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[Google Scholar](#) | [ResearchGate](#)

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
- 2015 – 2020: Assistant Professor, Department of Geography, University of South Carolina, Columbia, SC, USA
- 2015 – present: Director, Geoinformation & Big Data Research Laboratory at USC; Faculty Member, Hazards & Vulnerability Research Institute; Faculty Associate, South Carolina SmartState Center for Healthcare Quality; Core Faculty Member, USC Big Data Health Science Center (since 2019)
- 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

1. Geospatial World 50 Rising Stars, Geospatial Media and Communications, 2021
2. Breakthrough Star Award, University of South Carolina, 2020
3. Peter and Bonnie McCausland Faculty Fellowship (\$20,000), College of Arts and Sciences, University of South Carolina, 2020-2023
4. NSF Travel Award (\$2,000), UCGIS Symposium and summer school, Theme: Collaborative Problem Solving with CyberGIS and Geospatial Data Science, UIUC, Champaign, IL/Arlington, VA, US, 2017
5. USGIF/NVIDIA Essay Challenge Award (with Ning H. and Wang S., two NVIDIA Titan Xp GPUs), 2017
6. USNC/NSF Travel Award (\$1,000), 28th International Cartographic Conference, Washington, DC, US, 2017
7. Outstanding Graduate Ph.D. Award (\$1000), Department of Geography and Geoinformation Science, George Mason University, 2015
8. Raskin Scholarship (\$4500), Federation of Earth Science Information Partners (ESIP), 2014
9. Top-5 Finalist, Rob Raskin Mashup Mapping Student Competition, Association of the American Geographers, 2013
10. Extraordinary Achievements of Student Research, Hubei, China, 2006
11. Outstanding Student Scholarship, Wuhan University, China, 2003, 2005

RESEARCH GRANTS

External Funding

1. 2022-2023, Role: **PI**, (Co-PI: Susan Wang), 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. 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
3. 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
4. 2020-2022, Role: **Co-I** (with Zhang J., Weissman S., Hikment N., Hu J.). MPI: 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
5. 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
 6. 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
 7. 2018-2019, Role: **PI**, Social Sensing of Disaster Extents and Impacts of Hurricane Florence, Horne LLP, 13540-19-49715, \$5,000
 8. 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
 9. 2014-2015, Role: **Co-PI**, (PI: Yang C.), Developing a Hadoop-based Middleware for Handling Big Climate Data. NASA/NSF, \$45,000
 10. 2013, Role: **Co-PI**, (PI: Yang C.), Advanced Certificate for GeoInformation Sciences, NASG, \$70,000
 11. 2011-2012, Role: **PI**, Geospatial Web Services Discovery and Integration based on Tianditu, China Ministry of Education, \$3,500

Internal Funding

12. 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
13. 2020-2022, 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
14. 2021-2022, 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
15. 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
16. 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)
17. 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

18. 2018, Role: **PI**, Prototyping a Near Real-time Flood Mapping System with Social Sensing and Big Data Computing, CAS Faculty Research Initiative, \$3,400
19. 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
20. 2016-2017, Role: **PI**, Developing a High-Performance Query Analytical Framework to Support Large Scale Climate Data Analysis, ASPIRE Program, \$14,457
21. 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
22. 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

23. 2019-2020, Role: **PI** (Ph.D. student: Jiang Y.), Analyzing Human Mobility Patterns during Hurricane Matthew Evacuation, SPARC Program, \$5,000
24. 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

Peer-reviewed journal articles (_ denotes student-led; * denotes correspondence)

5. Zeng C., Zhang J., **Li Z.**, Sun X., Yang X., Olatosi B., Weissman S., Li X., (2022) Population mobility and aging accelerate the outbreaks of COVID-19 in the Deep South: a county-level longitudinal analysis, *Clinical Infectious Diseases* (in press)

6. 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*. (in press)
7. 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>
8. Zhang M., Wang S., Hu T., Fu. X., Wang X., Hu Y., Halloran B., Cui Y., Liu H., Bao S., **Li Z.** (2022). Human mobility and COVID-19 transmission: a systematic review and future directions, *Annals of GIS*. <https://doi.org/10.1080/19475683.2022.2041725>
9. 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>
10. 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>
11. 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> **(2020 IF: 10.98)**
12. 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*, <https://doi.org/10.1080/15230406.2021.2023366>
13. Ning H., **Li Z.**, Ye X., Wang S., Wang W., Huang X. (2021). 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*, 1-26, <https://doi.org/10.1080/13658816.2021.1981334>
14. 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>
15. 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 U.S. during the COVID-19 pandemic via Bayesian inference, *Transactions in GIS*. <https://doi.org/10.1111/tgis.12918>
16. 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>
17. **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>
 18. 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>
 19. **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>
 20. 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>
 21. 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>
 22. 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>
 23. 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>
 24. **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>
 25. 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>
 26. 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>
 27. **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
 28. 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
29. 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**)
 30. 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>
 31. 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>
 32. **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>
 33. 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>
 34. 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>
 35. 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**)
 36. 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**)
 37. 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>
 38. 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>
 39. Xu D., Huang X., **Li Z.**, Li X., (2020). Local Motion Simulation using Deep Reinforcement

- Learning, *Transactions in GIS*, 24(3), 756-779. <https://doi.org/10.1111/TGIS.12620>
40. 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-Information*, 9(2), 104; <https://doi.org/10.3390/ijgi9020104>
 41. 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>
 42. 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>
 43. Pham E., Emrich C., Li Z., Mitchem 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>
 44. 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](https://doi.org/10.1061/(ASCE)NH.1527-6996.0000354)
 45. 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>
 46. 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](https://doi.org/10.1061/(ASCE)NH.1527-6996.0000354)
 47. 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>
 48. 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>
 49. 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>
 50. 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>
 51. 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>

52. 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>
53. 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>
54. **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>
55. 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>
56. 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>
57. Wang C., **Li Z.**, Huang X. (2018). Geospatial Assessment of Wetness Dynamics in the October 2015 SC Flood with Remote Sensing and Social Media, *Southeastern Geographer*, 58(2), 164-180, <https://doi.org/10.1353/sgo.2018.0020>
58. Huang X., Wang C., **Li Z.** (2018). A Near Real-time Flood Mapping Approach by Integrating Post-event with Satellite Imagery and Flood-related Tweets, *Annals of GIS*. 24(2), 113-123, <https://doi.org/10.1080/19475683.2018.1450787>
59. **Li Z.**, Wang C., Emrich C., Guo D., (2018). A novel approach to leveraging social media for rapid flood mapping: a case study of the 2015 South Carolina floods, *Cartography and Geographic Information Science*, 45(2), 97-110, <https://doi.org/10.1080/15230406.2016.1271356>, **(ESI Highly Cited; Top 5 most cited articles in CaGIS as of 11/2021 in Taylor&Francis Online)**
60. Huang Q., Li, J., **Li, Z.**, (2018). A Hybrid Cloud Platform Based on Multi-sourced Computing and Model Resources for Geosciences, *International Journal of Digital Earth*, 11(12), 1184-1204, <https://doi.org/10.1080/17538947.2017.1385652>
61. **Li Z.**, Huang Q., Carbone G., Hu F. (2017). A High Performance Query Analytical Framework for Supporting Data-intensive Climate Studies, *Computers, Environment and Urban Systems*, 62(3), 210-221, <https://doi.org/10.1016/j.compenvurbsys.2016.12.003>
62. **Li Z.**, Hu, F., Schnase, J. L., Duffy, D. Q., Lee, T., Bowen, M. K., & Yang, C. (2017). A Spatiotemporal Indexing Approach for Efficient Processing of Big Array-based Climate Data with MapReduce. *International Journal of Geographical Information Science*, 31(1), 17-35, <https://doi.org/10.1080/13658816.2015.1131830> **(this Spatiotemporal Indexing Approach [SIA] was adopted by NASA as one of the key technologies in their Data Analytics and Storage System [DASS]).**

63. Martin Y., Li Z., Cutter L.S., (2017). Leveraging Twitter to gauge evacuation compliance: spatiotemporal analysis of Hurricane Matthew, *PloS ONE*, 12(7), <https://doi.org/10.1371/journal.pone.0181701> (the FIRST to use social media big data to study evacuation behaviors)
64. Yang C., Huang Q., **Li Z.**, Liu K., & Hu F. (2017). Big Data and cloud computing: innovation opportunities and challenges, *International Journal of Digital Earth* 10(1),13-53., <https://doi.org/10.1080/17538947.2016.1239771> (ESI Highly Cited; #1 most read and #1 most cited article among all articles published in IJDE; equal contribution with the second author)
65. **Li Z.**, Yang, C., Huang, Q., Liu K., Sun, M., Xia, J., (2017). Building Model as a Service for Supporting Geosciences, *Computers, Environment and Urban Systems*. 61(B), 141-152., <https://doi.org/10.1016/j.compenvurbsys.2014.06.004>
66. **Li Z.**, Yang, C., Liu, K., Hu, F., & Jin, B. (2016). Automatic Scaling Hadoop in the Cloud for Efficient Process of Big Geospatial Data. *ISPRS International Journal of Geo-Information*, 5(10), 173-187, <https://doi.org/10.3390/ijgi5100173>
67. Gui, Z., Yu, M., Yang, C., Jiang, Y., Chen, S., Xia, J., Huang, Q., Liu, K., **Li Z.**, Hassan, M.A. and Jin, B., (2016). Developing Subdomain Allocation Algorithms Based on Spatial and Communicational Constraints to Accelerate Dust Storm Simulation. *PloS ONE*, 11(4), <https://doi.org/10.1371/journal.pone.0152250>
68. **Li Z.**, Yang C., Yu M., Liu K., Sun M., (2015). Enabling Big Geoscience Data Analytics with a Cloud-based, MapReduce-enabled, and Service-oriented Workflow Framework, *PLOS ONE*, 10(3), <https://doi.org/10.1371/journal.pone.0116781>
69. Xia, J., Yang, C., Liu, K., **Li Z.**, Sun, M., & Yu, M. (2015). Forming a global monitoring mechanism and a spatiotemporal performance model for geospatial services. *International Journal of Geographical Information Science*, 29(3), 375-396., <https://doi.org/10.1080/13658816.2014.968783>
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100. Li J., **Li, Z.**, Sun M., Liu K., (2013). Cloud-enabling Climate@Home. In Yang C., Huang Q., Li Z., Xu C., Liu K.(Eds.), *Spatial cloud computing: a practical approach* (pp. 143-160). CRC Press/Taylor & Francis
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108. Liu K., Yang C., Li W., **Li Z.**, Wu H., Rezgui A., & Xia J., (2011). The GEOSS Clearinghouse high performance search engine. In *2011 19th International Conference on Geoinformatics* (pp. 1-4), IEEE., <https://doi.org/10.1109/GeoInformatics.2011.5981077>
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110. Bambacus M., Yang C., Evans J., **Li Z.**, Li W. and Huang Q., (2008). Sharing Earth science information to support the Global Earth Observing System of Systems (GEOSS). *Proceedings of IEEE International Geoscience and Remote Sensing Symposium (IGARSS08)* (pp. 141-144), Boston, US, <https://doi.org/10.1109/IGARSS.2008.4778813>

Other publications

111. **Li Z.**, Wang C., Emrich C., Guo D., (2016). Rapid Mapping of October 2015 South Carolina Flood using Social Media, Remote Sensing, and Stream Gauges. In: *The South Carolina Deluge: Lessons from a Watershed Disaster*, Center for Resilience Studies, Northeastern University (pp. 52-62), <https://doi.org/10.17760/D20241716>
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113. Karami A., **Li Z.** (2016). Computational Framework for Tracking Reports, Opinions and Feelings of People in Social Media Before, During and After a Natural Disaster: Twitter Case Study in the 2015 South Carolina Flood, Available at https://sc.edu/about/offices_and_divisions/research/docs/sc_floods_project_summary_booklet.pdf (pp. 37-38)
114. **Li Z.**, Wang C., Emrich C., Guo D. (2016). Leveraging Social Media for Rapid Mapping of 2015 South Carolina Floods, Available at https://sc.edu/about/offices_and_divisions/research/docs/sc_floods_project_summary_booklet.pdf (pp. 39-40)
115. Yu, M., Yang, C., **Li, Z.**, Liu, K., & Chen, S. (2015). Enabling the Acceleration of Dust Simulation using Job Scheduling Methods in a Cloud Environment. *Proceedings of the 13th International Conference on GeoComputation, May 20-23, 2015, Richardson, Texas* http://www.geocomputation.org/2015/papers/GC15_54.pdf

PRESENTATIONS (presented by the first author unless otherwise noted)

2022

1. Modeling Place-Place Connectiveness with Social Media, MobiLab Seminar Series: Doing Digital Humanities, University of Padua, Italy, Spring 2022 (to be presented by Li Z. and Michael H.) (**invited**)
2. 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.)
3. 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.)
4. Measuring Human Mobility Dynamics and Place Connectivity Using Big Social Media Data, AAG 2022, Feb. 25-Mar. 1, 2022, New York City (Li Z.)
5. 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.)
6. 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

7. Measuring Human Mobility Dynamics and Place Connectivity Using Big Social Media Data, 2021 SEDAAG Annual Meeting, Florence, Alabama, Nov 21-22, 2021 (Li Z.)
8. Big Social Media Analytics for Disaster Management: Approaches and Applications, Geoinformatics 2021 (CPGIS Annual Conference, online), November 4, 2021 (**invited**)
9. 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**)
10. 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.)
11. 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.)
12. 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.)
13. 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.)
 14. 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.)
 15. 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.)
 16. Measuring Human Movement Using Big Social Media Data, COVID Information Commons Webinar, Northeast Big Data Innovation Hub, August 18, 2021 (**invited**)
 17. 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**)
 18. 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**)
 19. Fighting the Pandemic with Big Movement Data: Our Approaches, 2021 AAG Annual Conference, Online, April 9, 2021
 20. 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**)
 21. Measuring place connectivity using big social media data, CPGIS Educational Webinar Series. "Spatiotemporal Study of Urban Dynamics", Mar 25, 2021, (**invited**)
 22. 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.)
 23. Using Big Movement Data in the Pandemic: Methods and Applications, MDPI Webinar on GIS and Remote Sensing, Jan. 16, 2021 (**invited**)

2020

24. 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>

25. 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.)
26. Using Social Media to Monitor the Spatial Propagation of COVID-19, South Carolina SmartState Center for Healthcare Quality (CHQ) Seminar, September 18, 2020 **(invited)**
27. Following the Pandemic on Twitter: A Big Data Approach, CAS Public Online Events, July 28, 2020 (Webinar, **invited**)
28. 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>
29. Disaster Management based on Social Sensing Big Data Computation, Online Guest Lecture, Wuhan University, July 6, 2020 **(invited)**
30. 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>
31. 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)
32. 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)**
33. 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)**
34. Leveraging Social Media Data for Disaster Management: Challenges and Applications, Big Data Health Science Conference, February 9-11, 2020 (Li Z.)

2019

35. Li Z., Social Sensing and Big Data for Disasters, China University of Petroleum, Nov. 25, 2019. **(invited)**
36. 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**)
37. Using Social Media Analytics for Enhancing Situational Awareness, Institute of Remote Sensing and Digital Earth, Beijing, China, June 20, 2019 (**invited**)
 38. A Scalable Online Visual Analytic System for Big Climate Data Analysis, ESIP Cloud Computing Group Webinar (lightning talk), May 5, 2019 (Li Z.)
 39. 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)
 40. Social Sensing and Big Data Computing for Disaster Management (Panel Introductory Talk), AAG Annual Meeting, Washington DC, April 3-7, 2019 (Li Z.)
 41. Social Media for Disaster Management (presentation in the Social Media Analytics Tool Development Panel), AAG Annual Meeting, Washington DC, April 3-7, 2019 (**invited**)
 42. Analyzing Human Mobility Patterns during Hurricane Matthew Evacuation using Twitter, AAG Annual Meeting, Washington DC, April 3-7, 2019 (Jiang Y., Li Z.)
 43. 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.)
 44. 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.)
 45. 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

46. Web-based GIS tools and applications in Public Health, November 27, 2018, Arnold School of Public Health, USC (**invited** guest lecture)
47. 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)
48. Big data, social media and evacuation, *New Generation GIS Workshop*, October 11, 2018, Center for Geographic Analysis, Harvard University, (**invited**)
49. Geospatial Big Data: Challenges, Opportunities, and Applications, *2018 GIS Day at USC* November 14, 2018 (Li Z.)
50. 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.).

51. 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.)
52. SCOVAS: A Scalable Climate Online Visual Analytical System, *AAG Annual Meeting* April 10-14, 2018, New Orleans (Li Z., Huang Q., Hu F.)
53. Understanding Evacuation Decision based on Twitter Network, *AAG Annual Meeting* April 10-14, 2018, New Orleans (Jiang Y., Li Z.)
54. 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.)
55. 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.)
56. 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.)
57. 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**)
58. Using Twitter to Monitor Evacuation Behavior in Matthew. National Hurricane Conference. Orlando, FL, 2018. (Martín Y., Li Z., and Cutter S.L.)

2017

59. 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.)
60. 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**)
61. 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.
62. A Scalable Online System for Parallel Query Analytics or Big Climate Data, *The 28th International Cartographic Conference*, July 2-7, 2017, Washington DC
63. Computing and GIScience, *Seminar at the Department of Computing Sciences*, Coastal Carolina University, June 26, 2017(**invited**)
64. Mining Big Twitter Data to Enhance Disaster Situational Awareness, *Seminar at South Carolina SmartState Center for Health Care Quality*, April 28, 2017 (**invited**)
65. Geospatial Big Data Analytics with High Performance Computing, *Symposium on*

Research Computing Infrastructure, April 14, 2017, University of South Carolina

66. 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.)
67. 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.)
68. 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.)
69. 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.)
70. 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.)
71. 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.)
72. 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

73. 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.)
74. 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.)
75. 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.)
76. 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.)
77. 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.)
78. BigQuery: Parallel Query Analytics of Big Climate Data, 2016 International Workshop

on Cloud Computing and Big Data, Fairfax, Virginia, July 26 – 27, 2016 (**invited**)

79. 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.)
80. 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.)
81. Panelist, "HPC and Big Data Challenges at USC" session at the Symposium on Research Computing Infrastructure. USC, April 15, 2016. (**invited**)

2015

82. 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.)
83. 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.)
84. 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.)
85. Enabling Big Climate Data Processing with a Cloud-based Workflow Framework. AAG annual meeting, Chicago, IL. April 21 - 25, 2015
86. Cloud Computing for Geospatial Data Sciences. 2015 Unidata Users Workshop, Boulder, Colorado. June 22-25, 2015 (**invited**)
87. 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)
88. Cloud-based, workflow-enabled and service-oriented scientific workflow framework. ESIP Winter Meeting, Washington DC. Jan. 06-09, 2015 (**invited**)

2014

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

2013

91. 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.)
92. 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.)

93. Using MapReduce and cloud computing to support geospatial processing, AAG meeting, Los Angeles, CA. Apr. 9-13, 2013 (Huang Q., Li Z., Yang C.)
94. 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

95. 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

96. Quality-supported architecture for Geospatial Information Service, AAG meeting, Washington, DC Apr. 14-18, 2010 (Wu H., Li Z., Yang C.,)
97. 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.)
98. 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.)
99. 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.)
100. 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

101. 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.)
102. 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.)
103. 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

104. 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.)

105. 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)
106. Portal & Interoperability: share ESG Portlets to support EIE through JSR 1/268 & WSRP (Yang C., Li Z., Li W.)
107. Geo-visualization for Geosciences data in World Wind. 2008 AGU Fall Meeting. (Li, J., Li, Z., Xie, J., Huang, Q., Li, W., & Yang, C.)
108. The WECHO project, presented at ESIP summer meeting, July 17, 2008, New Hampshire. (Houser, P. R., Yang C., Li Z., Larko M.)
109. 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 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. 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)
2. Dr. Fengrui Jing, Postdoctoral Research Fellow, Geoinformation and Big Data Research Lab, University of South Carolina (01/2022-)

As Committee Chair

Current:

3. Yuqin Jiang, Ph.D. student of Geography, USC (2017 - present)
4. Huan Ning, Ph.D. student of Geography, USC (2021 – present)
5. Seth Church, Ph.D. student of Geography, USC (2021 – present)

Graduated:

6. Mary Windsor, M.S. student of Geography, USC (2016-2017)
7. Huan Ning, M.S. student of Geography, USC (2017 – 2019)
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. Qian Huang, Ph.D. student of Geography, USC (2019 – present)
11. Sarah Jackson, Ph.D. student of Geography, USC (2020 – present)
12. Xinyi Liu, Ph.D. student of Geography, University of Wisconsin-Madison, (2021-present)
13. Nicole Steeves, M.S. student of Geography, USC (2019 – present)
14. Margot Habets, M.S. student of Geography, USC (2021 – present)
15. Andrew White, M.S. student of Geography, USC (2021 – present)

Graduated:

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

- Serve as a Mentor for the NIH-funded T35 Research Traineeship Program in Big Data Science (2021- , <https://bigdata.sc.edu/t35-mentors/>)
- Teaching Grant for Online Course Design, GEOG 105 Digital Earth, USC Center for Teaching Excellence (2020, \$1,626.13)
- Teaching Innovation Grant for Integrative Learning, GEOG 554 Spatial Programming, USC Connect and Center for Teaching Excellence, (2016, \$3,305)
- 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
- 2020 - 2022, Faculty Senator
- 2021 - 2022, Undergraduate Director
- 2021-2022, Awards 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
- 2019, NSF EPSCoR Internal Competition Review Panel
- 2018, 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
 - Academic Editor, *ISPRS International Journal of Geo-Information*, 2017- present
 - Academic Editor, *PLOS ONE*, 2018 – present
 - Editorial Board, *Geo-spatial Information Science*, 2019 – present
 - Editorial Board, *Big Earth Data (BEDJ)*, 2020 – 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
 - Education Committee, 2018-present

- China Base Committee, 2017-present
- 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 Member, 8th International Conference on Geographical Information Systems Theory, Applications and Management, Online, April 27-29, 2022
2. 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.
3. Programming Committee Member, 4th ACM SIGSPATIAL International Workshop on Advances in Resilient and Intelligent Cities (ARIC 2021), Virtual, November 2, 2021
4. Programming Committee Member, 3rd ACM SIGSPATIAL International Workshop on Advances in Resilient and Intelligent Cities (ARIC 2020), Seattle, Washington, November 3, 2020
5. 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
6. Programming Committee Member, Symposium on Frontiers in CyberGIS and Geospatial Data Science, AAG Annual Meeting, Denver, Colo., April 6-10, 2020
7. Organizing Committee Member, The 6th Symposium on Human Dynamics Research, AAG Annual Meeting, Denver, Colo., April 6-10, 2020
8. Programming Committee Member, Symposium on Artificial Intelligence and Deep Learning in Geography, AAG Annual Meeting, Denver, Colo., April 6-10, 2020
9. Programming Committee Member, 2nd ACM SIGSPATIAL Workshop on Advances in Resilient and Intelligent Cities (ARIC), Nov. 5, 2019, Chicago, Illinois, US
10. 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)
11. Evaluation Committee Member of 2019 Travel Award for Ph.D. students, ISPRS International Journal of Geo-Information

12. Program Committee Member, NCCTA'2019: National Conference on Computer Technologies and their Applications, Saida University, Algeria, December 4-5, 2019
13. Program Committee Member, AAG 2019 Symposium on Frontiers in Geospatial Data Science, April 3-7, 2019 - AAG Annual Meeting, WASHINGTON DC 2019
14. Organizing Committee Member, 2nd International Conference on Earth Science & Geo Science, August 12-13, 2019 at Prague, Czech Republic.
15. Organizing Committee Member, International Conference on Computer Science & Cloud Computing (ICCSCC-2019), July 22-23, 2019, Italy
16. Programming Committee Member, Symposium on Artificial Intelligence and Deep Learning in Geography, April 10-14, 2018, New Orleans
17. Programming Committee Member, Symposium on Spatiotemporal Thinking, Computing and Applications, AAG Annual Meeting, April 10-14, 2018, New Orleans
18. Programming Committee Member, Symposium on CyberGIS and Spatial Data Science, AAG Annual Meeting, April 10-14, 2018, New Orleans
19. Programming Committee Member, Second Edition International Conference on Big Data and Advanced Wireless technologies, 2018, Oxford, United Kingdom.
20. Programming Committee Member, 2nd International Symposium on Spatiotemporal Computing, NSF STC/ISPRS, August 7-9, 2017 at Harvard University
21. Programming Committee Member, Symposium on Spatiotemporal Thinking, Computing and Applications, AAG Annual Meeting, April 5-9, 2017, Boston
22. Programming Committee Member, International Workshop on Cloud Computing and Big Data, NSF Spatiotemporal Innovation Center, GGL, ISPRS, July 25 -27, 2016, Fairfax, Virginia
23. Organizing Committee Member, Symposium on Spatiotemporal Thinking, Computing and Applications, 2016 AAG annual meeting
24. 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. 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.)
2. 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.)
3. 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.)
4. 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.)
5. Social Media and Big Data for Disasters, AAG annual meeting, Online, April 7-11, 2021 (co-organized with Kar B., Huang Q., Chow E.).
 6. Mobility Data: Applications and Challenges, AAG annual meeting, Online, April 7-11, 2021 (co-organized with Hu T.).
 7. CISG Robert Raskin Student Competition Panel Session, AAG annual meeting, Denver, Colo., April 6-10, 2020 (Chair, co-organized with Hohl A., held virtually)
 8. 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)
 9. 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)
 10. 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)
 11. 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)
 12. 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)
 13. 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.)
 14. 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.)
 15. Panel session: Social Sensing and Big Data Computing for Disaster Management, 2019 AAG annual meeting (co-organized with Huang Q.)
 16. Smart Cities and Urban Computing, 2019 AAG Annual Meeting (co-organized with Wang S. and Ye X.)
 17. Session Chair, Symposium on New Horizons in Human Dynamics Research: Smart Cities and Urban Computing I, 2018 AAG annual meeting
 18. Session Chair, Big Data Streams and Mining for Natural Hazards, 2018 AAG annual meeting
 19. Big Data Computing for Geospatial Applications, 2018 AAG annual meeting (co-organized with Huang Q., Tang W., Shook E.)
 20. Panel session: Social Sensing and Big Data Computing for Disaster Management, 2018 AAG annual meeting (co-organized with Huang Q.)
 21. 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.)
22. Big Data Streams and Mining for Natural Hazards, 2018 AAG annual meeting (co-organized with Huang Q., Ye X.)
 23. 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.)
 24. High Performance Computing for Big Spatiotemporal Analytics, 2017 AAG annual meeting (co-organized with Hu F.)
 25. CISG Robert Raskin Student Competition, 2017 AAG annual meeting (co-organized with Tang W.)
 26. Session Chair, International Workshop on Cloud Computing and Big Data, NSF Spatiotemporal Innovation Center, GGL, ISPRS, July 25 -27, 2016, Fairfax, Virginia
 27. High Performance Computing for Spatiotemporal Analytics, 2016 AAG annual meeting (co-organized with Hu F.)
 28. New Data Sources, Technologies, and Tools for Disaster Management, 2016 AAG annual meeting (co-organized with Huang Q.)
 29. Spatiotemporal Computing for Spatial Big Data Science, 2015 AAG annual meeting (co-organized with Hu F.)
 30. Spatiotemporal Thinking, Computing, and Applications: Climate and Weather Change, 2015 AAG annual meeting (co-organized with Sun M.)
 31. WebGIS: Technologies and applications, 2015 AAG annual meeting (co-organized with Xia J.)
 32. Integrating spatiotemporal and advanced computing technologies for geosciences, 2014 AAG annual meeting (Li Z.)
 33. Technologies and applications of Web-based GIS, 2014 AAG annual meeting (co-organized with Xia J.)
 34. Session Chair, Integrating spatiotemporal and advanced computing technologies for geosciences, 2014 AAG annual meeting
 35. Cloud computing for geosciences, 2014 AAG annual meeting (Li Z.)
 36. Technologies and applications of the modern Web-based GIS session, 2013 AAG annual meeting (co-organized with Xia J.)
 37. CyberGIS Symposium: CyberGIS for supporting climate studies session, 2013 AAG annual meeting (Li Z.)
 38. Session Chair, Technologies and applications of the modern Web-based GIS session, 2013 AAG annual meeting

Manuscript Reviews for Peer-reviewed Journals

For over 30 international journals including: 1. *International Journal of Geographical Information Science*; 2. *Geoinformatica*; 3. *Annals of the American Association of Geographers*; 4. *Computers, Environment and Urban Systems*; 5. *International Journal of*

Digital Earth; 6. Cartography and Geographic Information Science; 7. Computers & Geosciences; 8. PLOS ONE; 9. ISPRS International Journal of Geo-Information; 10. Weather, Climate and Society; 11. Environmental Modelling & Software; 12. Annals of GIS; 13. Information Sciences; 14. Journal of Geography; 15. Information; 16. Journal of Geographic information System; 17. Journal of Spatial Science; 18. Transportation Research Part C; 19. Journal of Risk and Financial Management; 20. Transactions in GIS; 21. Journal of Geovisualization and Spatial Analysis; 22. Informatics; Urban Science; 23. Frontiers in Big Data; 24. Cities; 25. International Journal of Disaster Risk Reduction; 26. Geo-spatial Information Science; 27. Remote Sensing; 28. Natural Hazards; 29. Future Generation Computer Systems; 30. Journal of Ambient Intelligence and Humanized Computing; 31. Annals of Epidemiology; 32. Growth and Change: A Journal of Urban and Regio; 33. Big Data and Society; 34. Nature Communications.

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

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

- 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#.YZErWDMInA

- 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>