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EDUCATION

- **Ph.D.** 2012 – 2015 Earth Systems and Geoinformation Sciences (with Distinction), George Mason University, VA, USA
- **M.S.** 2008 – 2010 Earth System Science, George Mason University, VA, USA
- **B. S.** 2002 – 2006 GIS and Remote Sensing, Wuhan University, China

PROFESSIONAL EXPERIENCE

- 2020 – present: Associate Professor, Department of Geography, University of South Carolina, Columbia, SC, USA
- 2022 – present: Director, Center for GIScience and Geospatial Big Data (CeGIS), University of South Carolina
- 2015 – 2020: Assistant Professor, Department of Geography, University of South Carolina, Columbia, SC, USA
- 2021 – 2022: Director of Undergraduate Studies, Department of Geography, University of South Carolina, Columbia, SC, USA
- 2022 – present: Co-Lead of Social Media Core and Founding Core Member (since 2019), USC Big Data Health Science Center
- 2015 – present: Director, Geoinformation & Big Data Research Laboratory (GIBD), Department of Geography, University of South Carolina; Faculty Member, Hazards & Vulnerability Research Institute; Faculty Associate, South Carolina Smart State Center for Healthcare Quality
- 2012 – 2015: Graduate Research and Teaching Assistant, Department of Geography and Geoinformation Sciences, George Mason University, VA, USA
- 2011 – 2012: Manager and Chief GIS Engineer, Department of Research and Development, SeaSky Geomatics Technology Inc., Harbin, China
- 2010 – 2011: GIS Engineer, Heilongjiang Bureau of Surveying and Mapping, Harbin, China

- 2007 – 2010: Visiting Research Scholar, Center of Intelligent Spatial Computing for Water/Energy Science, George Mason University, VA, USA
- 2006 – 2007: GIS Developer, Heilongjiang Bureau of Surveying and Mapping, Harbin, China

HONORS AND AWARDS

- Peter and Bonnie McCausland Faculty Fellowship, College of Arts and Sciences, University of South Carolina, 2020-2023
- Geospatial World 50 Rising Stars, Geospatial Media and Communications, 2021
- Breakthrough Star Award, University of South Carolina, 2020
- NSF Travel Award, UCGIS Symposium and summer school, Theme: Collaborative Problem Solving with CyberGIS and Geospatial Data Science, UIUC, Champaign, IL/Arlington, VA, US, 2017
- USGIF/NVIDIA Essay Challenge Award (with Ning H. and Wang S), 2017
- USNC/NSF Travel Award, 28th International Cartographic Conference, Washington, DC, US, 2017
- Outstanding Graduate Ph.D. Award, Department of Geography and Geoinformation Science, George Mason University, 2015
- Raskin Scholarship, Federation of Earth Science Information Partners (ESIP), 2014
- Top-5 Finalist, Rob Raskin Mashup Mapping Student Competition, Association of the American Geographers, 2013
- Extraordinary Achievements of Student Research, Hubei, China, 2004
- Outstanding Student Scholarship, Wuhan University, China, 2003, 2005

RESEARCH GRANTS

External Funding

1. 2022-2023, Role: **PI**, (Co-PI: Wang C.), Creating a GIS-Based Siting Tool for South Carolina Mariculture Site Selection, NOAA Sea Grant Consortium at South Carolina $52,620 ($34,993 from SeaGrant, $17,627 match)
2. 2022-2023, Role: **Co-I**, (PI: Li X., Co-PI: Olatosi B.), Delivering Comprehensive and Sustainable HIV/AIDS Clinical and Community Services to Achieve HIV Epidemic Control in Subnational Units in Nigeria (USC Subaward), Centers for Disease Control and Prevention (CDC), $444,172

3. 2020-2022, Role: **PI**, (Co-PI: Porter D. and Li X.), RAPID: Monitoring the Spatial Spread of COVID-19 through the Lens of Human Movement using Big Social Media Data, National Science Foundation (NSF), 2028791, $108,717
4. 2021-2026, Role: **Co-I** (with Weissman S., Hu J., Li X.). MPI: Bankole Olatosi & Jiajia Zhang, Patterns and Predictors of Viral Suppression: A Big Data Approach, National Institutes of Health (NIH), R01AI164947, $3,557,900
5. 2020-2023, Role: **Co-PI** (with Zhang J., Weissman S., Hikment N., Hu J.). PI: Li X. & Olatosi B., Big Data Driven Clinical Informatics & Surveillance - A Multimodal Database Focused Clinical, Community, & Multi-Omics Surveillance Plan for COVID19, National Institutes of Health (NIH), 3R01AI127203-04S1, $1,252,550
6. 2020-2021, Role: **PI**, XSEDE Startup Resource Allocation for A Scalable Online Visual Analytic System for Big Climate Data Analysis, National Science Foundation (NSF), SES200001, $1,051
7. 2019-2022, Role: **Co-I** (with Weissman S., Hu J., Zhang J.) MPI: Li X. & Olatosi B., Big Data Analytics of HIV Treatment Gaps in South Carolina: Identification and Prediction, National Institutes of Health (NIH), R01AI127203, $3,259,978
8. 2018-2019, Role: **PI**, Social Sensing of Disaster Extents and Impacts of Hurricane Florence, Horne LLP, 13540-19-49715, $5,000
9. 2016-2017, Role: **PI**, (Co-I: Hu F.), Prototyping a Cloud-based Spatial Web Portal for Parallel Analytics of Big Climate Data, Federation of Earth Science Information Partners (ESIP), $6,981
10. 2014-2015, Role: **Co-PI**, (PI: Yang C.), Developing a Hadoop-based Middleware for Handling Big Climate Data. NASA/NSF, $45,000
11. 2013, Role: **Co-PI**, (PI: Yang C.), Advanced Certificate for GeoInformation Sciences, NASG, $70,000
12. 2011-2012, Role: **PI**, Geospatial Web Services Discovery and Integration based on Tianditu, China Ministry of Education, $3,500

Internal Funding

13. 2022-2023, Role: **PI**, (Co-Is: Qiao S., Olatosi B., Zhang J.) Developing a novel network-based big data approach to measure healthcare utilization disparity: A feasibility study, BDHSC Pilot Project Program, BDHSC-PP2022-16, $30,000
14. 2022-2023, Role: **PI**, (Co-Is: Qiao S., Li X., Olatosi B., Zhang J.) A novel data-driven approach to empirically link structural racism and health access and utilization in South Carolina, UofSC OVPR Racial Justice and Equity Research Program, $14,981
15. 2020-2023, Role: **PI**, (Co-PI: Kupfer J.), Rapid Estimation of Visitation Activities in U.S. National Parks by Mining Big Social Media Data, USC ASPIRE Program, $14,846

16. 2021-2023, Role: **Co-PI**, (PI: Qiao S.), Identifying a COVID-19 patient cohort based on Twitter data for PASC symptoms analysis, BDHSC Pilot Project Program, $34,000
17. 2020-2022, Role: **PI**, (Co-PI: Olatosi B., Li X.), A Preliminary Study of using Social Media to Monitor the Spatial Propagation of COVID-19 and Quantify the Effectiveness of the Control Measures, USC COVID-19 Internal Funding Initiative, $13,017
18. 2019-2023, Role: **Co-I**, (PI: Li X.), Big Data Health Science Center (BDHSC), University of South Carolina Excellence Initiative, my share of funding: ~$100,000 (support of one Ph.D. student)
19. 2017-2019, Role: **PI**, Enhancing Situational Awareness by Mining Big Social Media Data in Near-real Time for Disaster Management: A CyberGIS Approach, ASPIRE Program, $14,861
20. 2018, Role: **PI**, Prototyping a Near Real-time Flood Mapping System with Social Sensing and Big Data Computing, CAS Faculty Research Initiative, $3,400
21. 2017-2018, Role: **Co-PI**, (PI: Karami A.)Computational Analysis of the US 2016 Presidential Election in Social Media. USC Office of the Provost, $15,019
22. 2016-2017, Role: **PI**, Developing a High-Performance Query Analytical Framework to Support Large Scale Climate Data Analysis, ASPIRE Program, $14,457
23. 2015-2016, Role: **PI** (Co-I: Wang C., Emrich C., Guo D.), Spatiotemporal Dynamics of Flood Impact by Integrating Satellite, VGI, and Social Media Data: Rapid Assessment of the October Flood, USC Floods Seed Grant, $18,477
24. 2015-2016, Role: **Co-PI**, (PI: Karami A.), A Computational Framework for Tracking Reports, Opinions, and Feelings of People in Social Media Before, During and After a Natural Disaster, USC Floods Seed Grant, $12,000

Funded Student-Led Research

25. 2019-2020, Role: **PI** (Ph.D. student: Jiang Y.), Analyzing Human Mobility Patterns during Hurricane Matthew Evacuation, SPARC Program, $5,000
26. 2017, Role: **PI** (Undergraduate student: Newsome D.), When, Where, and Who: Mining Billions of Tweets to Understand Celebration Patterns of US Holidays, Magellan program, $3,000

PUBLICATIONS

Edited Books

1. **Li Z.,** Huang Q., Emrich C. (eds.) (2021) *Social Sensing and Big Data Computing for Disaster Management*, Routledge/Taylor & Francis, ISBN 978-0-367-61765-3. 204 pages
2. **Li Z.,** Tang W., Huang Q., Shook E., Guan Q. (eds.) (2020) *Big Data Computing for*

Geospatial Applications, MDPI, ISBN 978-3-03943-244-8. 222 pages

3. Yang C., Yu M., Huang Q., **Li Z**., Sun M., Liu K. et al. (2017) *Introduction to Programming and GIS* Algorithms with Python and ArcGIS, CRC Press/Taylor & Francis, ISBN-13 978-1466510081. 328 pages

4. Yang C., Huang Q., **Li Z**., Xu C., Liu K. (eds.), (2013) *Spatial Cloud Computing: A Practical Approach*, CRC Press/Taylor & Francis. ISBN-13 978-1466593169. 357 pages

Articles in peer-reviewed journals *(Postdoc or graduate students whose work I have supervised as advisor or committee member are underscored; * denotes correspondence)*

1. Jing F., Liu L., Zhou S., **Li Z.,** Song J., Wang L., Ma R., Lu J., Li X., Exploring large-scale spatial distribution of fear of crime integrating small sample surveys and massive street view images, *Environment and Planning B: Urban Analytics and City Science. https://doi.org/10.1177/239980832211356*

2. Wei, H., Huang, X., Wang, S., Lu, J., **Li, Z.,** & Zhu, L. A data-driven investigation on park visitation and income mixing of visitors in New York City. *Environment and Planning B: Urban Analytics and City Science*, https://doi.org/10.1177/23998083221130708

3. Huang X., Wang S., Zhang M., Hu T., Hohl A., She B., Gong X., Li J., Liu X., Gruebner O.,Liu R., L X., Liu Z., Ye X., **Li Z.,** (2022), Social media mining under the COVID-19 context: progress, challenges, and opportunities*, International Journal of Applied Earth Observation and Geoinformation*, https://doi.org/10.1016/j.jag.2022.102967

4. Ozigbu C., Olatosi B., **Li Z.,** Hardin J., Hair N., (2022) Correlates of Zero-Dose Vaccination Status among Children Aged 12–59 Months in Sub-Saharan Africa: A Multilevel Analysis of Individual and Contextual Factors, *Vaccines*, https://doi.org/10.3390/vaccines10071052

5. Huang X., Zhao B., **Li Z,** Bao S., Zhang S. (2022) Black businesses matter: A longitudinal study of black owned restaurants in the COVID-19 pandemic*. Annals of the American Association of Geographers*, https://dx.doi.org/10.1080/24694452.2022.2095971

6. Qiao S, **Li Z,** Liang C, Li X, Rudisill AC. (2022) Three dimensions of COVID-19 risk perceptions and their socioeconomic correlates in the United States: A social media analysis. *Risk Analysis,* https://doi.org/10.1111/risa.13993

7. Ning H., **Li Z*.,** Wang C., Hodgson M., Huang X., Li X., (2022) Converting street view images to land cover maps for metric mapping: a case study on sidewalk network extraction for the wheelchair users, *Computers, Environment and Urban Systems*. https://doi.org/10.1016/j.compenvurbsys.2022.101808

8. Wang S., Zhang M., Huang X., Hu T., **Li Z.,** Sun Q., Liu Y. (2022). Urban-regional disparities in mental health signals in Australia during the COVID-19 pandemic: a study via Twitter data and machine learning models, *Cambridge Journal of Regions, Economy and Society*, https://doi.org/10.1093/cjres/rsac025

9. Kazemi M., Weng Q., Haghi V., **Li Z.,** Arsanjani J., (2022). Learning-based methods for

detection and monitoring of shallow flood-affected areas: Impact of shallow-flood spreading on vegetation density, *Canadian Journal of Remote Sensing*, https://doi.org/10.1080/07038992.2022.2072277

10. Zeng, C., Zhang, J., **Li, Z.,** Sun, X., Yang, X., Olatosi, B., ... & Li, X. (2022). Population Mobility and Aging Accelerate the Transmission of Coronavirus Disease 2019 in the Deep South: A County-Level Longitudinal Analysis. Clinical Infectious Diseases, 74, e1-e3. https://doi.org/10.1093/cid/ciac050
11. Kazemi-Garajeh M., Blaschke T., Haghi V., Weng Q., Kamran K., **Li Z.,** (2022). A comparison between Sentinel-2 and Landsat 8 OLI satellite images for soil salinity distribution mapping using a deep learning convolutional neural network, *Canadian Journal of Remote Sensing*. https://doi.org/10.1080/07038992.2022.2056435
12. Qiao S., **Li Z.,** Zhang J., Sun X., Garrett C., Li X., (2022) Social capital, urbanization level, and COVID-19 vaccination uptake in the United States: A national level Analysis, *Vaccines*, 10(4), 625. https://doi.org/10.3390/vaccines10040625
13. Wang S., Huang X., Hu T., Zhang M., **Li Z*.,** Ning H., et al., (2022). The times, they are a-changin': tracking the shifts in mental health signals in Australia from the early to later phase of the COVID-19 pandemic, *BMJ Global Health*, 7(1), http://dx.doi.org/10.1136/bmjgh-2021-007081
14. Zhang, M., Wang, S., Hu, T., Fu, X., Wang, X., Hu, Y., Halloran B., **Li Z.,** Cui Y., Liu H., Liu Z., Bao, S. (2022). Human mobility and COVID-19 transmission: a systematic review and future directions. *Annals of GIS*, 1-14. https://doi.org/10.1080/19475683.2022.2041725
15. Morgan G., Wang C., **Li Z*.,** Schill S., Morgan D., (2022) Deep Learning of High-Resolution Aerial Imagery for Coastal Marsh Change Detection: A Comparative Study, *ISPRS International Journal of Geo-Information*, 11(2). https://doi.org/10.3390/ijgi11020100
16. Zhang J., Olatosi B., Yang X., Weissman S., **Li Z.,** Hu J., Li X., (2022) Studying patterns and predictors of HIV viral suppression using A Big Data approach: A research protocol, BMC Infectious Diseases, 22:122, https://doi.org/10.1186/s12879-022-07047-5
17. Yang Y., Zhang L., Wu L., **Li Z.,** (2022) Does distance still matter? Moderating effects of distance measures on the relationship between pandemic severity and bilateral tourism demand, *Journal of Travel Research*, http://dx.doi.org/10.1177/00472875221077978
18. Huang X., Martin Y., Wang S., Zhang M., Gong X., Ge Y., **Li Z.*** (2022). The promise of excess mobility analysis: measuring episodic-mobility with geotagged social media data, *Cartography and Geographic Information Science*, 49(5) https://doi.org/10.1080/15230406.2021.2023366
19. Ning, H., **Li, Z.,** Ye, X., Wang, S., Wang, W., & Huang, X. (2022). Exploring the vertical dimension of street view image based on deep learning: A case study on lowest floor elevation estimation. *International Journal of Geographical Information Science*, 36(7), 1317-1342. https://doi.org/10.1080/13658816.2021.1981334

20. Lyu T., Hair N., Yell N., **Li Z.,** Qiao S., Liang C., Li X. (2021). Temporal Geospatial Analysis of COVID-19 Pre-infection Determinants of Risk in South Carolina, *International Journal of Environmental Research and Public Health*, 18(18), 9673. https://doi.org/10.3390/ijerph18189673

21. Huang X., Xu Y., Liu R., Wang S., Wang S., Zhang M., Kang Y. Zhang Z., Gao S., **Li Z.,** Hu T. (2022). Exploring the spatial disparity of home-dwelling time patterns in the USA during the COVID-19 pandemic via Bayesian inference, *Transactions in GIS*. 26(4). P. 1939-1961. https://doi.org/10.1111/tgis.12918

22. Kupfer, J. A., **Li, Z.,** Ning, H., & Huang, X. (2021). Using Mobile Device Data to Track the Effects of the COVID-19 Pandemic on Spatiotemporal Patterns of National Park Visitation. *Sustainability*, 13(16), 9366. https://doi.org/10.3390/su13169366

23. **Li Z*.,** Huang X., Hu T., Ning H., Ye X., Huang B., Li X. (2021). ODT FLOW: Extracting, analyzing, and sharing multi-source multi-scale human mobility, *Plos One*, 16(8), p.e0255259. https://doi.org/10.1371/journal.pone.0255259

24. Hu T., Wang S., She B., Zhang M., Huang X., Cui Y., Khuri J., Hu Y., Fu X., Wang X., Wang P., Zhu X., Bao S., Guan W., **Li Z.** (2021). Human Mobility Data in the COVID-19 Pandemic: Characteristics, Applications, and Challenges, *International Journal of Digital Earth*, 14(9), 1126-1147. https://doi.org/10.1080/17538947.2021.1952324

25. **Li Z*.,** Huang X., Ye X., Jiang Y., Martin Y., Ning H., Hodgson M., Li X. (2021). Measuring Global Multi-Scale Place Connectivity using Geotagged Social Media Data, *Nature Scientific Reports,* 11, 14694. https://doi.org/10.1038/s41598-021-94300-7

26. Hu, T., Wang, S., Luo, W., Yan, Y., Zhang, M., Huang, X., Yan Y., Liu R., Ly K., Kacker V., She B., **Li, Z**. (2021). Revealing public opinion towards COVID-19 vaccines using Twitter data in the United States: a spatiotemporal perspective, *Journal of Medical Internet Research*, 23(9):e30854. https://doi.org/10.2196/30854

27. Jiang, Y., Guo, D., **Li, Z.** Hodgson, M. (2021). A novel big data approach to measure and visualize urban accessibility. *Computational Urban Science,* 1, 10 (2021). https://doi.org/10.1007/s43762-021-00010-1

28. Martín, Y., **Li, Z*.** Ge, Y., Huang, X. (2021). Introducing Twitter Daily Estimates of Residents and Non-Residents at the County Level. *Social Sciences*, 10(6), 227. https://doi.org/10.3390/socsci10060227

29. Jiang Y., Huang X., **Li Z.** (2021). Spatiotemporal patterns of human mobility and its association with land use types during COVID-19 in New York City, *ISPRS International Journal of Geo-Information*, 10(5), 344; https://doi.org/10.3390/ijgi10050344

30. Jiang Y., **Li Z.,** Cutter S. (2021). Social Distance Integrated Gravity Model for Evacuation Destination Choice, *International Journal of Digital Earth*, 14 (8), 1004-1018. https://doi.org/10.1080/17538947.2021.1915396

31. Ye X., Wang W., Zhang X., **Li Z.,** Yu D., Du J., Chen Z. (2021). Reconstructing spatial

information diffusion networks with heterogeneous agents and text contents, *Transactions in GIS*, 25(4) 1654-1673. https://doi.org/10.1111/tgis.12747

32. Zeng C., Zhang J., **Li Z.,** Sun X., Olatosi B., Weissman S., Li X. (2021). Spatial-temporal relationship between population mobility and COVID-19 outbreaks in South Carolina: A time series forecasting analysis, *Journal of Medical Internet Research*, 23(4):e27045, https://doi.org/10.2196/27045

33. **Li Z*.,** Qiao S., Jiang Y., Li X. (2021). Building a Social media-based HIV Risk Behavior Index to Inform the Prediction of HIV New Diagnosis: A Feasibility Study, *AIDS*, 35 (Suppl 1):S91–S99, doi:10.1097/QAD.0000000000002787

34. Zeng C., Zhang J., Sun X., **Li Z.,** Weissman S., Olatosi B., Li X. (2021). County-level predictors of retention in care status among people living with HIV in South Carolina from 2010 to 2016: A data-driven approach, *AIDS*, 35(Suppl 1): S53-S64

35. Huang, X., **Li, Z.,** Jiang, Y., Ye, X., Deng, C., Zhang, J., & Li, X. (2021). The characteristics of multi-source mobility datasets and how they reveal the luxury nature of social distancing in the US during the COVID-19 pandemic. *International Journal of Digital Earth*, 14(4) 424-442. https://doi.org/10.1080/17538947.2021.1886358 (**ESI Highly Cited)**

36. Xu D., Huang X., Mango J., Li X., **Li Z*.** (2021). Simulating multi-exit evacuation using deep reinforcement learning, *Transactions in GIS*, 25(3), 1542-1564. https://doi.org/10.1111/tgis.12738

37. Qiao S., **Li Z.,** Weissman S., Li X., Olatosi B., Davis C., Mansaray A. (2021). Disparity in HIV service interruption in the outbreak of COVID-19: A mixed-method study in South Carolina, *AIDS and Behavior*, 25(1), 49-57. https://dx.doi.org/10.1007%2Fs10461-020-03013-x

38. **Li Z*.,** Li X., Porter D., Zhang J., Jiang Y., Olatosi B., Weissman S. (2020). Monitoring the Spatial Spread of COVID-19 and Effectiveness of Control Measures Through Human Movement Data: Proposal for a Predictive Model Using Big Data Analytics, *JMIR Research Protocols,* 9(12), e24432. https://doi.org/10.2196/24432

39. Huang X., **Li Z.,** Lu J., Wang S., Wei H., Chen B. (2020) Time-series clustering for home dwell time during COVID-19: what can we learn from it? *ISPRS International Journal of Geo-Information*, 9(11), 675. https://doi.org/10.3390/ijgi9110675

40. Ning H. , **Li Z*.,** Wang C., Yang L. (2020) Choosing an appropriate training set size when using existing data to train neural networks for land cover segmentation, *Annals of GIS*, 26(4), 329-342. https://doi.org/10.1080/19475683.2020.1803402

41. Huang X., **Li Z*.,** Jiang Y., Li X., Porter D. (2020). Twitter reveals human mobility dynamics during the COVID-19 pandemic, *PloS One*, 15(11), e0241957. https://doi.org/10.1371/journal.pone.0241957 (**ESI Highly Cited)**

42. Yang C., Sha D., Liu S., Li Y., Lan H., Guan W., Hu T., **Li Z.,** Zhang Z., Thompson J., Wang Z.,

Wong D., Ruan S., Yu M., Richardson D., et al., (2020). Taking the pulse of COVID-19: A spatiotemporal perspective. *International Journal of Digital Earth*, 13(10), 1186-1211. https://doi.org/10.1080/17538947.2020.1809723 (**ESI Highly Cited)**

43. Huang X., Wang C., **Li Z.,** Ning H., Kim H. (2020). A 100m population grid in the CONUS by disaggregating census data with open-source Microsoft building footprints, *Big Earth Data*, 5(1), 112-133. https://doi.org/10.1080/20964471.2020.1776200

44. Yu M., Bambacus G., Cervone G., Clarke K., Huang Q., Li J., Li W., **Li Z.,** Liu Q., Yang J., Yang, C., (2020). Spatiotemporal Event Detection: A Review*, International Journal of Digital Earth*, 13(12), 1339-1365. https://doi.org/10.1080/17538947.2020.1738569

45. Xu D., Huang X., **Li Z*.,** Li X., (2020). Local Motion Simulation using Deep Reinforcement Learning, *Transanctions in GIS,* 24(3), 756-779*.* https://doi.org/10.1111/TGIS.12620

46. Ning H., **Li Z*.,** Hodgson M., Wang C. (2020). Prototyping A Social Media Flooding Photo Screening System Based on Deep Learning, *ISPRS International Journal of Geo-Informatio, 9(2), 104;* https://doi.org/10.3390/ijgi9020104

47. Martín Y., Cutter S.L. **Li Z,** Emrich C., Mitchell, J.T. (2020). Using geotagged tweets to track population movements to and from Puerto Rico after Hurricane Maria. *Population and Environment,* 42(1), 4-27. https://doi.org/10.1007/s11111-020-00338-6

48. Hu L., **Li Z.,** Ye X., (2020). Delineating and Modelling Activity Space Using Geotagged Social Media Data, *Cartography and Geographic Information Science*, 47(3) https://doi.org/10.1080/15230406.2019.1705187 **(#1 most cited articles published in CaGIS in the last 3 years** [as of 10/2/2022]).

49. Pham E., Emrich C., **Li Z.,** Mitchell J., Cutter S., (2020). Evacuation Departure Timing during Hurricane Matthew, *Weather, Climate, and Society*, 12(2), 235-248. https://doi.org/10.1175/WCAS-D-19-0030.1

50. **Li Z*.,** Tang W., Huang Q., Shook E., Guan Q., (2020). Introduction to Big Data Computing for Geospatial Applications, *ISPRS International Journal of Geo-Information,* 9(8), 487, https://doi.org/10.3390/ijgi9080487

51. Martín Y. , Cutter S.L., **Li Z.,** (2020). Bridging Twitter and Survey Data for Evacuation Assessment of Hurricane Matthew and Hurricane Irma, *Natural Hazard Review,* 21(2), 04020003. https://doi.org/10.1061/(ASCE)NH.1527-6996.0000354

52. Ning H., Huang X., **Li Z*.,** Wang C., Xiang D., (2020). Detecting New Building Construction in Urban Areas Based on Images of Small Unmanned Aerial System, *Papers in Applied Geography*, 6(1), 56-71. https://doi.org/10.1080/23754931.2019.1707108

53. Huang X., **Li Z*.,** Wang C., Ning H. (2020). Identifying disaster related social media for rapid response: a visual-textual fused CNN architecture, *International Journal of Digital Earth,* 13(9), 1017-1039. https://doi.org/10.1061/(ASCE)NH.1527-6996.0000354

54. **Li Z***., Huang Q., Jiang Y., Hu F. (2019). SOVAS: A Scalable Online Visual Analytic System for Big Climate Data Analysis, *International Journal of Geographic Information Science*,

34(6), 1188-1209. https://doi.org/10.1080/13658816.2019.1605073

55. Dahal, B., Kumar, S. A., & **Li, Z.** (2019). Topic modeling and sentiment analysis of global climate change tweets. *Social Network Analysis and Mining*, 9(1), 24. https://doi.org/10.1007/s13278-019-0568-8

56. **Li Z*.,** Huang Q., Emrich C., (2019). Introduction to Social Sensing and Big Data Computing for Disaster Management, *International Journal of Digital Earth*, 12(11), 1198-1204., https://doi.org/10.1080/17538947.2019.1670951

57. Jiang Y., **Li Z*.,** Cutter L.S. (2019). Social network, activity space, sentiment, and evacuation: what can social media tell us? *Annals of the American Association of Geographers,* 109 (6), https://doi.org/10.1080/24694452.2019.1592660

58. Yang L., Sun X., **Li Z.** (2019). An Efficient Framework for Remote Sensing Parallel Processing: Integrating the Artificial Bee Colony Algorithm and Multiagent Technology, *Remote Sensing,* 11(2), 152, https://doi.org/10.3390/rs11020152

59. Jiang Y., **Li Z*.,** Ye X. (2019). Understanding Demographic and Socioeconomic Bias of Geotagged Twitter Users at the County Level, *Cartography and Geographic Information Science*. 46(3), 228-242, https://doi.org/10.1080/15230406.2018.1434834

60. Hu F., **Li Z*.,** Yang C., Jiang Y. (2019). A graph-based approach to detect the tourist movement pattern using social media data, *Cartography and Geographic Information Science*, 46(4), 368-382, https://doi.org/10.1080/15230406.2018.1496036

61. Huang X, Wang C, **Li Z,** and Ning H. (2019). A visual–textual fused approach to automated tagging of flood-related tweets during a flood event. *International Journal of Digital Earth*, 12 (11), 1248-1264., https://doi.org/10.1080/17538947.2018.1523956

62. **Li Z***., Hodgson M., Li W., (2018). A general-purpose framework for large-scale Lidar data processing, *International Journal of Digital Earth*, 11(1), 26-47, https://doi.org/10.1080/17538947.2016.1269842

63. Deng, C., Lin, W., Ye, X., **Li, Z**., Zhang, Z., Xu, G. (2018). Social media data as a proxy for hourly fine-scale electric power consumption estimation. *Environment and Planning A: Economy and Space*. 50(8), 1553–1557, https://doi.org/10.1177/0308518X18786250

64. Huang X., Wang C., **Li Z**. (2018). Reconstructing Flood Inundation Probability by Enhancing Near Real-Time Imagery with Real-Time Gauges and Tweets, *IEEE Transactions on Geoscience and Remote Sensing*, 56(8), 4691-4701, https://doi.org/10.1109/TGRS.2018.2835306

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PRESENTATIONS (*Postdoc or graduate students whose work I have supervised as advisor or committee member are underscored;* presented by the first author unless otherwise noted;)

Forthcoming

1. Diffusion of polarized information on Twitter and vaccination behaviors: Understanding intertwined role of emotions and moralization, 73rd Annual International Communication Association Conference. (Zain A., Li Z., Liang C.)
2. Estimating first floor elevation for building flooding risk assessment using street view image, AAG Annual Meeting, March 23-27, 2023, Denver. (Ning H. Li Z., Ye X.)
3. A census-tract level examination of the association between immigrant proportions and mental health service utilization in the United States from 2019 to 2021. AAG Annual Meeting, March 23-27, 2023, Denver. (Jing F., Li Z., Qiao S.)
4. A parallel genetic algorithm for multiple geographical features label placements. AAG Annual Meeting, March 23-27, 2023, Denver. (Lessani N, Li Z.)

2022

5. Using mobile device data to track the effects of the COVID-19 pandemic on spatiotemporal patterns of national park visitation, 77th Annual Meeting of the Southeastern Division of the AAG. Atlanta, Georgia, November 20-21, 2022 (Kupfer J., Li Z., Ning H., Huang X.)
6. Place visitation data reveals the geographic and racial disparity of COVID-19 impact on HIV facility utilization in Deep South, The 150th APHA Annual Meeting, Boston, MA, Nov 6-9, 2022. (Li Z., Qiao S., Ning H., Zhang J., Olatosi B., Li X)
7. Association of county-level social vulnerability with COVID-19 testing: The case of South

Carolina in the United States, The 150th APHA Annual Meeting, Boston, MA, Nov 6-9, 2022. (Shi F., Zhang J., Olatosi B., Li Z., Li X)

8. Integrating human mobility data with SEIR model to analyze COVID-19 spreading in South Carolina, The 150th APHA Annual Meeting, Boston, MA, Nov 6-9, 2022. (Ning H., Li Z., Qiao S., Zhang J., Olatosi B., Li X)
9. Sidewalk extraction based on street view image, The 29th International Conference on Geoinformatics, Aug. 15-18, Beijing. (Ning H., Li Z., Wang C., Hodgson M., Huang X., Li X.)
10. Place connectivity moderates the association between concentrated disadvantage and COVID-19 deaths in the contiguous US, The 29th International Conference on Geoinformatics, Aug. 15-18, Beijing. (Jing F., Li Z., Qiao S., Zhang J., Olatosi B., Li X.)
11. Using Social Media Big Data for Public Health: A Geospatial Perspective, BDHSC Webinar for R25 fellows, July 26, 2022. (Li Z.) (**invited**)
12. Modeling Place-Place Connectiveness with Social Media, MobiLab Seminar Series: Doing Digital Humanities, University of Padua, Italy, Spring 2022 (by Li Z. and Hodgson M.) (**invited**)
13. Converting street view images to land cover maps for metric mapping using AI: a case study on sidewalk network extraction for the wheelchair users, AAG 2022, Feb. 25-Mar. 1, 2022, New York City (Ning H., Li Z., Wang C., Hodgson M., Huang X., Li X.)
14. Event detection method with principal component analysis-based sensor placement, AAG 2022, Feb. 25-Mar. 1, 2022, New York City (Jiang Y., Popov A., Li Z.)
15. Measuring Human Mobility Dynamics and Place Connectivity Using Big Social Media Data, AAG 2022, Feb. 25-Mar. 1, 2022, New York City (Li Z.)
16. Spatiotemporal changes in visitation to U.S. national parks and associated social inequity: A big data approach, AAG 2022, Feb. 25-Mar. 1, 2022, New York City (Lu J., Huang X., Kupfer, Xiao X., Li Z.)
17. An analytical framework to evaluate the effect of COVID-19 on the restaurant industry: a study of New York City, International symposium on Geospatial approaches to combating Covid-19, ICC 2021, Dec.13-14, 2021, Florence, Italy (Wang S., Wang R., Huang X., and Li Z.)

2021

18. Measuring Human Mobility Dynamics and Place Connectivity Using Big Social Media Data, 2021 SEDAAG Annual Meeting, Florence, Alabama, Nov 21-22, 2021 (Li Z.)
19. Big Social Media Analytics for Disaster Management: Approaches and Applications, Geoinformatics 2021 (CPGIS Annual Conference, online), November 4, 2021 (**invited**)

20. Rapid Response to Emerging Public Health Threats: Measuring human mobility using Twitter data, Geoinformatics 2021 (CPGIS Annual Conference, pre-conference, online), Oct. 31, 2021 (**invited**)
21. Evolving risk perceptions of COVID-19 and socioeconomic correlates in the United States: A social media analysis, American Public Health Association (APHA) Annual Meeting, Oct 24-27, Denver, CO, US (Qiao S., Li Z., Liang C., Rudisill C. Li X.)
22. Spatial-temporal relationship between population mobility and COVID-19 outbreaks in South Carolina: A time series forecasting analysis, American Public Health Association (APHA) Annual Meeting, Oct 24-27, Denver, CO, US (Zeng C., Zhang J., Li Z., Sun X., Yang X., Olatosi B., Weissman S., Li X.)
23. Geospatial difference in linkage to care among HIV population in South Carolina from 2010 to 2016: A county-level longitudinal analysis, American Public Health Association (APHA) Annual Meeting, Oct 24-27, Denver, CO, US (Shi F., Zhang J., Li Z., Zeng C., Sun X., Olatosi B., Weissman S., Li X.)
24. Population mobility and health disparities in COVID-19 outbreaks in deep south: A county-level longitudinal analysis, American Public Health Association (APHA) Annual Meeting, Oct 24-27, Denver, CO, US (Zeng C., Zhang J., Li Z., Sun X., Olatosi B., Weissman S., Li X.)
25. Dynamic relationship between population mobility and COVID-19 incidence in South Carolina: Practical application of time-varying effect model to surveillance data, American Public Health Association (APHA) Annual Meeting, Oct 24-27, Denver, CO, US (Zeng C., Zhang J., Li Z., Sun X., Olatosi B., Weissman S., Li X.)
26. Urban-regional disparities in mental health signals in Australia during the COVID-19 pandemic: a study via Twitter data and machine learning models, The Regions, Economy and Society in the Post-Covid World Online Conference, Friday, 17 September 2021 (Wang S., Liu Y., Li Z., Huang X., Hu T.)
27. Measuring Human Movement Using Big Social Media Data, COVID Information Commons Webinar, Northeast Big Data Innovation Hub, August 18, 2021 (**invited**)
28. Big Social Media Data to measure place connectivity and human mobility dynamics. IJGI Webinar on "Social Computing for Geographic Information Science", Institute for Research on Population and Social Policies, Italy National Research Council, July 9, 2021 (**invited**)
29. Measuring Human Mobility Dynamics and Place Connectivity Using Big Social Media Data, Oak Ridge National Laboratory GSHS Division Director Seminar Series, June 24, 2021 (**invited)**
30. Fighting the Pandemic with Big Movement Data: Our Approaches, 2021 AAG Annual Conference, Online, April 9, 2021

31. Panelist on the AAG Panel on Spatiotemporal Sciences (along with Michael Batty, Kathleen Stewart, Xun Shi, Laura Cline), 2021 AAG Annual Conference, April 9, 2021 (**invited**)
32. Measuring place connectivity using big social media data, CPGIS Educational Webinar Series. "Spatiotemporal Study of Urban Dynamics", Mar 25, 2021, (**invited**)
33. Monitoring the Spatial Spread of COVID-19 and Effectiveness of the Control Measures through Human Movement using Big Social Media Data, SC Big Data Health Science Center Conference 2021, Feb. 05, 2021 (Li Z.)
34. Using Big Movement Data in the Pandemic: Methods and Applications, MDPI Webinar on GIS and Remote Sensing, Jan. 16, 2021 (**invited**)

2020

35. Fighting the COVID-19 Pandemic with Big Movement Data, The 1st Renmin University of China (RUC) Workshop on AI for Social Good, 12/19/2020, (**invited**), http://stat.ruc.edu.cn/displaynews.php?id=6053
36. Contextual factors with county-level retention in care status among people living with HIV in South Carolina from 2005 to 2016, APHA's 2020 Annual Meeting and Expo, Oct. 24 – 28, 2020, San Francisco, CA, US (Zeng C, Zhang J., Sun X., Li Z., Weissman S., Olatosi B., Li X.)
37. Using Social Media to Monitor the Spatial Propagation of COVID-19, South Carolina SmartState Center for Healthcare Quality (CHQ) Seminar, September 18, 2020 (**invited**)
38. Following the Pandemic on Twitter: A Big Data Approach, CAS Public Online Events, July 28, 2020 (Webinar, **invited**)
39. Social Sensing and Big Data Analytics: from Disaster Management to Public Health, Online Guest Lecture, Webinar on Robotics, AI& Big Data and Smart Materials & Nanotechnology, July 20, 2020 (**invited,** online) https://online.fliphtml5.com/uxfiv/vyog/#p=25
40. Disaster Management based on Social Sensing Big Data Computation, Online Guest Lecture, Wuhan University, July 6, 2020 (**invited**)
41. Social Media (Twitter) Big Data, Human Mobility, and COVID-19, Webinars on Data Introduction, July 1, 2020 (**invited**), ppt available at Harvard Dataverse https://dataverse.harvard.edu/file.xhtml?persistentId=doi:10.7910/DVN/5PRYPC/SUYWJ2&version=7.0
42. Towards real-time population estimates: introducing Twitter daily estimates of residents and non-residents at the county level, 2020 Annual Meeting of the Population Association of America, April, 22 – 25, 2020 in Washington, DC, US (Martin Y., Li Z., Ge Y.) (virtual presentation)

43. Understanding Human Dynamics During Disasters with Geospatial Big Data Analytics and Computing, South Carolina Association for Hazard Mitigation Conference, Greenville, SC, March 2-4, 2020 (**invited**)
44. Social Sensing and Big Data Computing: from Disaster Management to Public Health, Spring Seminar Series, Department of the Environmental Health Sciences, USC, February 19, 2020 (**invited**)
45. Leveraging Social Media Data for Disaster Management: Challenges and Applications, Big Data Health Science Conference, February 9-11, 2020 (Li Z.)

2019

46. Li Z., Social Sensing and Big Data for Disasters, China University of Petroleum, Nov. 25, 2019. (**invited**)
47. Social Sensing and Big Data Computing for Disaster Management: Challenges and Solutions, State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing, Wuhan University, Wuhan, China, July 17, 2019 (**invited**)
48. Using Social Media Analytics for Enhancing Situational Awareness, Institute of Remote Sensing and Digital Earth, Beijing, China, June 20, 2019 (**invited**)
49. A Scalable Online Visual Analytic System for Big Climate Data Analysis, ESIP Cloud Computing Group Webinar (lightning talk), May 5, 2019 (Li Z.)
50. Using existing data to build customized deep learning training datasets for remote sensing image classification, AAG Annual Meeting, Washington DC, April 3-7, 2019 (Li Z., Ning H)
51. Social Sensing and Big Data Computing for Disaster Management (Panel Introductory Talk), AAG Annual Meeting, Washington DC, April 3-7, 2019 (Li Z.)
52. Social Media for Disaster Management (presentation in the Social Media Analytics Tool Development Panel), AAG Annual Meeting, Washington DC, April 3-7, 2019 (**invited**)
53. Analyzing Human Mobility Patterns during Hurricane Matthew Evacuation using Twitter, AAG Annual Meeting, Washington DC, April 3-7, 2019 (Jiang Y., Li Z.)
54. Language and Twitter-based Social Media During Disaster Events, AAG Annual Meeting, Washington DC, April 3-7, 2019 (Hodgson M., Li Z., Piovan S., Koylu C.)
55. Identifying disaster-related social media for rapid response: a visual-textual fused approach, AAG Annual Meeting, Washington DC, April 3-7, 2019 (Huang X., Li Z., Wang C.)
56. Tracking the Disruption of Hurricane Maria on Population Movements in Puerto Rico Through Geotagged Tweets, AAG Annual Meeting, Washington DC, April 3-7, 2019

(Martin Y., Cutter S.L., Li Z., Emrich C., Mitchell J.)

2018

57. Web-based GIS tools and applications in Public Health, November 27, 2018, Arnold School of Public Health, USC (**invited** guest lecture)
58. High performance computing for geospatial big data analytics, November 9, 2018, Department of Geography & Earth Sciences, the University of North Carolina at Charlotte (**invited** colloquium talk)
59. Big data, social media and evacuation, *New Generation GIS Workshop*, October 11, 2018, Center for Geographic Analysis, Harvard University, (**invited**)
60. Geospatial Big Data: Challenges, Opportunities, and Applications, *2018 GIS Day at USC* November 14, 2018 (Li Z.)
61. Measuring inter-city network using digital footprints from Twitter users, *ACM SIGSPATIAL International Workshop on PredictGIS*, 11/06/2018, Seattle, Washington (Jiang Y., Li Z., Ye X.).
62. Neighborhood characteristics and activity space: a new application of social media data, 58th Annual ACSP Conference, October 25-28, 2018, Buffalo, New York (Hu L., Ye X., Li Z.)
63. SCOVAS: A Scalable Climate Online Visual Analytical System, *AAG Annual Meeting* April 10-14, 2018, New Orleans (Li Z., Huang Q., Hu F.)
64. Understanding Evacuation Decision based on Twitter Network, *AAG Annual Meeting* April 10-14, 2018, New Orleans (Jiang Y., Li Z.)
65. Build customized deep learning training dataset for remote sensing image classification, *AAG Annual Meeting*, April 10-14, 2018, New Orleans (Huan N., Li Z., presented by Li Z.)
66. The Use of Social Media in Guiding Satellite Image Collection During Disaster Events, *AAG Annual Meeting*, April 10-14, 2018, New Orleans (Michael H., Li Z., Piovan S., Davis B.)
67. A Flooding Probability Reconstruction Approach by Enhancing Near Real-Time (NRT) Imagery with Real-Time (RT) Data, *AAG Annual Meeting*, April 10-14, 2018, New Orleans (Huang X., Wang C., Li Z.)
68. Plenary talk: Social Media and Big Data Computing for Disaster Management, *South Carolina Association for Hazard Mitigation (SCAHM) Annual Conference*, March 12-14, 2018, Hilton Head Island, SC (**invited**)
69. Using Twitter to Monitor Evacuation Behavior in Matthew. National Hurricane Conference. Orlando, FL, 2018. (Martín Y., Li Z., and Cutter S.L.)

2017

70. Social Media, Human Movement, and the Eclipse, *Public Mini-lecture on the Eclipse at Russel House Theater*, August 21, 2017, USC (**invited,** co-presented with Jiang Y.)
71. Enhancing Situational Awareness by Mining Big Social Media Data in Near-real Time for Disaster Management, *3rd World Congress on GIS and Remote Sensing*, September 20 - 21, 2017, Charlotte, NC. (**invited**)
72. A Cloud-based Spatial Web Portal for Big Earth Data Visual Analytics (in Research as Art session, poster presentation), *ESIP Summer Meeting*, July 25-28, 2017, Bloomington, IN.
73. A Scalable Online System for Parallel Query Analytics or Big Climate Data, *The 28th International Cartographic Conference*, July 2-7, 2017, Washington DC
74. Computing and GIScience, *Seminar at the Department of Computing Sciences*, Coastal Carolina University, June 26, 2017(**invited**)
75. Mining Big Twitter Data to Enhance Disaster Situational Awareness, *Seminar at South Carolina SmartState Center for Health Care Quality*, April 28, 2017 (**invited**)
76. Geospatial Big Data Analytics with High Performance Computing, *Symposium on Research Computing Infrastructure*, April 14, 2017, University of South Carolina
77. A General-purpose Framework for Parallel Processing of Large-scale LiDAR Data, *AAG Annual Meeting*, Boston, April 05-09, 2017 (Li Z., Hodgson M., Li W.)
78. Exploring Traffic Patterns Using Twitter Data: A Case Study in Chicago. 2017 UCGIS Symposium, May 23-25,2017. Arlington, VA (Poster presentation by Liu Z., Wei C., Zhang W., Zou T., Li Z.)
79. Leveraging Twitter to gauge evacuation compliance: spatiotemporal analysis of Hurricane Matthew, *AAG Annual Meeting*, Boston, April 05-09, 2017 (Martin Y., Li Z., Cutter S., presented by Martin Y.)
80. Geospatial assessment of flooding dynamics and risks of the October'15 South Carolina Flood, *The 25th International Conference on Geoinformatics*, Aug 2-4, 2017, Buffalo, NY, US (Wang C., Li Z., Huang X.)
81. A Near Real-time Flood Mapping Approach by Integrating Post-event with Satellite Imagery and Flood-related Tweets, *The 25th International Conference on Geoinformatics*, Aug 2-4, 2017, Buffalo, NY, US (Huang X., Wang C., Li Z.)
82. ClimateSpark: An In-memory Distributed Computing Framework for Big Climate Data Analytics, *AAG Annual Meeting*, Boston, April 05-09, 2017(Hu F., Yang C., Xu M., Li Z., Schnase J., Duffy D., Bowen M.)
83. Explotar Twitter para estimar la tasa de evacuación: análisis espacio-temporal del

huracán Matthew. Week of Geography. Zaragoza, 2017. Department of Geography, University of Zaragoza. (Martín, Y., Li, Z., Cutter, S.L.)

2016

84. A General-purpose Framework for Parallel Processing of Large-scale LiDAR Data, AGU Fall Meeting, San Francisco, December 12-16, 2016 (Li Z., Hodgson M., Li W.)
85. A High Performance Spatiotemporal Query Analytical Framework for Large-scale Climate Data Analysis, SEDAAG, Columbia, SC, November 20-22, 2016 (Li Z., Huang Q., Carbone G., Hu F.)
86. Leveraging Social Media for Rapid Mapping of 2015 South Carolina Floods, SC Floods Conference, November 18, Columbia, SC (Li Z., Wang C., Emrich C., Guo D.)
87. ClimateSpark: An In-memory Distributed Computing Framework for Big Climate Data Analytics, AGU Fall Meeting, San Francisco, December 12-16, 2016 (Hu F., Yang C., Duffy D., Schnase J., Li Z.)
88. A Computational Framework for Tracking Reports, Opinions, and Feelings of People in Social Media Before, During and After a Natural Disaster, SC Floods Conference, November 18, Columbia, SC (Karami A., Li Z.)
89. BigQuery: Parallel Query Analytics of Big Climate Data, 2016 International Workshop on Cloud Computing and Big Data, Fairfax, Virginia, July 26 – 27, 2016 (**invited**)
90. Rapid Flood Mapping with Social Media and Remote Sensing. South Carolina October ’15 Flood Workshop Understanding the Path to Resilience, Adaptation, and Recovery, Columbia, SC, June 15, 2016. (Li Z., Wang C., Emrich C., Guo D.)
91. Remote Sensing of Flooding Dynamics, Congaree River Watershed. South Carolina October ’15 Flood Workshop Understanding the Path to Resilience, Adaptation, and Recovery, Columbia, SC, June 15, 2016. (Wang C., Li Z., Emrich C.)
92. Panelist, "HPC and Big Data Challenges at USC" session at the Symposium on Research Computing Infrastructure. USC, April 15, 2016. (**invited**)

2015

93. A spatiotemporal indexing approach for efficient process of big array-based climate data with MapReduce. International Symposium on Spatiotemporal Computing, Fairfax, Virginia, July 13-15, 2015 (Li Z., Hu F., Schnase J., et al.)
94. Enabling the acceleration of dust simulation using job scheduling method in a cloud environment, Geocomputation, 2015, Dallas, TX, US. (Yu M., Yang C., and Li Z.)
95. An Index for Efficient Retrieval and Process of Big Array-based Geospatial Data in Hadoop Distributed File System, 2015, AAG, Chicago, IL, US. (Hu F., Li Z., and Yang C.)

96. Enabling Big Climate Data Processing with a Cloud-based Workflow Framework. AAG annual meeting, Chicago, IL. April 21 - 25, 2015
97. Cloud Computing for Geospatial Data Sciences. 2015 Unidata Users Workshop, Boulder, Colorado. June 22-25, 2015 (**invited**)
98. A Columnar Storage Strategy with Spatiotemporal Index for Big Climate Data, 2015 AGU Fall Meeting. (Hu F., Bowen M., Li Z., Schnase J., Duffy D., Lee T., and Yang C., poster presentation)
99. Cloud-based, workflow-enabled and service-oriented scientific workflow framework. ESIP Winter Meeting, Washington DC. Jan. 06-09, 2015 (**invited**)

2014

100. A MapReduce-enabled Framework for Processing Big Climate Data, AAG annual meeting, Tampa, FL. Apr. 8-12, 2014 (Li Z., Yang C., Liu K.)
101. Keynote Address: Cloud Computing for Geosciences. ESIP Federation Meeting, Frisco, CO. Jul. 8-11, 2014 (**invited**)

2013

102. Climate@Home: Citizen Science for Climate Change (Robert Raskin Mashup Mapping Student Competition), AAG meeting, Los Angeles, CA. April 9-13, 2013 (Li Z., Sun M.., Jiang Y., Liu K.)
103. A High Performance Web-Based System for Analyzing and Visualizing Spatiotemporal Data for Climate Studies, AAG meeting, Los Angeles, CA. Apr. 9-13, 2013 (Li Z., Yang C., Sun M., Li J., Xu C., Huang Q., & Liu K.)
104. Using MapReduce and cloud computing to support geospatial processing, AAG meeting, Los Angeles, CA. Apr. 9-13, 2013 (Huang Q., Li Z., Yang C.)
105. Using Semantic Web to Optimize the Discovery, Access, and Utilization of Big Geospatial Data, Virtual Semantic Web Workshop, May 7, 2013 (Yang C., Liu K., Xia J., Gui Z., Li Z., Xu C.)

2011

106. The GEOSS Clearinghouse High Performance Search Engine, the 19th International Conference on Geoinformatics, Shanghai, China, June 24-26, 2011. (Liu K., Yang C., Li W., Li Z., Wu H., Rezgui A., and Xia J.)

2010

107. Quality-supported architecture for Geospatial Information Service, AAG meeting,

Washington, DC Apr. 14-18, 2010 (Wu H., Li Z., Yang C.,)

108. Metadata Standards in GEOSS Clearinghouse, ESIP Federation Meeting, Knoxville, TN, July 20-23, 2010 (Liu K., Yang C., Wu H., Li W., Li Z., Miao L., Huang Q.)

109. Seamless Integration and Visualization of Heterogeneous and Distributed Earth Science Data Using Bing Map, ESIP Federation Meeting, Knoxville, TN, July 20-23, 2010 (Co-authors: Wu H., Yang C., Li Z., Qu X., Xu Y.)

110. Spatial Web Service Evaluator for Supporting Spatial Web Portal, July 20-23, 2010, ESIP Federation Meeting, Knoxville, TN (Li J., Yang C., Wu H., Li Z., Sun M., Otunba R.)

111. Cloud Computing for Earth Science –Parallelize and schedule spatial computing for WRF-NMM model (Best student presentation, 2nd place), AAG Annual Meeting, Washington, 14-18 April 2010 (Huang Q., Yang C., Wu H., Xie J., Li J., Li Z., Sun M.)

2009

112. Application Composition based on WMS Layers for Supporting Spatial Data Infrastructure, AGU Fall Meeting, San Francisco, CA, Dec 14-1, 2009 (Li Z., Wu H., Yang C.)

113. Real-time Monitoring of WMS Quality for Optimized Map Composition with Distributed WMS Layers, AGU Fall Meeting, San Francisco, CA, Dec 14-1, 2009 (Wu H., Li Z., Yang C.)

114. Water and Energy Cycle EOS House web portal (WECHO), AAG meeting, Las Vegas, NV. Mar. 22-27, 2009 (Li Z., Huang Q., Li W. Zhu H., Yang C., Houser P., Larko M.)

2008

115. Earth Information Exchange: sharing the geospatial resources for Earth science and applications in an interoperable fashion, AAG meeting, Boston, Apr.18-23, 2008 (Li Z., Yang C., Li W., Li J., Huang Q., Zhou X.)

116. Sharing earth science information to support the global earth observing system of systems (GEOSS), IGARSS 2008, Boston, Massachusetts, July 7 (Bambacus M, Yang C., Evans J., Li Z., Li W., Huang Q, presented by Bambacus M)

117. Portal & Interoperability: share ESG Portlets to support EIE through JSR 1/268 & WSRP (Yang C., Li Z., Li W.)

118. Geo-visualization for Geosciences data in World Wind. 2008 AGU Fall Meeting. (Li, J., Li, Z., Xie, J., Huang, Q., Li, W., & Yang, C.)

119. The WECHO project, presented at ESIP summer meeting, July 17, 2008, New Hampshire. (Houser, P. R., Yang C., Li Z., Larko M.)

120. Water Cycle ECHO Client, presented at ESIP summer meeting, July 17, 2008, New Hampshire. (Zhu H., Li Z.)

TEACHING AND ADVISING

Courses Taught

- GEOG 363 *Introduction to Geographic Information Systems* (Spring 2016, Fall 2017, Spring 2018, Spring 2019, Fall 2020, Spring 2021; Fall 2021; Spring 2022)
- GEOG 531 *Quantitative Methods in Geographic Research* (Fall 2015, Fall 2019; Fall 2021)
- GEOG 554 *Spatial Programming with Python and ArcGIS* (new development) (Spring 2016, Spring 2017, Spring 2018, Spring 2019, Spring 2020, Spring 2021)
- GEOG 556 *WebGIS* (new development) (Fall 2018, Fall 2019, Fall 2020)
- GEOG 763 *Seminar in Geographic Information Science* (new theme: Geospatial Big Data, cloud computing and Cyberinfrastructure--Innovations and Applications) (Fall 2016, Fall 2017, Fall 2018, Spring 2020; Spring 2022)

Directed Individual Study Courses

GEOG 805 A Parallel Algorithm Based on Feature Density for Multiple Geographical Features Label Place (Fall 2022); GEOG 705 Quantitative Methods in Geography (Fall 2021); GEOG 706 Advanced Remote Sensing with Deep Learning Techniques (Spring 2021); GEOG 499 Senior Thesis (Spring 2021); GEOG 805 Advanced Directed Individual Studies in Geography (Spring 2021); GEOG 498 Undergraduate Research (Fall, 2020); GEOG 705, Quantitative Methods in Geographic Research (Fall 2019); GEOG 705 Human Mobility Data Model Development (Spring 2019); GEOG 705 Task parallelization in the cluster environment(Fall, 2018); GEOG 705 Human Dynamics in Disasters (Fall, 2018); GEOG 705 Natural Disasters and Social Media (Spring 2018) ; GEOG 705 Build customized deep learning training dataset for remote sensing image classification (Spring 2018) ; GEOG 705 Parallel Computing for Big Climate Data Analytics (Spring 2018) ; GEOG 705 A Web-based Decision Support Platform for Community Engagement in Water Resources Planning (Spring 2017) ; GEOG 705 Spatiotemporal Analysis of Human Mobility Patterns with Transportation Data and Social Media (Summer 2017); GEOG 805 Human Mobility in the Era of Big Data (Summer 2017); GEOG 399 When, Where, and Who: Mining Billions of Tweets to Understand Celebration Patterns of US Holidays (Fall, 2017)

Advising/Mentoring

As Junior Faculty/Postdoc Mentor

1. Dr. Fengrui Jing, Postdoctoral Research Fellow, Geoinformation and Big Data Research Lab, University of South Carolina (01/2022- present)
2. Dr. Diego Leal Castro, Assistant Professor of Sociology, University of South Carolina, via the R25 Fellow program at Big Data Health Science Center (09/2021-09/2022)

As Committee Chair

Current:

1. Naser Lessani, Ph.D. student of Geography, USC (2022 - present)
2. Huan Ning, Ph.D. student of Geography, USC (2021 – present)
3. Seth Church, Ph.D. student of Geography, USC (2021 – present)
4. Alex Fulham, M.S. student of Geography, USC (2021 - present)

Graduated:

5. Yuqin Jiang, Ph.D. student of Geography, USC (2017 - 2022)
6. Huan Ning, M.S. student of Geography, USC (2017 – 2019)
7. Mary Windsor, M.S. student of Geography, USC (2016-2017)
8. Finn Hagerty, Senior Thesis (Graduate with Distinction), Geography, USC (2019 – 2021)

As Committee Member

Current:

9. Chamberline Ozigbu, Ph.D. student of Public Health, USC (2019-present)
10. Sarah Jackson, Ph.D. student of Geography, USC (2020 – present)
11. Nicole Steeves, M.S. student of Geography, USC (2019 – present)

Graduated:

12. Qian Huang, Ph.D. student of Geography, USC (2018 – 2022)
13. Xinyi Liu, Ph.D. student of Geography, University of Wisconsin-Madison, (2018-2022)
14. Margot Habets, M.S. student of Geography, USC (2020 – 2022)
15. Andrew White, M.S. student of Geography, USC (2020 – 2022)
16. Grayson Morgan, Ph.D. student of Geography, (2019-2022)
17. Christopher Krause, Ph.D. student of Geography, USC (2019-2021)
18. Sahar Derakhshan, Ph.D. student of Geography, USC (2016-2020)
19. Yago Martin, Ph.D. student of Geography, USC (2016-2019)
20. Xiao Huang, Ph.D. student of Geography, USC (2017-2020)
21. Nicholas Sokol, Ph.D. student of Geography, USC (2017-2020)
22. Leah Blackwood, M.S. student of Geography, USC (2020 – 2022)
23. Logan Lee, M.S. student of Geography, USC (2019 – 2021)
24. Jacob Ramthun, M.S. student of Geography, USC (2018 – 2020)
25. Tracy Whelen, M.S. student of Geography, USC (2019 – 2020)

26. Grayson Morgan, M.S. student of Geography, USC (2019 – 2020)
27. Alan Rickenbaker, M.S. student of Geography, USC (2019 – 2020)
28. Raelene Campbell, M.S. student of Geography, USC (2017-2018)
29. Erika Pham, M.S. student of Geography, USC (2017-2018)
30. Yuqin Jiang, M.S. student of Geography, USC (2016-2017)
31. Aysegul Yeniaras, M.S. student of Geography, USC (2015-2017)
32. Ike Vayansky, M.S. student of Computing Sciences, Coastal Carolina University (2017-2018)
33. Reaghan Murphy, Honors Thesis, undergraduate of USC Honors College (2018 – 2019)
34. Ethan Magnuson, Honors Thesis, undergraduate of USC Honors College (2019 – 2021)

Former Visiting Scholars

35. Anna Fiedukowicz, Warsaw University of Technology, 2019
36. Dong Xu, East China Normal University, 2019-2020

Others

- Academic Advisor for the KNIME Training Workshop on Sentiment Analysis in Social Media Data, co-organized by Center for Geographic Analysis at Harvard University, NSF Spatiotemporal Innovation Center, Future Data Lab, and KNIME. November 2022
- Mentor for the NIH-funded T35 Research Traineeship Program in Big Data Science (2021-2023, https://bigdata.sc.edu/t35-mentors/). Mentee: Ali Zain (PhD student)
- Teaching Grant for Online Course Design, GEOG 105 Digital Earth, USC Center for Teaching Excellence (2020)
- Teaching Innovation Grant for Integrative Learning, GEOG 554 Spatial Programming, USC Connect and Center for Teaching Excellence, (2016)
- Fall 2014: Teaching Assistant, GGS 650 Introduction to GIS Programming and Algorithms (partly taught the course)
- Summer 2014: advised undergraduate student Mathew Zhan for his summer internship.
- Fall 2013: Teaching Assistant, GGS 650 Introduction to GIS Programming and Algorithms (partly taught the course)
- Jan. 2013: Instructor, Cloud Computing Hands-on Workshop, 2013 ESIP Winter Meeting.
- Summer 2009: advised a high school student Kevin Huang on summer internship.
- Spring 2008: Teaching Assistant, GEOG 563 Advanced Geographic Information System

ACADEMIC SERVICES AND OUTREACH

USC Services

Departmental service

- 2017 - present, Undergraduate Advising
- 2022-2023, Chair's Advisory Committee
- 2020 - 2022, Faculty Senator
- 2021 - 2022, Undergraduate Director
- 2021-2022, Awards and Scholarships Committee
- 2021 - 2022, Ombudsperson
- 2022, Chair Search Committee
- 2020, Geography Mapping in Justice Competition, Judge
- 2020, Graduate Admissions Committee (Chair)
- 2018, 2019, Graduate Admissions Committee (Member)
- 2018, Ad Hoc Awards Committee (Lovingood Award)
- 2017 - 2018, Search Committee (Human Rights hire)
- 2017 - 2018, Delegate of University Consortium for Geographic Information Science
- 2017-2019, Undergraduate Recruitment Committee
- 2016-2017, Library Representative
- 2017, Search Committee (Instructor hire)
- 2015 - 2020, Member, Computer Policy Standing Committee
- 2016,2017,2019 Moderator, AAG session student practice

College and University service

- 2022, ASPIRE Program Review Committee
- 2021, Data Science and Data Analytics Working Group, College of Arts and Sciences
- 2019 – present: Core Faculty, UofSC Big Data Health Science Center
- 2021, ASPIRE Program Review Committee
- 2018 and 2019, NSF EPSCoR Internal Competition Review Panel
- 2018, ASPIRE Program Review Committee
- 2017-2018, Faculty Senate Information Technology Committee
- 2016, Served as a Mentor at the New Faculty Orientation

Professional Activities

- Editorial Services

- Editorial Board, *ISPRS International Journal of Geo-Information*, 2017- present
- Editorial Board, *PLOS ONE*, 2018 – present
- Editorial Board, *Geo-spatial Information Science*, 2019 – present
- Editorial Board, *Big Earth Data (BEDJ),* 2020 – present
- Editorial Board, *International Journal of Digital Earth*, 2022 – present
- Editorial Board, Infectious Diseases – Surveillance, Prevention and Treatment (specialty section of *Frontiers in Medicine* and *Frontiers in Public Health*), 2020 – 2021
- Lead Guest Editor, Special Issue on "Harnessing Geospatial Big Data for Infectious Diseases" by the *International Journal of Applied Earth Observation and Geoinformation* (Elsevier) (with Lai S., Stewart K., Huang B., Li X.)
- Lead Guest Editor, Special Issue on "Social Sensing and Big Data Computing for Disaster Management" by the *International Journal of Digital Earth* (Taylor & Francis) (with Huang Q. and Emrich C.)
- Lead Guest Editor, Special Issue on "Big Data Computing for Geospatial Applications" by the *ISPRS International Journal of Geo-Information* (with Tang W., Huang Q., Shook E., and Guan Q.)
- Guest Editor, Special Issue on "Scaling, Spatio-Temporal Modeling, and Crisis Informatics" by the *ISPRS International Journal of Geo-Information* (with Kar B., Ye X., and Huang Q.)
- Guest Editor, Special Issue on "GIScience for Risk Management in Big Data Era" by the *ISPRS International Journal of Geo-Information* (with Konecny M., and Shen J.)

- Cyberinfrastructure Specialty Group (CISG) of American Association of Geographers (AAG)
  - Past Chair, 2020 - 2021
  - Chair (elected), 2019 - 2020
  - Vice Chair (elected), 2018 - 2019
  - Secretary/Treasurer (elected), 2016-2018
  - Award Committee, 2016-2020
  - Board Director (student, elected), 2013-2014
  - Webmaster, 2009-2010
- International Association of Chinese Professionals in Geographic Information Sciences (CPGIS)
  - Board of Director (elected) Member, 2017-2019
  - Election Committee (appointed), 2018
  - Urban computing and spatial planning committee, 2020-present
  - Education Committee, 2018-2021

- China Base Committee, 2017-2021
- Federation of Earth Science Information Partners (ESIP)
  - Co-Chair, Cloud Computing Group (appointed), 2018-2019
  - Student (Young Researcher) Fellowship, 2014
- 2012-2015: Webmaster, ICWG IV/II: Computing Optimization for Spatial Databases and Location-based Services, ISPRS
- 2010-2011, English Abstract Editor, *Journal of Geomatics and Spatial Information Technology* (in Chinese)
- 2005-2006, Co-Founder and Chair of the SpaceSoft Club (geospatial software development) in Wuhan University

Served on Professional Committees

1. Programming Committee, Symposium on Harnessing the Geospatial Data Revolution for Sustainability Solutions, AAG Annual Meeting, Denver, Colo., Mar 23 - 27, 2023
2. Programming Committee, National Big Data Health Science Conference 2023, Columbia, SC. February 10-11, 2023.
3. Programming Committee Member, 5th ACM SIGSPATIAL International Workshop on Advances in Resilient and Intelligent Cities (ARIC 2022), Seattle, Washington, USA, November 1, 2022
4. Programming Committee Member, Symposium on Data-Intensive Geospatial Understanding in the Era of AI and CyberGIS, AAG 2022, Feb. 25- Mar. 1, 2022, New York City.
5. Programming Committee Member, 4th ACM SIGSPATIAL International Workshop on Advances in Resilient and Intelligent Cities (ARIC 2021), Virtual, November 2, 2021
6. Programming Committee Member, 3rd ACM SIGSPATIAL International Workshop on Advances in Resilient and Intelligent Cities (ARIC 2020), Seattle, Washington, November 3, 2020
7. Programming Committee Member, Special Session: The 2nd AI with Geographic Information Systems for Social Good, 19th IEEE International Conference on Machine Learning and Applications, Miami, Florida, December 14-17, 2020
8. Programming Committee Member, Symposium on Frontiers in CyberGIS and Geospatial Data Science, AAG Annual Meeting, Denver, Colo., April 6-10, 2020
9. Organizing Committee Member, The 6th Symposium on Human Dynamics Research, AAG Annual Meeting, Denver, Colo., April 6-10, 2020
10. Programming Committee Member, Symposium on Artificial Intelligence and Deep Learning in Geography, AAG Annual Meeting, Denver, Colo., April 6-10, 2020
11. Programming Committee Member, 2nd ACM SIGSPATIAL Workshop on Advances in Resilient and Intelligent Cities (ARIC), Nov. 5, 2019, Chicago, Illinois, US

12. Programming Committee Member, International Geoinformatics Week, Guangzhou, China, Nov. 22-25, 2019 (Annual Meetings of Geoinformatics in Sustainable Ecosystem and Society and Geospatial Artificial Intelligence for Urban Computing)
13. Evaluation Committee Member of 2019 Travel Award for Ph.D. students, ISPRS International Journal of Geo-Information
14. Program Committee Member, NCCTA'2019: National Conference on Computer Technologies and their Applications, Saida University, Algeria, December 4-5, 2019
15. Program Committee Member, AAG 2019 Symposium on Frontiers in Geospatial Data Science, April 3-7, 2019 - AAG Annual Meeting, WASHINGTON DC 2019
16. Organizing Committee Member, 2nd International Conference on Earth Science & Geo Science, August 12-13, 2019 at Prague, Czech Republic.
17. Organizing Committee Member, International Conference on Computer Science & Cloud Computing (ICCSCC-2019), July 22-23, 2019, Italy
18. Programming Committee Member, Symposium on Artificial Intelligence and Deep Learning in Geography, April 10-14, 2018, New Orleans
19. Programming Committee Member, Symposium on Spatiotemporal Thinking, Computing and Applications, AAG Annual Meeting, April 10-14, 2018, New Orleans
20. Programming Committee Member, Symposium on CyberGIS and Spatial Data Science, AAG Annual Meeting, April 10-14, 2018, New Orleans
21. Programming Committee Member, Second Edition International Conference on Big Data and Advanced Wireless technologies, 2018, Oxford, United Kingdom.
22. Programming Committee Member, 2nd International Symposium on Spatiotemporal Computing, NSF STC/ISPRS, August 7-9, 2017 at Harvard University
23. Programming Committee Member, Symposium on Spatiotemporal Thinking, Computing and Applications, AAG Annual Meeting, April 5-9, 2017, Boston
24. Programming Committee Member, International Workshop on Cloud Computing and Big Data, NSF Spatiotemporal Innovation Center, GGL, ISPRS, July 25 -27, 2016, Fairfax, Virginia
25. Organizing Committee Member, Symposium on Spatiotemporal Thinking, Computing and Applications, 2016 AAG annual meeting
26. Organizing Committee Member, 1st International Symposium on Spatiotemporal Computing, NSF Spatiotemporal Innovation Center (STC)/ISPRS, July 13-15, 2015, Fairfax, VA

Conference Sessions Organized/Chaired

1. Big Data Computing for Geospatial Applications (I and II), AAG Annual Meeting, March 23-27, 2023, Denver (co-organized with Ning H., Huang Q., Shook E., Tang W.)

2. Human Mobility Analytics in Big Data Era, AAG Annual Meeting, March 23-27, 2023, Denver (co-organized with Lessani N., Ning H.)
3. Harnessing Geospatial Big Data for Infectious Diseases, AAG Annual Meeting, March 23-27, 2023, Denver (co-organized with Jing F., Lai S., Huang B., Stewart K.)
4. Harnessing Geospatial Information for Mental Health and Emotion Issues, AAG Annual Meeting, March 23-27, 2023, Denver (co-organized with Jing F., Ning H., Qiao S)
5. Multimodal Learning with Geospatial Big Data, AAG Annual Meeting, March 23-27, 2023, Denver (co-organized with Wu M., Huang Q., Huang X., Li Z., Michels A., Park J., Gao S.)
6. Social Sensing and Big Data Computing for Disaster Management, AAG Annual Meeting, March 23-27, 2023, Denver (co-organized with Lessani, Ning H., Huang Q., Emrich C.)
7. Urban Sensing and Understanding via Big Data and GeoAI, AAG Annual Meeting, March 23-27, 2023, Denver (co-organized with Ning H., Jing F.)
8. Uncertainties in Big Data Analytics in Disaster Research, AAG Annual Meeting, March 23-27, 2023, Denver (co-organized with Kar B., Chow E., Huang Q.)
9. Urban Computational Paradigms with Shareable Data, Models, Tools, and Frameworks, 2022 AAG, Feb. 25 – Mar. 1, 2022, New York City (co-organized with Huang X., Ye X.)
10. Symposium on Human Dynamics Research: Human mobility in Big Data Era I & II, 2022 AAG, Feb. 25 – Mar. 1, 2022, New York City (co-organized with Jiang Y, Huang X.)
11. Uncertainties in Big Data Analytics in Disaster Research, 2022 AAG, Feb. 25 – Mar. 1, 2022, New York City (co-organized with Edwin Chow, Huang Q.)
12. Harnessing Geospatial Big Data for Infectious Diseases, 2022 AAG, Feb. 25 – Mar. 1, 2022, New York City (co-organized with Lai S., Huang B., Stewart K.)
13. Social Media and Big Data for Disasters, AAG annual meeting, Online, April 7-11, 2021 (co-organized with Kar B., Huang Q., Chow E.).
14. Mobility Data: Applications and Challenges, AAG annual meeting, Online, April 7-11, 2021 (co-organized with Hu T.).
15. CISG Robert Raskin Student Competition Panel Session, AAG annual meeting, Denver, Colo., April 6-10, 2020 (Chair, co-organized with Hohl A., held virtually)
16. Symposium on Human Dynamics Research: Human Mobility in Big Data Era, AAG annual meeting, Denver, Colo., April 6-10, 2020 (co-organized with Jiang Y., cancelled due to the pandemic)
17. Big Data Computing for Geospatial Applications in the Symposium on Frontiers in CyberGIS and Geospatial Data Science, AAG annual meeting, Denver, Colo., April 6-10, 2020 (Chair, co-organized with Tang W., Shook E., cancelled due to the pandemic)
18. Human Mobility in Big Data Era, AAG Annual Meeting, Denver, Colo., April 6-10, 2020 (co-organized with Jiang Y., Ye X., cancelled due to the pandemic)
19. Social Media Big Data and Uncertainties in Disaster Research, AAG Annual Meeting, Denver, Colo., April 6-10, 2020 (co-organized with Kar B., Chow E., Huang Q., cancelled due to the pandemic)

20. Big Data and GeoAI for Natural Hazards, in Symposium on Artificial Intelligence and Deep Learning in Geography, AAG Annual Meeting, Denver, Colo., April 6-10, 2020 (co-organized with Huang Q., cancelled due to the pandemic)
21. Big Data Computing for Geospatial Applications, April 3-7, 2019 - AAG Annual Meeting, Washington DC 2019 (co-organized with Tang W., Shook E., Huang Q.)
22. Big Data and GeoAI for Natural Hazards, AAG 2019 Symposium on Frontiers in Geospatial Data Science, April 3-7, 2019 - AAG Annual Meeting, Washington DC 2019 (co-organized with Huang Q.)
23. Panel session: Social Sensing and Big Data Computing for Disaster Management, 2019 AAG annual meeting (co-organized with Huang Q.)
24. Smart Cities and Urban Computing, 2019 AAG Annual Meeting (co-organized with Wang S. and Ye X.)
25. Session Chair, Symposium on New Horizons in Human Dynamics Research: Smart Cities and Urban Computing I, 2018 AAG annual meeting
26. Session Chair, Big Data Streams and Mining for Natural Hazards, 2018 AAG annual meeting
27. Big Data Computing for Geospatial Applications, 2018 AAG annual meeting (co-organized with Huang Q., Tang W., Shook E.)
28. Panel session: Social Sensing and Big Data Computing for Disaster Management, 2018 AAG annual meeting (co-organized with Huang Q.)
29. Symposium on New Horizons in Human Dynamics Research: Smart Cities and Urban Computing I, 2018 AAG annual meeting (co-organized with Ye X., Wang S., Mesev V.)
30. Big Data Streams and Mining for Natural Hazards, 2018 AAG annual meeting (co-organized with Huang Q., Ye X.)
31. Symposium on New Horizons in Human Dynamics Research: Smart Cities and Urban Computing III, 2018 AAG annual meeting (co-organized with Wang S. and Ye X.)
32. High Performance Computing for Big Spatiotemporal Analytics, 2017 AAG annual meeting (co-organized with Hu F.)
33. CISG Robert Raskin Student Competition, 2017 AAG annual meeting (co-organized with Tang W.)
34. Session Chair, International Workshop on Cloud Computing and Big Data, NSF Spatiotemporal Innovation Center, GGL, ISPRS, July 25 -27, 2016, Fairfax, Virginia
35. High Performance Computing for Spatiotemporal Analytics, 2016 AAG annual meeting (co-organized with Hu F.)
36. New Data Sources, Technologies, and Tools for Disaster Management,2016 AAG annual meeting (co-organized with Huang Q.)
37. Spatiotemporal Computing for Spatial Big Data Science, 2015 AAG annual meeting (co-organized with Hu F.)

38. Spatiotemporal Thinking, Computing, and Applications: Climate and Weather Change, 2015 AAG annual meeting (co-organized with Sun M.)
39. WebGIS: Technologies and applications, 2015 AAG annual meeting (co-organized with Xia J.)
40. Integrating spatiotemporal and advanced computing technologies for geosciences, 2014 AAG annual meeting (Li Z.)
41. Technologies and applications of Web-based GIS, 2014 AAG annual meeting (co-organized with Xia J.)
42. Session Chair, Integrating spatiotemporal and advanced computing technologies for geosciences, 2014 AAG annual meeting
43. Cloud computing for geosciences, 2014 AAG annual meeting (Li Z.)
44. Technologies and applications of the modern Web-based GIS session, 2013 AAG annual meeting (co-organized with Xia J.)
45. CyberGIS Symposium: CyberGIS for supporting climate studies session, 2013 AAG annual meeting (Li Z.)
46. Session Chair, Technologies and applications of the modern Web-based GIS session, 2013 AAG annual meeting

Manuscript Reviews for Peer-reviewed Journals

For 35 international journals including*:*

- *International Journal of Geographical Information Science*
- *Geoinformatica*
- *Annals of the American Association of Geographers*
- *Computers, Environment and Urban Systems*
- *International Journal of Digital Earth*
- *Cartography and Geographic Information Science*
- *Computers & Geosciences*
- *PLOS ONE*
- *ISPRS International Journal of Geo-Information*
- *Weather, Climate and Society*
- *Environmental Modelling & Software*
- *Annals of GIS*
- *Information Sciences*
- *Journal of Geography*
- *Information*
- *Journal of Geographic information System*
- *Journal of Spatial Science*
- *Transportation Research Part C;*
- *Journal of Risk and Financial Management*

- *Transactions in GIS*
- *Journal of Geovisualization and Spatial Analysis*
- *Informatics; Urban Science*
- *Frontiers in Big Data*
- *Cities*
- *International Journal of Disaster Risk Reduction*
- *Geo-spatial Information Science*
- *Remote Sensing*
- *Natural Hazards*
- *Future Generation Computer Systems*
- *Journal of Ambient Intelligence and Humanized Computing*
- *Annals of Epidemiology*
- *Growth and Change: A Journal of Urban and Region*
- *Big Data and Society*
- *Nature Communications*
- *Regional Science, Policy and Practice*

Manuscript Reviews for Books and Conferences, and Book Proposal Reviews:

Geographic Information Science & Technology Body of Knowledge; High Performance Computing for Geospatial Applications; Cloud Computing in Ocean and Atmospheric Sciences (Book); Elsevier Book Proposal Review; International Symposium on Spatiotemporal Computing; International Workshop on Web Mapping, Geoprocessing and Services; ACM SIGSPATIAL Workshop on Advances in Resilient and Intelligent Cities (ARIC); *Elsevier*; *Bentham Science Publisher*

Proposal Reviews

Review panel of National Science Foundation (NSF); U.S. Department of Commerce, National Institute of Standards and Technology (NIST); North Carolina Water Resources Research Institute;

Professional Memberships

- 2012-present: International Association of Chinese Professionals in Geographic Information Sciences (CPGIS)
- 2007- present: Association of the American Geographers (AAG)
- 2008- present: American Geophysical Union (AGU)
- 2009-present: Cyberinfrastructure Specialty Group, AAG
- 2016- present: SouthEastern Division of Association of the American Geographers (SEDAAG)

Media interviews/mentions

- 2022, The Conversation, Fear of COVID-19 and fear of change are dangerously

intertwined for 2022, https://theconversation.com/fear-of-covid-19-and-fear-of-change-are-dangerously-intertwined-for-2022-174849

- 2020, The New York Times, The Young Cut Loose in Myrtle Beach. The Virus Followed Them Home. https://www.nytimes.com/2020/07/01/us/coronavirus-myrtle-beach.html
- 2020, WLTX, UofSC researchers using Twitter to track COVID19, https://www.wltx.com/article/news/local/street-squad/twitter-data-tracks-covid19
- 2020, COVID-19 research: Geographer tracks movement with Twitter data, Study holds promise for disease tracking in future outbreaks, https://sc.edu/uofsc/posts/2020/04/covid_impact_twitter_data_air_traffic.php#.YZErfWDMInA
- 2019, Breakthrough Magazine of USC and PreventionWeb.net, Disaster research: Learning from past devastation helps prepare for future events, https://www.sc.edu/uofsc/posts/2019/07/disaster_flood_research.php
- 2017, Charleston City Paper: Avoiding fake news during extreme storms while leveraging Twitter to report the weather, https://goo.gl/YF6A3Z
- 2017, ABC Columbia (WOLO): Using Twitter to Track Eclipse Visitors to the Midlands, http://www.abccolumbia.com/2017/08/18/icymi-using-twitter-to-track-eclipse-visitors-to-the-midlands
- 2017, South Carolina Radio Network: University of South Carolina researcher uses social media in research on eclipse. https://www.southcarolinaradionetwork.com/2017/08/22/university-south-carolina-researcher-uses-social-media-research-eclipse
- 2016, WSPA Columbia: USC Researchers Who Studied SC Flood Share Findings, http://wspa.com/2016/11/18/usc-researchers-who-studied-sc-flood-share-findings