vol. 8 No.7, pp29-32.

121.   Zhang, C. 1995. Database Integration of IDMS (Integrated Disaster Management System). In: T. Chi (Ed.), Systematic Integration of Disaster Monitoring and Evaluation Technologies, Chinese Science Press (in Chinese).

122.   Zhang, C. 1995. Model Integration of IDMS (Integrated Disaster Management System) – Example of Earthquake. In: T. Chi (Ed.), Systematic Integration of Disaster Monitoring and Evaluation Technologies, Chinese Science Press (in Chinese).

123.   Zhang, C. 1995. Application of IDMS (Integrated Disaster Management System) – Example of Rapid Response to Flood Emergency. In: T. Chi (Ed.), Systematic Integration of Disaster Monitoring and Evaluation Technologies, Chinese Science Press (in Chinese).

Peer-reviewed Conference Proceedings

124.   Zhao, T, C. Zhang and Z. Zhang. 2018. Scalable Spatial Join for WFS Clients. Proceedings of the 10th International Conference on Geographic Information Science (GIScience 2018), Melbourne, Australia, August 28-31, 2018. Editors: Stephan Winter, Amy Griffin, and Monika Sester; Article No. 72; pp. 72:1–72:6. http://drops.dagstuhl.de/opus/volltexte/2018/9400/pdf/LIPIcs-GISCIENCE-2018-72.pdf.

125.   Zhang C., T. Zhao and W. Li. 2018. Optimization of Spatial Queries over Semantic Web for The National Map. Proceedings of the 26th International Conference on Geoinformatics (Geoinformatics 2018), Kunming, Yunnan, China, June 28-30, 2018.

126.   Zhang C., W. Zhang and W. Li. 2017. Application of Markov chain geostatistical cosimulation to land cover postclassification. Proceedings of the 25th International Conference on Geoinformatics (Geoinformatics 2017), Buffalo, U.S.A, August 2-4, 2017.

127.   Zhai R., C. Zhang, W. Li and J. Allen. 2017. Predicting land use/land cover change and its effect on the distribution of one invasive plant, glossy buckthorn (Frangula alnus). Proceedings of the 25th International Conference on Geoinformatics (Geoinformatics 2017), Buffalo, U.S.A, August 2-4, 2017.

128.   Li, X. and C. Zhang. 2016. Urban land use information retrieval based on scene classification of Google Street View images. Proceeding of GIScience 2016 (The Ninth International Conference on Geographic Information Science). Montreal, Canada, Sep. 27- 30th, 2016. http://stko.geog.ucsb.edu/sdw16/paper_1.pdf.

129.   Zhao, T., C. Zhang, and W. Li. 2016. Accessing Distributed WFS Data Through A RDF Query Interface. Proceeding of GIScience 2016 (The Ninth International Conference on Geographic Information Science). Montreal, Canada, Sep. 27- 30th, 2016. https://escholarship.org/uc/item/9fs8s68v.

130.   Li, X., Zhang, C., Li, W., and Liu, K. 2016. Potential Application of DMSP/OLS Nighttime Light Data for Estimating Ground-level PM2.5 Concentrations. IEEE International Geoscience and Remote Sensing Symposium (IGARSS). Beijing, China, July 10-15, 2016. pp. 5749-5752. doi: 10.1109/IGARSS.2016.7730502. http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=7730502

131.   Li, W, and C. Zhang. 2015. Spatiotemporal Markov Chain Modeling of Land Use/Cover Changes: A Preliminary Study. Proceedings of the 23th International Conference on Geoinformatics (Geoinformatics 2015), Wuhan, China. June 19-21, 2015.

132.   Li, W. and Zhang, C. 2013. Updating Categorical Soil Map with Limited Survey Data by Bayesian Markov Chain Co-Simulation. Proceedings of Twelfth International Conference on GeoComputation, Wuhan, China, May 23-25, 2013. http://www.geocomputation.org/2013/papers/55.pdf.

133.   Li, W. and Zhang, C. 2012. A Bayesian Markov Chain Approach for Land Use Classification Based on Expert Interpretation and Auxiliary Data. Proceedings of the Seventh International Conference on geographic Information Science, Columbus, OH, Sep.18-21, 2012.

134.   Zhang, C. and W. Li. 2009. Towards Spatial Data Discovery and Integration Using Geospatial Semantic Web Techniques. Proceedings of the 6th International Symposium on Digital Earth (ISDE6), Beijing, China, Sep. 9-12, 2009.

135.   Zhang, C. and W. Li. 2009. Markov chain Simulation of Land Cover Classes with Spatial Uncertainty Assessment. Proceedings of Fifth International Workshop on the Analysis of Multi-temporal Remote Sensing Images, Groton, Connecticut, July 28-30, 2009.

136.   Li, W. and C. Zhang. 2008. Simulating the vertical two-dimensional structures of alluvial soil textural layers from borehole observations. Proceedings of 3rd Global Workshop on Digital Soil Mapping, Logan, UT, Sept 30 - Oct 3, 2008.

137. Li, W. and C. Zhang. 2008. Mapping the probabilities of soil clay layer thickness exceeding some threshold values with Markov chain geostatistics. Proceedings of Fifth International Conference on Geographic Information Science. September 23-26, Park City, Utah.

138. Zhang, C., T. Zhao and W. Li. 2008. An interoperable spatial decision support system based on geospatial semantic web technologies. Proceedings of the 16th International Conference on Geoinformatics. June 28-29, 2008, Guangzhou, P.R. China.

139. Zhang, C. Z-R. Peng, T. Zhao and W. Li. 2008. Transforming transportation data models from UML to OWL ontological Representation. Proceedings of the 87th Transportation Research Board Annual Meeting. January 13-17, 2008, in Washington, D.C.

140. Zhang, C. 2007. Towards Real-Time Feature Level Spatial Data Sharing based on Geospatial Semantic Web Services. Proceedings of the Third IASTED International Conference on Environmental Modelling and Simulation, Honolulu, Hawaii, USA, August 20-22, 2007. http://www.actapress.com/PaperInfo.aspx?PaperID=31229.

141. Li, W. and C. Zhang. 2007. A Middle-Insertion Algorithm for Markov Chain Simulation of Soil Layering. Proceedings of the ACM International Symposium on Advances in Geographic Information Systems in 2007. Seattle, Washington, USA. November 7-9, 2007.

142. Li, W. and C. Zhang. 2007. The Nonlinear Markov Chain Geostatistics. Proceedings of International Association for Mathematical Geology meeting 2007 on Geomathematics and GIS Analysis of Resources, Environment and Hazards. Beijing, China. August 26-31, 2007.

143. Zhang, C., W. Li and D. Travis. 2006. Quantifying spatial uncertainty of land cover classes derived from satellite images using a Markov chain approach. The 15th Annual Wisconsin Space Conference, Marquette University, Milwaukee, WI, August 10-11, 2006.

144. Li, W. and C. Zhang. 2006. Visualizing spatial uncertainty in area-class mapping by Markov chain geostatistics. AutoCarto 2006. June 25-28, 2006 - Vancouver, Washington, pp 12. http://www.cartogis.org/publications/autocarto-2006/lizhang.pdf/

145. Zhang, C. 2005. The Role of Web Feature Service and Web Map Service in Real Time Geospatial Data Sharing for Time-Critical Applications. Auto-Carto 2005, Las Vegas, March 18-23rd, 2005 http://www.acsm.net/cagis/zhang.pdf

146. Li, W. and C. Zhang. 2005. Transiograms for Characterizing Soil Type Spatial Variability. GeoComputation2005 International Conference, University of Michigan, Ann Arbor, Michigan, August 1-3rd, 2005.

147. Zhang C. and W. Li. 2004. Predictive Area Class Mapping of Multinomial Land-cover Categories Using Markov Chains. The Third International Conference on Geographic Information Science, University of Maryland Conference Center October 20-23, 2004, pp 239-242.

148. Zhang, C., Z.-R. Peng, W. Li and M. Day. 2003. GML-based Interoperable Geographical Databases. UCGIS Summer Assembly 2003, Pacific Grove, CA, June 15-20. http://www.ucgis.org/summer03/studentpapers.htm.

149. Zhang, C. and M. Day. 2002. Conservation of Stone Forest Landscape and Spatial Decision Support System. Proceedings of International Conference on Computer Graphics and Spatial Information System 2002. P653-P661. China Meteorological Press.

Research Grants:

Funded Grants:

1. Aug. 2019—July 2023. "A UConn Partnership to Expand the GIS Capabilities of the Connecticut Department of Transportation". With Eric Jackson (PI). Total: $6.8 M.

2. Sept.1 2017—May 31 2019. "Processing and optimization of spatial knowledge queries of The National Map". USGS. PIs: C. Zhang, T. Zhao, and W. Li. Total: $120,000. Role: PI.

3. Aug.1 2014—Jan.1 2017. "CNH-Ex: Interactive Effects of Economics, Public Policy, Land Use Change, and Invasive Plants in Long Island Sound Watersheds". NSF, Dynamics of Coupled Natural and Human Systems (CNH) program. UCONN, PIs: C. Zhang, J. Allen, J. Silander, M. Boyer, and K. Segerson. Total: $ 249,966.00. Role: PI.

4. June 1, 2014—May 30, 2015. "Map human perception of urban greenery for real estate studies—a case study for Hartford city in Connecticut". Center for Real Estate and Urban Economic Studies, UConn. $14,351. Role: PI.

5. Nov. 2013—Oct. 2015. "CC-NIE Network Infrastructure: Enabling Data-Intensive Research at the University of Connecticut Through Science DMZ", NSF, UCONN PIs: B. Wang, S. Rajasekaran, R. Jones, S. Taylor, J. Farese. Total: $499, 385. Role: Senior Personnel.

6. Feb. 2013—Jan. 2014. "Towards an online Spatial Decision Support System for Management of Storm Hazards in Connecticut: A Proof-of Concept Study." ESRI Natural Resources Imagery Grant Program. PIs: D. Civco; C. Zhang; J. Hurd; J. Osleeb; M. Howser. Software and remote sensing data with an approximate value of $100,000. Role: Co-PI.

7. Feb. 2012—Jan. 2013. "SunRise New England – Open for Business", U.S. Department of Energy. UCONN, UConn PIs: F. Carstensen; C. Zhang; J. Osleeb; D. Civco. Total: $643,785. Role: Co-PI.

8. May. 2011—Apri. 2015. "Collaborative Research: A Pilot Project on Interactive Land Use and Climate Predictions", NSF, AGS, UConn PIs: Guiling Wang; C. Zhang. Total: $795,142. Role: Co-PI.

9. Sep. 2008—Aug. 2011. "Collaborative Research: Spatio-temporal (4D) Atmorspheric environments of Jet Contrail Outbreaks for Potential Mitigation of their Climatic Impacts", NSF, Geography and Spatial Sciences program and Climate & Large-Scale Dynamics program. PIs: A. Carleton; D. Travis. Total: $200,000. Role: GIS consult.

10. Jan 19, 2010-May 22, 2010. "Restoration of Jet contrail pixels for potential mitigation of their climatic impacts" CESE-Graduate Student Research Assistantship Program in Support of Multidisciplinary Environmental Activities by Faculty Members, $15,000. Role: PI.

11. Jan. 1, 2009-Dec. 31, 2009. "Super-resolution land cover mapping with a Markov Chain Geostatistics approach", University of Connecticut large grant faculty research. $16,000. Role: PI.

12. Sept 2006- Aug. 2008. "A Geospatial Semantic Web Framework for Feature-Level Data Search, Access, Retrieval, Integration and Visualization: A Case of Transportation Network Data", NSF, Geography and Regional Science Program. PIs: Z.-R. Peng, C. Zhang, T. Zhao. $256,000. Role: Co-PI.

13. Jul 2005- Jun 2006. "Quantifying spatial uncertainty of land cover classes derived from satellite images using a Markov chain approach", Wisconsin Space Grant Consortium (NASA). PIs: C.Zhang, D. Travis. $15,000. Role: PI.

14. Dec 2005- Dec 2006. "A Web-based Spatial Decision Support System for Protected-Area Designation in China", UWW Faculty Proposal and Research Enhancement Program. $4,000. Role: PI.

Invited Presentations

1. Zhang, C. 2018. A Bayesian Markov Chain Approach for Land Use Classification Based on Expert Interpretation and Auxiliary Data. Key Laboratory of Soil Environment and Pollution Remediation, Institute of Soil Science, Chinese Academy of Sciences, July 26, 2018.

2. Zhang, C. 2018. Parcel-based urban land use classification in megacity using airborne LiDAR, high resolution orthoimagery, and Google Street View. Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, July 24, 2018.

3. Zhang, C. 2018. Parcel-based urban land use classification in megacity using airborne LiDAR, high resolution orthoimagery, and Google Street View. Henan University, July 17, 2018.

4. Zhang, C. 2018. Parcel-based urban land use classification in megacity using airborne LiDAR, high resolution orthoimagery, and Google Street View. Wuhan University, July 11, 2018.

5. Zhang, C. 2018. Parcel-based urban land use classification in megacity using airborne LiDAR, high resolution orthoimagery, and Google Street View. China University of Geosciences, July 10, 2018.

6. Zhang, C. 2017. GIScience Grand Challenges—how can research and technology in this field address big-picture problems? Shangdong Normal University, Sept. 15, 2017.

7. Zhang, C. 2017. A Bayesian Markov Chain Approach for Land Use Classification Based on Expert Interpretation and Auxiliary Data. Tianjin Polytechnic University, Sept. 11, 2017.

8. Zhang, C. 2016. A comparison of Markov chain random field (MCRF) Cosimulation for improving land cover pre-classification. Wuhan University, June 6, 2016.

9. Zhang, C. 2016. Incorporating Spectral Similarity into Markov Chain Geostatistical Cosimulation for Improving Land Cover Classification. HuaZhong Agriculture University, June 6, 2016.

10. Zhang, C. 2016. A Bayesian Markov Chain Approach for Land Use Classification Based on Expert Interpretation and Auxiliary Data. China University of Geosciences, June 5, 2016.

11. Zhang, C. 2015. Predictive mapping of soil total nitrogen at a regional scale. Agro-Environmental Protection Institute, Ministry of Agriculture, July 16, 2015.

12. Zhang, C. 2015. Effective techniques to fill gaps in Landsat ETM+ imagery. State Key Laboratory of Remote Sensing Science. Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, July 14, 2015.

13. Zhang, C. 2015. A Parallel Approach for Improving Query Performance in a Geospatial Semantic Web for Disaster Response. Department of Earth Sciences, Zhejiang University, July 3, 2015.

14. Zhang, C. 2015. Toward Sustainable Long Island Sound Watersheds by Linking Economics, public policy, land-use change, and invasive plants. China University of Geosciences, June 26, 2015.

15. Zhang, C. 2011. A Geospatial Semantic Web based Spatial Decision Support System, State Key Laboratory of Resources and Environmental Information System. Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Science. July 2011.

16. Zhang, C. 2010. Geospatial Semantic Web, GIS Center, Chinese Academy of Surveying and Mapping.

17. Zhang, C. 2010. Geospatial Semantic Web, Markov Chain Geostatistics, and their applications, State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing, Wuhan University.

18. Zhang, C. 2010. Geospatial Semantic Web, Markov Chain Geostatistics, and their applications, Nanjing University.

19. Zhang, C. 2010. Developing an interoperable Spatial Decision Support System based on Geospatial Semantic web technologies, State Key Laboratory of Resources and Environmental Information System. Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Science.

20. Zhang, C. 2009. "Nonlinear Markov Chain Geostatistics for Prediction and Simulation of Categorical Spatial Variables --with Comparison to Indicator Kriging", Department of Civil & Environmental Engineering, University of Connecticut.

21. Zhang, C. 2008. "Geospatial Semantic Web Application Example and Issues", First International Workshop on Biographical Databases for China's History. Harvard University.

22. Zhang, C. 2008. "Nonlinear Markov Chain Geostatistics for Prediction and Simulation of Categorical Spatial Variables --with Comparison to Indicator Kriging", Department of Statistics, University of Connecticut.

23. Zhang, C. 2008. "Nonlinear Markov Chain Geostatistics for Prediction and Simulation of Categorical Spatial Variables --with Comparison to Indicator Kriging", Center for Integrative Geosciences, University of Connecticut.

24. Zhang, C. 2007. "Nonlinear Markov Chain Geostatistics for Prediction and Simulation of Categorical Spatial Variables --with Comparison to Indicator Kriging", Department of Geography, University of Illinois at Urbana-Champaign.

25. Zhang, C. 2006. "Comparing Markov Chain Geostatistics and Conventional Indicator Geostatistics for Prediction and Simulation of Spatial Distribution", Department of Geography, University of Missouri-Columbia.

26. Zhang, C. 2004. "GIS, Remote Sensing and Spatial Modeling for Conservation of Karst Landscape", Department of Geography, University of Denver.

27. Zhang, C. 2004. "Web-based Spatial Decision Support System for conservation of karst landscape"", Department of Geography, University of Wyoming.

Conference Presentations

1. Zhai R., C. Zhang, and W. Li. 2019. Assessing driving forces of land use and land cover change by a mixed-method approach in New England area, US. AAG 2019 Annual Meeting, Washington, DC. April 3-7, 2019.

2. Zhang C., T. Zhao, and W. Li. 2019. Optimization techniques for Improving Geospatial Semantic Web Query. AAG 2019 Annual Meeting, Washington, D.C. April 3-7, 2019.

3. Zhang C., T. Zhao, L. E. Usery, D. Varanka, and W. Li. 2019. Evaluation of Spatial Join Algorithms for Geospatial Semantic Query. 2nd U.S. Semantic Technologies Symposium 2019. March 11-13, 2019 at Duke University in Durham, NC.

4. Zhang B., X. Li, C. Zhang. 2018. A comparative analysis of aerosols in China and the United States using MODIS Collection 6 aerosol products and times series models. AGU Fall Meeting 2018, Dec. 10-14., Washington, D.C.

5. Zhang, C., T. Zhao, W. Li, J. Zhang, Z. Zhang, and W. Zhang. 2018. Processing and Optimization of Spatial Knowledge Queries of The National Map. USGS CEGIS Research Meeting, June 26-28, 2018, Rolla Federal Center, Rolla, Missouri.

6. Lu S. C. Zhang, and H. Lu. 2018. Spatio-temporal dynamics of shifting cultivation in Upland Myanmar using time series images and implications for REDD+. SPIE Asia-Pacific Remote Sensing conference on Land Surface and Cryosphere Remote Sensing IV, Honolulu, Hawaii. Sept. 24-26, 2018.

7. Zhang C., T. Zhao, and W. Li. 2018. Efficient spatial knowledge queries of The National Map using Geospatial Semantic Web technologies. AAG 2018 Annual Meeting, New Orleans. April 10-14, 2018.

8. Zhang B., W. Li, and C. Zhang. 2018. 3D subsurface soil texture modeling based on Markov Chain Geostatistics. AAG 2018 Annual Meeting, New Orleans. April 10-14, 2018.

9. Li X., C. Zhang, and W. Li. 2018. Time series analysis and stochastic modeling of aerosol optical depth distribution using satellite- and ground-based observations. AAG 2018 Annual Meeting, New Orleans. April 10-14, 2018.

10. Zhai R., W. Li, and C. Zhang. 2018. Transiogram: the new index to quantify spatial patterns of landscapes. AAG 2018 Annual Meeting, New Orleans. April 10-14, 2018.

11. Zhang C., T. Zhao, W. Li. 2017. Processing and optimization of spatial knowledge queries of The National Map. ISPRS Workshop on Collaborative and Dynamic Land Cover Information Services Supporting UN Sustainable Development Goals. Sept. 16-17 2017, Jinan, China.

12. Zhang, C. (Panelist). 2017. CyberGIS Reflections from the Past and Projections for the Future. AAG Annual Meeting, April 5-9, 2017. Boston, Massachusetts.

13. Zhang C., R. Zhai, W. Li. 2017. Land Use/Cover Change in Long Island Sound Watersheds (LISW), USA. AAG Annual Meeting, April 5-9, 2017. Boston, Massachusetts.

14. Zhai R., Zhang C., W. Li. 2017. Comparing the Logistic Regression-Markov model and the Multi-Layer Perceptron (MLP)-Markov model for Modeling Land Use/Cover Change in Long Island Sound Watersheds, USA. AAG Annual Meeting, April 5-9, 2017. Boston, Massachusetts.

15. Zhang W., W. Li, C. Zhang, D. Hanink, X. Li, and W. Wang. 2017. Urban Land Use Classification with Google Street View. AAG Annual Meeting, April 5-9, 2017. Boston, Massachusetts.

16. Li X., C. Zhang, W. Li, K. Liu. 2017. Time series analysis of aerosol optical depth (AOD) over United States and China using an adaptive ARIMA model. AAG Annual Meeting, April 5-9, 2017. Boston, Massachusetts, USA.

17. Li X., C. Zhang, W. Li, K. Liu. 2016. Potential application of DMSP/OLS nighttime light data for estimating ground-level PM2.5 concentrations in the New England region. American Geophysical Union Fall Meeting, December 12‐16, 2016. San Francisco, California, USA.

18. Wang, W., C. Zhang, W. Li. 2016. Analysis of Land Use Changes and Major Driving Forces in Connecticut. The 10th Annual Connecticut Conference on Natural Resources, March 14, 2016. Storrs, Connecticut, USA.

19. Zhang C. (Keynotes Speaker). 2016. Estimate Spatiotemporal Distribution and Variation of Air Pollution Using Multiple Data Sources. The International Conference on Environmental Research and Public Health. Oct. 21 - 23, 2016, Shenzhen, China.

20. Zhang, C. and W. Li. 2016. Modeling Land Use/Cover Changes using a Bayesian Markov Chain approach. AAG Annual Meeting, San Francisco, California, March 29-April 2, 2016.

21. Zhang, C. (Panelist). 2016. Future Directions in CyberGIS III . AAG Annual Meeting, San Francisco, California, March 29- April 2, 2016.

22. Zhang, C. (Panelist). 2016. Teaching Web and Mobile GIS. AAG Annual Meeting, San Francisco, California, March 29- April 2, 2016.

23. Zhang, W., W. Li, C. Zhang, X. Li. 2016. Incorporating spectral similarity into Markov chain geostatistical cosimulation for improving land cover classification. AAG Annual Meeting, San Francisco, California, March 29- April 2, 2016.

24. Zhai, R., Zhang, C., Allen, J. M. 2016. Land cover change and forest fragmentation in Long Island Sound Watersheds. CCNR Conference. Storrs, Connecticut, March 14th, 2016.

25. Zhang, C. 2015. Development of an Online Volunteered Geographic Information System based on Semantic Web Technologies. UCGIS 2015 Symposium. Old Town Alexandria, Virginia, May 28-30, 2015.

26. Zhang W., W. Li, and C. Zhang. 2015. "Comparison of land cover post-classifications by Markov chain random field cosimulation with different conventional classifiers". The 23rd International Conference on Geoinformatics, June 19-21, 2015, Wuhan, China.

27. Li, X., Zhang, C., Liu, K., and Wu, T. 2015. Potential Evaluation of Chinese High-spatial-resolution Hyperspectral Satellite TianGong-1 in Urban Land-cover Classification by Comparison to the EO-1 Hyperion. Fall 2015 NESTVAL Annual Meeting, Bridgewater, Massachusetts, October 9-10, 2015.

28. Li, X, C. Zhang, and W. Li. 2015.Assessing urban street greenery using Google Street View. 2015 AAG Annual Meeting, Chicago, Illinois, April 21-25, 2015.

29. Zhang, W, W. Li, and C. Zhang. 2015. Comparison of land cover classification accuracies using the Markov chain random field (MCRF) cosimulation approach with different conventional classifiers. 2015 AAG Annual Meeting, Chicago, Illinois, April 21-25, 2015.

30. Li, W, and C. Zhang. 2015. Optimal neighborhood sizes and sectorization for Markov chain random field simulation. 2015 AAG Annual Meeting, Chicago, Illinois, April 21-25, 2015.

31. Allen, J.M., M.A. Boyer, K. Segerson, J.A. Silander, W. Wang, and C. Zhang. 2015. Socio-ecology of invasive plants in the northeastern US. Ecology and Management of Alien Plant Invasions 13th International Conference, Waikoloa, Hawaii, September 20-24, 2015.

32. Zhang, C., T. Zhao, L. Anselin, W. Li, and K. Chen. 2014. A Parallel Approach for Improving Query Performance in a Geospatial Semantic Web for Disaster Response. UCGIS 2014 Symposium: Setting the Agenda: Research and Education for Today & Tomorrow. May 18-21, 2014.

33. Zhang, C. 2014. Improving Geog 5810 (Web GIS) to Enhance CyberGIS Education at UCONN. The Second International Conference on CyberGIS and Geodesign. Aug. 19-21, 2014. Redlands, California.

34. Zhang, C., T. Zhao, L. Anselin, W. Li, and K. Chen. 2014. A Parallel Approach for Improving Query Performance in a Geospatial Semantic Web for Disaster Response. 2014 AAG Annual Meeting, Tampa, Florida. April 8-12, 2014.

35. Zhang, C., T. Zhao, and W. Li. A Parallel approach to improve query performance of Web Feature Services (WFS) for disaster management and response. UCGIS 2013 Symposium: Collaboration Across Communities: GIScience 2.0 and Beyond. Washington, D.C., USA. May 21-23, 2013.

36. W., Li, and C. Zhang. A Bayesian Markov Chain Co-Simulation Approach for Updating Categorical Soil Maps. 2013 AAG Annual Meeting, Los Angeles, USA. April 9-13, 2013.

37. Zhang, D. and C. Zhang. Using cokriging for contrail pixels restoration in multispectral remotely sensed imagery. 2013 AAG Annual Meeting, Los Angeles, USA. April 9-13, 2013.

38. Zhang C., T. Zhao, and W. Li. Towards automatic search of geospatial features for disaster and emergency management. 2012 AAG Annual Meeting, New York, USA. Feb 25-28, 2012.

39. Zhang C., D. Zhang, D. Travis, and W. Li. Identifying contrails in AVHRR satellite images using an object-oriented classification approach. 2011 AAG Annual Meeting, Seattle, USA. April 12-16, 2011.

40. W. Li and C. Zhang. A Markov chain geostatistical framework for land-cover classification with uncertainty assessment based on expert interpreted pixels from remotely sense imagery. 2011 AAG Annual Meeting, Seattle, USA. April 12-16, 2011.

41. Zhang, C. Automatic search of geospatial features for disaster and emergency management. Connecticut conference on natural resources, UConn, March 07, 2011.

42. Zhang, C. and W. Li. A geospatial semantic approach for automatic search of geospatial features for disaster and emergency management. New England-St. Lawrence Valley Geographical Society (NESTVAL) UConn, Oct. 29-30, 2010.

43. Li, W., and C. Zhang. Quantification of Spatial Uncertainty in Categorical Fields. The International Workshop on Advances in Spatial Statistics and Intelligence. Wuhan, China. June 22-23, 2010.

44. Zhang C. and W. Li. 2010. Challenges for developing a Geospatial Semantic Web for automatic search of geospatial features. The 18th International Conference on Geoinformatics 2010, Beijing, China. June 16-18, 2010.

45. Li, W., and C. Zhang. 2010. Dealing with Minor Classes in Simulation of Categorical Fields with Expert Knowledge. The 18th International Conference on Geoinformatics 2010, Beijing, China. June 16-18, 2010.

46. Zhang C., T. Zhao, and W. Li. 2010. A geospatial Semantic Web based Spatial Decision Support System. 2010 AAG (Association of American Geographers) Annual Meeting, Washington, DC. April 14-18, 2010.

47. Li, W., and C. Zhang. 2010. Dealing with Minor Classes in Markov Chain Simulation of Categorical Spatial Variables. 2010 AAG (Association of American Geographers) Annual Meeting, Washington, DC. April 14-18, 2010.

48. Li, W., C. Zhang, and D. K. Dey. 2009. Threshold-exceeding probability estimation of soil attributes by markov chain Geostatistics. Pedometrics 2009. International Conference Centre- China Agricultural University, Beijing, China, Aug. 26-28, 2009.

49. Li, W. and C. Zhang. 2009. Transiogram Modeling for Markov Chain Simulation of Discrete Geospatial Variables. The 6th International Symposium on Digital Earth (ISDE6), Beijing, China, Sep. 9-12, 2009.

50. Zhang, C., D. Travis, and A. Carleton. 2009. A New Method of Jet Contrail Identification and Extraction on AVHRR Satellite Imagery Using a Geostatistical Approach. ASPRS (the American Society of Photogrammetry and Remote Sensing) 2009 Annual Conference, March 9-13. Baltimore, Maryland.

51. Zhang, C., and W. Li. 2009. Comparison of Linear Regression, Brovey Transform and Cokriging for Restoration of Clouded Pixels in Remotely Sensed Imagery. ASPRS (the American Society of Photogrammetry and Remote Sensing) 2009 Annual Conference, March 9-13. Baltimore, Maryland.

52. Zhang, C., Z-R Peng, T. Zhao and W. Li. 2008. Developing Ontologies from UML: An Automated Approach. AAG Annual Meeting, April 15-19, 2008, Boston, Massachusetts.

53. Zhao, T., Z-R Peng, and C. Zhang. 2008. A Data Query and Retrieval Model of Heterogeneous Geospatial Data Based on Standard Web Service Protocols. AAG Annual Meeting, April 15-19, 2008, Boston, Massachusetts.

54. Zhang, C., and W. Li. 2007. A Framework of Real-Time Feature Level Spatial Data Sharing for Disaster Management. 2007 annual meeting of the east lakes division Association of American Geographers, East Lansing, Michigan, Oct. 19-20, 2007.

55. Zhang, C. 2007. Invited participant for "spatial technology gallery" event organized by Alan Glennon and Mike Goodchild from department of Geography, University of California, Santa Barbara.

56. Li, W. and C. Zhang. 2007. A Markov chain algorithm for simulating categorical variables from random point samples. AAG Annual Meeting, April 17-21, 2007, San Francisco, California.

57. Zhang, C. and W. Li. 2006. An Open Standard-Based Framework for Geospatial Data Sharing Systems with the Services-Oriented Architecture. The Association of American Geographers Annual Meeting, Chicago, IL, March 7-11, 2006.

58. Li, W., and C. Zhang. 2005. Account for interclass dependences in stochastic simulation of categorical soil variables using Markov chain geostatistics. Pedometrics 2005, University of Florida, Naples, Florida. September 12-14, 2005, http://conference.ifas.ufl.edu/pedometrics/abs/LiWAbstract.

59. Zhang, C. 2004. Feature-Level Geospatial Data Sharing Over the Web. AAG West Lakes Division Annual Meeting. Oshkosh, WI, Oct. 7-9, 2004.

60. Zhang, C., W. Li, and M. Day. 2004. GIS, Remote sensing and spatial modeling for conservation of karst landscape. The Association of American Geographers 100th Annual Meeting, Philadelphia, PA, March 15-19, 2004.

61. Li. W., J.E. Burt, A.-X. Zhu, and C. Zhang. 2004. Stochastic generation of multi-categorical landscape raster images using Markov chains. The Association of American Geographers 100th Annual Meeting, Philadelphia, PA, March 15-19, 2004.

62. Zhang, C. 2003. Web-based Spatial Decision Support System for conservation of karst landscape. 2003 Meeting of the East Lakes & West Lakes Divisions of the Association of American Geographers, Kalamazoo, MI, October 16-18.

63. Zhang, C. 2003. Designation of Protections Boundary for Lunan Stone Forest Park. 57th Annual Meeting of the Wisconsin Geographical Society, Eau Claire, WI, September 19-20, 2003.

64. Zhang, C. 2003. Using GML to build a Feature Oriented Database for Conservation of Lunan Stone Forest Landscape. The Association of American Geographers 99th Annual Meeting, New Orleans, LA, March 5-8, 2003.

65. Zhang, C., and M. Day. 2003. A GIS Approach to Conservation of Stone Forest Landscape in Lunan, China. Proceedings of International Conference on Karst Hydrology and Ecosystems, Bowling Green, Kentucky USA, June 3-6, 2003.

Teaching Experience:

2008-present   Assistant/Associate/Full Professor in the Department of Geography, University of Connecticut. Course: Geog5500 Fundamentals of GIScience; Geog5600 Spatial data analysis; Geog5610 Spatial Statistics and Modeling; Geog1100 Globalization; Geog2000 Globalization.

Courses taught (number of students)

- Intersession 2019   Geog 2000-19-Globalization (26)
                       Geog 2000-20-Globalization (26)
                       Geog 2000-21-Globalization (26)
- Fall 2018   Geog 2000 Globalization (196)
                       Geog 5010 Independent Study (7)
                       Geog 6950 Doctoral Dissertation Research (4)
- Summer 2018   Geog 2000-10-Globalization (25)
                       Geog 2000-11-Globalization (17)
                       Geog 2000-20-Globalization (25)
                       Geog 2000-21-Globalization (13)
- Spring 2018   Geog 5600 Spatial Data Analysis (6)
                       Geog 6950 Doctoral Dissertation Research (5)
- Intersession 2018   Geog 2000-18-Globalization (25)
                       Geog 2000-19-Globalization (24)
                       Geog 2000-10-Globalization (17)
- Fall 2017   Geog 2000 Globalization (194)
                       Geog 5810 Independent Study (1)
                       Geog 6950 Doctoral Dissertation Research (4)

- Summer 2017   Geog 2000-10-Globalization (24)
     Geog 2000-11-Globalization (24)
     Geog 2000-20-Globalization (25)
     Geog 2000-20-Globalization (25)
- Spring 2017   Geog 5610 Spatial Statistics and Modeling (9)
     Geog 6950 Doctoral Dissertation Research (4)
- Intersession 2017   Geog 2000-16- Globalization (27)
     Geog 2000-17- Globalization (25)
- Fall 2016   Geog 2000 Globalization (148)
     Geog 5810 Independent Study (1)
     Geog 6800 Practicum in College Teaching (2)
     Geog 6950 Doctoral Dissertation Research (5)
- Summer 2016   Geog 2000-10- Globalization (25)
     Geog 2000-20- Globalization (23)
     Geog 2000-21- Globalization (25)
- Spring 2016   Geog 5600 Spatial Data Analysis (6)
     Geog 5810 Independent Study (1)
     Geog 6950 Doctoral Dissertation Research (3)
- Intersession 2016   Geog 2000-16- Globalization (25)
     Geog 2000-17- Globalization (25)
- Fall 2015   Geog 2000 Globalization (114)
     Geog 4099-009 Independent Study (1)
     Geog 5810 Independent Study (1)
     Geog 6800 Practicum in College Teaching (1)
     Geog 6950 Doctoral Dissertation Research (2)
- Summer 2015   Geog 2000-10- Globalization (25)
     Geog 2000-20- Globalization (24)
     Geog 2000-21- Globalization (19)
- Spring 2015   Geog 6950 Doctoral Dissertation Research (1)
     Geog 5610 Spatial Statistics and Modeling (4)
- Fall 2014
  **Sabbatical Year   Geog 6800 Practicum in College Teaching (1)

     Geog 5810 Independent study (1) ** Sabbatical Year
- Summer 2014   Geog 1100-20- Globalization (24)
     Geog 1100-10- Globalization (24)
- Spring 2014   Geog 6950 Doctoral Dissertation Research (1)
     Geog 5600 Spatial Data Analysis (8)
- Fall 2013   Geog 5810 Independent study (1)
     Geog 5500 Fund of Geog Info Science (10)
- Summer 2013   Geog 1100-20- Globalization (19)
     Geog 1100-10- Globalization (19)
- Spring 2013   Geog 5810 Independent study (1)
     Geog 5600 Spatial Data Analysis (6)
- Fall 2012   Geog 5500-002 Fund of Geog Info Science (3)
     Geog 5500-001 Fund of Geog Info Science (12)
- Summer 2012   Geog 1100-20- Globalization (23)
     Geog 1100-10- Globalization (23)
- Spring 2012   Geog 5600 Spatial Data Analysis (7)
- Fall 2011   Geog 4099 Independent Study (1)
     Geog 5500 Fund of Geog Info Science (14)
- Summer 2011   Geog4099 Independent Study (1)
- Spring 2011   Geog 5600 Spatial Data Analysis (10)

- Fall 2010   Geog 5810 Independent study (1)
  Geog 5500 Fund of Geog Info Science (16)
- Spring 2010   Grad 5950 Master's Thesis Research (1)
  Geog 5610 Spatial Statistics and Modeling (12)
- Fall 2009   Geog 5810 Independent study (2)
  Geog 5500 Fund of Geog Info Science (12)
- Spring 2009   Geog 5600 Spatial Data Analysis (12)
- Fall 2008   Geog 5500 Fund of Geog Info Science (21)

2006- 2008   Assistant Professor in the Department of Geography, Kent State University. Course: Geog39002 Statistical Methods in Geography; Geog4/5/700195 Internet GIS; Geog-17063 World Regional Geography; Geog4/5/79080 Advanced Geographic Information Science; Geog-4/5/79076 Spatial Programming.

2004- 2006   Assistant Professor in the Department of Geography and Geology, University of Wisconsin, Whitewater. Course: Geog 252: Human Environmental Problems; Geog 370: Geographic Information Systems; Geo 496 Advanced GIS.

2003-2004   Teaching Assistant in the Department of Geography, University of Wisconsin, Milwaukee. Course: Geog 405: Cartography. Teach lab sessions.

2002- 2003   Teaching Assistant in the Department of Geography, University of Wisconsin, Milwaukee. Course: Geog 125: Introduction to Environmental Geography. Teach discussion session.

2002- 2003   Teaching Assistant in the Department of Geography, University of Wisconsin, Milwaukee. Course: Geog 120: Our Physical Environment. Teach lab session.

Mentorship (at UCONN)

PhD students—as major advisor

1. Aaron Adams (Geog 2019—current)
2. Yunhe Cui (Geog 2019—current)
3. Adam Gallaher (Geog 2019—current)
4. Moataz Kilany (Geog, 2018—current)
5. Zhijie Zhang (Geog, 2018—current)
6. Bo Zhang (Geog, 2016-current)
7. Xueke Li (Geog, 2015-current)
8. Ruiting Zai (Geog, 2015-current)
9. Wenjie Wang (Geog, 2014-current)
10. Weixing Zhang (Geog, 2015-2018), Institute of Transportation , UCONN
11. Xiaojiang Li (Geog, 2013-2016), Assistant Professor, Temple University
12. Michael Howser (Geog, part time student, 2011-current)

PhD students—as associate advisor

1. Nancy Marek (NRE, current)

2. Antonio Barocci (Geog, current)
3. Awanti Acharya (Geog, current)
4. Diane BenBella (Geog, current)
5. Megan McCusker Hill (Geog, current)
6. Hui Wang (Geog, current)
7. Shuowei Zhang (Geog, 2018)
8. Curtis Denton (Geog, current)
9. Yue Zhang (Geog, current)
10. Francis Pickering (Geog, current)
11. Rachel (Qian) Lei (NRE, current)
12. Qinglin Hu (Geog, 2017)
13. Jonathan Pollak (Geog, 2017)
14. Katharine Johnson (Geog, 2017)
15. Eric Hoffman (Geog, 2017)
16. Jinwon Chung (NRE, 2017)
17. Mengyao Zhang (Geog, 2016)
18. Shaolu Yu (Geog, 2015)
19. Natalia Vorotyntzeva (Geog, 2015)
20. Kazi Farzan Ahmed (Environmental Engineering, 2015)
21. Kristen Keegan (Geog, 2014)
22. Marcello Graziano (Geog, 2014)
23. Naomi Lazarus (Geog, 2014)
24. Vincent Owanda Otieno (NRE, 2014)
25. Benjamin Franek (Geog, 2013)
26. Cary Lynch (Geog, 2013)
27. Zhiqiang Liu(Geog, 2013)
28. Jie Lin (Geog, 2013)
29. George Bentley (Geog, 2013)
30. Paul Fernald (Geog, 2010)
31. Minjuan Zhao (ARE, 2009)

Master students—as major advisor

1. Weixing Zhang (Geog, 2015)
2. Jonathan Brink (Co-advisor with Dr. Cromley, Geog, 2014)
3. Daxiang Zhang (Geog, 2010)
4. Jie Lin (Co-advisor with Dr. Cromley, Geog, 2010)

Master students—as associate advisor

1. Zhiyuan Yang (NRE, 2018)
2. Saroeun E (Geog, 2017)
3. Francis Pickering (Geog, 2014)
4. Benjamin Olsen (EEB, 2014)
5. Allison Bradshaw (Geog, 2013)
6. Wenqiang Bao (NRE,2010)

Visiting Scholars

1. Ku Wang (Minjiang University, 2010)
2. Guanglian Qin (Huazhong Agriculture University, 2013-2014)
3. Shougeng Hu (China University of Geosciences, 2014-2015)

4. Haitao Zhang (Huazhong Agriculture University, 2014-2015)
5. Chunzeng Fan (Shanghai Jiao Tong University, 2015)
6. Hengzhou Xu (Tianjin University, 2015-2016)
7. Shengfu Yang(China University of Geosciences, 2015-2017)
8. Sheng Cheng(China University of Geosciences, 2015-2016)
9. Qingwu Yan(China University of Mining &Technology, 2015-2016)
10. Linying Zhang(South China Normal University, 2016-2017)
11. Yuan Gao(Wuhan University, 2016-2017)
12. Jia Yu (Shanghai Normal University, 2016-2017)
13. Shijin Qu (China University of Mining &Technology, 2017-2019)
14. Huicong Jia (Institute of Remote Sensing and Digital Earth, Chinese Academy of Science, 2018-2019)
15. Junfeng Kang (Jiangxi University of Science and Technology, 2018-2019)
16. Junfeng Tian (Jilin University, 2018-2019)
17. Mengxue Wan (Institute of Soil Science, Chinese Academy of Science, 2018-2020)

SERVICE

National and International

Guest Editor
- *[Land]* Special issue "Land, Environment, and Policy" 2017 (with Drs. M. Boyer, W. Li, S. Hu, M. Qu).

Editorial Board
- *[Remote Sensing]*, 2017-present
- *[Land]*, 2016-present
- *[ISPRS Journal of Photogrammetry and Remote Sensing]*, 2013—2016.

Journal Reviewer (reviewing papers for the following journals)
1. *International Journal of Geographical Information Science,*
2. *Transactions in GIS,*
3. *International Journal of Remote Sensing,*
4. *ISPRS Journal of Photogrammetry and Remote Sensing,*
5. *IEEE Transactions on Geoscience and Remote Sensing,*
6. *International Journal of Applied Earth Observation and Geoinformation,*
7. *Cartography and Geographic Information Science,*
8. *Water Resources Research,*
9. *GIScience & Remote Sensing,*
10. *Sensors,*
11. *Soil Use and Management,*
12. *Journal earth Science Informatics,*
13. *Annals of GIS,*
14. *Environmental modeling & Software,*
15. *Computers & Geosciences,*
16. *Applied Geography,*
17. *Computers, Environment and Urban Systems(CEUS),*
18. *Geoinformatics,*

19. *Future Generation of Computer System,*
20. *Earth Science Informatics,*
21. *Annals of Epidemiology,*
22. *Ecological Modelling,*
23. *Landscape and Urban Planning,*
24. *Expert System,*
25. *Open Atmospheric Science Journal,*
26. *Water*

Book Reviewer
1. *Spatial Cloud Computing: a practical approach (2013)*
2. *Advanced Geoinformatic (2009)*

International Conference Committee
1. Program Committee for the International Conference on Environmental Research and Public Health, Oct 21-23, 2016, Shenzhen, China.
2. Organizing Committee Member for the GS Multi-Conference on Sciences and Technology 2014 (the biggest conference in the history of the GULF States) conference on Nov 7-9, 2014 in Dubai, UAE.
3. Program Committee member for the International Conference on Advanced Geographic Information Systems, Applications, and Services, 2009—present.
4. Program Committee member for International Conference on Geoinformatics, 2010—present.

Conference Session Chair/Organizer

1. "Symposium on CyberGIS and Spatial Data Science: Geocomputation for Processing Spatial Big Data" session organizer and session chair at 2018 AAG meeting.
2. "Land resources and pollution" session organizer and session chair at 2017 AAG meeting.
3. "Geo-computation for Environment" session organizer and session chair at 2015 AAG meeting.
4. "Geospatial Semantic Web Technologies for geospatial interoperability" session organizer and session chair at 2008 AAG meeting.
5. "Water and Geographical Modelling II" session chair at the IASTED International Conference on Environmental Modelling and Simulation. August 20-22, 2007.
6. "Machine Learning Applications" session chair at 2007 AAG meeting.

Other Committee Activities

1. UCGIS Board of Director, 2018—2021.
2. Chair of AAG Research Grants Committee, 2017—2020.
3. Chair of CPGIS Award committee (1. the CPGIS Service Excellence Award; 2. the CPGIS Distinguished Scholar Award; 3. the Education Excellence Award; and 4. the Life-Time Achievement Award), 2016-present.
4. Chair of CPGIS Supporting Women in GIS Committee, 2012—2016.
5. Chair of CPGIS Social Events Committee, 2009—2014.
6. Travel Award Committee for [*Land]* journal, 2017.

7. AAG Research Grants Committee, 2014-2017.
8. AAG Marble-Boyle undergraduate award committee, 2014-present.
9. Treasurer of CPGIS, 2006-2009.
10. UCGIS communications committee, 2013-2017.
11. CPGIS BOD members, 2005-2009.
12. CPGIS "Go Northeast" committees, 2005-2009.

PTR Evaluation

•	2017 Department of Earth Sciences, University of Memphis: Promotion to Full Professor.

University

UCONN
1. CLAS Big data task forces committee (2019--)
2. Environment Science Board Committee (2019--)
3. Judge for UConn ECE Globalization Conference 2019 (2019)
4. Application review committee for Master's of Energy and environmental Management—Online
5. A group co-chair for the proposal review of Research Excellence Program
6. Faculty Research Advisory Councils (RAC) for the Vice President for Research (2016-2019)
7. Geography Representative to the Graduate Faculty Council (GFC) (2013—2018)
8. Alternate of the University Interdisciplinary Courses Committee (2014-2017)
9. UCGIS delegate for UConn (2013-present)
10. Environmental Studies BA committee (2009-2010)
11. Reviewer of proposals for Graduate Student Research Assistantships for Center for Environmental Sciences & Engineering, UConn. (2008)

Kent State University
1. House Bill 699 equipment application
2. Kent State University China Initiative Program

UWW
1. Microcomputer Committee (college of letters and sciences)

Department

UCONN
1. Write 7 new GIS courses proposals (GEOG 3512, GEOG 4516, GEOG 5512, GEOG 5516, GEOG 4518, GEOG 5518, ECON/GEOG 5612) (2018-2019)
2. Search and Hire two new GIS faculty
3. Creation of the new joint professional M.S. in Geographic Information Science (GIS) (2019-2020)
4. Creation of the new joint professional M.S. in Spatial Econometrics and Spatial Data Science (2019-2020)
5. Creation of the new GIS BA/BS Major undergraduate programs (2018-2019)
6. Search committee for Geospatial Science position at Department of Natural Resources and the Environment, 2018

7. Coordinator of Geography Departmental Eight-year Program Review Self-Study 2017-2018
8. Chair of Geography PTR Committee (2016—2018)
9. Search committee for four positions at Department of Mathematics, 2016-2017
10. Geography Colloquium and Award Committee (2015-2016)
11. Geography Merit Advisory Committee (2015-2017)
12. Graduate coordinator at Department of Geography (2013—2015)
13. Chair of search committee for the Assistant Professor position at Department of Geography, 2013.
14. Curriculum committee member of Geography (2013—2016)
15. Geography PTR Committee member (2011-present)
16. Graduate committee member at Department of Geography (2008-2013)

UWW
1. Faculty search committee
2. Maintain department website

Memberships

- ❖ Membership of the American Association for the Advancement of Science (AAAS) (2015-2019).
- ❖ Membership of the Association of American Geographers (2001-current).
- ❖ Membership of Chinese Professional Geographic Information Science (Lifetime).
- ❖ Membership of International Association for Mathematical Geology (Lifetime).
- ❖ Membership of American Society of Photogrammetry and Remote Sensing (ASPRS) (2006--2010).
- ❖ Membership of Soil Science Society of America (2007-2010).
- ❖ Membership of Urban and Regional Information Systems Association (2002-2006).
- ❖ Membership of Cartography & Geographic Information Society (2002-2006)
- ❖ Membership of Geographic & Land Information Society (2002-2006)
- ❖ Membership of American Congress on Surveying & Mapping (2002-2006)