

## **Qingmin Meng**

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[Qingmin Meng - Google Scholar | \(0000-0002-6287-5553\) \(orcid.org\)](https://scholar.google.com/citations?user=0000-0002-6287-5553)

### **Education**

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PhD	School of Forestry and Natural Resources, University of Georgia	2006
	Dissertation title: “Fine Spatial Resolution Forest Inventory for Georgia: Remote Sensing Based Geostatistical Modeling and K Nearest Neighbor Method”	
	Certificate in Geographic Information Science, Dept. of Geography, University of Georgia	2006
MS	Statistics, Department of Statistics, University of Georgia	2005
PhD	Department of Geography, Peking University, China	2001
MS	Department of Geography, Lanzhou University, China	1997
BS	Department of Geography, Shandong Normal University, China	1994

### **Professional Experience**

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Associate Professor	Department of Geosciences, Mississippi State University	2018 –
Assistant Professor	Department of Geosciences, Mississippi State University	2012 – 2018
Visiting Asst Prof.	Dept. of Geography & Planning, SUNY at Albany	2010 – 2012
Associate Director	Center for Applied GIS, UNC at Charlotte	2008 – 2010
Post-Doc Researcher	School of Forestry and Natural Resources University of Georgia	2007 – 2008

### **Research and Teaching Interest**

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GIS and remote sensing; Geospatial statistics, GeoAI, and Big Data; Hazards and disasters; Environmental justice and equity; Natural resources and biometrics; Environment, society & policy; Decision making

### **Awards and Honors**

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1. I am recognized to be listed on the 2024 “World’s Top 2% Scientists list” (<https://topresearcherslist.com/>) compiled by Standford and Elsevier. This is a prestigious ranking list highlighting the most influential researchers in the world across a wide range of scientific fields and disciplines.
2. Most read article, All Time, “Assessment of regression kriging for spatial interpolation – comparisons of seven GIS interpolation methods” (Meng, et al. 2013). In *Cartography and Geographic Information Science*. [Most read articles from Cartography and Geographic Information Science \(tandfonline.com\)](https://doi.org/10.1177/1524907913508888)

3. Top 5% of all research outputs scored by Altmetric, and most notable article: <https://mdpi.altmetric.com/details/140362905/news>  
[Altmetric – Urban Water Crisis Causes Significant Public Health Diseases in Jackson, Mississippi USA: An Initial Study of Geographic and Racial Health Inequities](#) (Meng, 2022). This article is in the top 5% of all research outputs scored by Altmetric and mentioned by 12 news outlets including *Water Online* 2023, *Fast Company* 2023, *Smart Water Magazine* 2023, *Idaho Press* 2023, *Seattle Post-Intelligencer* 2023, *SFGate* 2023, *Houston Chronicle* 2023, *Foreign Affairs New Zealand* 2023, *Yahoo Style Singapore* 2023, *Yahoo! News* 2023, *The Conservation* 2023, and *Journalist’s Resource* 2022.
4. Most popular article (2020 – 2023), “A thematic mapping method to assess and analyze potential urban hazards and risks caused by flooding” (Hossain and Meng, 2020). *Computers, Environment and Urban Systems* 79, 101417.
5. CHANS Fellowship. 2010. International Network of Research on Coupled Human and Natural Systems, National Science Foundation and Michigan State University
6. UCGIS / ESRI Junior Faculty Award. 2010. The University Consortium for Geographic Information Science (UCGIS)
7. UCGIS Student Paper Award. 2006. The University Consortium for Geographic Information Science (UCGIS) 2006 Summer Assembly, Vancouver WA, June 28 – July 1, 2006.
8. 3<sup>rd</sup> place. 2005. Geostatistical Mapping for Large Area Forest Inventory Using Remote Sensing Data. 2005 American Society of Photogrammetry and Remote Sensing Mid-South Conference. Athens, GA. Nov. 10-11, 2005.

## Publications

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### *Peer-reviewed journal articles* († denotes graduate students)

1. Malaker†, T., **Meng, Q.** 2024. Urban disparity analytics using GIS: A systematic review. *Sustainability*, 16(14), 5956. (IF, 3.3).
2. Islam†, MD., **Meng, Q.** 2024. Spatial dynamic analysis and thematic mapping of vulnerable communities to urban floods. *Cities* 145, 104735. (IF 6.0)
3. Rai†, N., Ma, Q., Poudel, K.P., Himes, A., **Meng, Q.** 2024. Evaluating the Uncertainties in Forest Canopy Height Measurements Using ICESat-2 Data. *Journal of Remote Sensing*, <https://doi.org/10.34133/remotesensing.0160> (IF 8.8)
4. Islam†, MD., **Meng, Q.** 2024. Spatial analysis of socio-economic and demographic factors influencing urban flood vulnerability. *Journal of Urban Management*, DOI: [10.1016/j.jum.2024.06.001](https://doi.org/10.1016/j.jum.2024.06.001) (IF 3.9)

5. **Meng, Q.**, Smith, S., Rodgers, J. 2024. Geospatial Analysis and Mapping of Regional Landslide Susceptibility: A Case Study of Eastern Tennessee, USA. *GeoHazards* 5 (2), 364-373. (IF 2.3)
6. Hodges, B., Tagert, M., Paz, J.O., **Meng, Q.** 2023. Assessing in-field soil moisture variability in the active root zone using granular matrix sensors. *Agricultural Water Management*, 2023-05, DOI: [10.1016/j.agwat.2023.108268](https://doi.org/10.1016/j.agwat.2023.108268) (IF: 6.61)
7. Shammi†, S., **Meng, Q.** 2023. Modeling crop yield using NDVI-derived VGM metrics across different climatic regions in the USA. *International Journal of Biometeorology*. 2023-06, DOI: [10.1007/s00484-023-02478-4](https://doi.org/10.1007/s00484-023-02478-4) (IF: 3.74)
8. Xie†, W., **Meng, Q.** 2023. An Integrated PCA–AHP Method to Assess Urban Social Vulnerability to Sea Level Rise Risks in Tampa, Florida. *Sustainability* 15 (3), 2400. (IF: 3.9)
9. **Meng, Q.** 2023. Urban water crisis and its relationship to health inequities against black communities in the USA: Spatial analytics of the Jackson region in Mississippi. *Journal of Cleaner Production*. 2023-04, DOI: [10.1016/j.jclepro.2023.137356](https://doi.org/10.1016/j.jclepro.2023.137356) (IF: 11.07)
10. **Meng, Q.** 2023. A locational analytics approach to COVID-19 discrimination and inequality against minorities across the United States. *Social Science & Medicine*. (IF 5.38)
11. Wang, Z., Gu, H., **Meng, Q.** Ren. C. et al., 2022. Allocation patterns of root biomass and nutrient accumulation in *Haloxylon ammodendron* seedlings in southern Gurbantunggut Desert. *Rhizosphere*, <https://doi.org/10.1016/j.rhisph.2022.100594>. (IF: 3.44)
12. **Meng, Q.** 2022. Urban Water Crisis Causes Significant Public Health Diseases in Jackson, Mississippi USA: An Initial Study of Geographic and Racial Health Inequities. *Sustainability* 14 (24), 16325. (IF 3.9)
13. **Meng, Q.** 2022. A new simple method to test and map environmental inequality: Urban hazards disproportionately affect minorities. *Land Use Policy* 122, 106384. (IF 7.1)
14. Islam†, MT., **Meng, Q.** 2022. An exploratory study of Sentinel-1 SAR for rapid urban flood mapping on Google Earth Engine. *International Journal of Applied Earth Observation and Geoinformation*. 113, 103002. (IF 7.67)
15. Liu, Q., Yang, Y., **Meng, Q.**, Man, S., Wang, Y. 2022. The Multiple Cooperative Mechanism and Globalization Path of Small Inland Cities in China: A Showcase Study of Dunhuang, China. *International Journal of Environmental Research and Public Health* 19 (18), 11241. (IF 4.61)
16. Xie\*, W., Tang, B., **Meng, Q.** 2021. The Impact of Sea-Level Rise on Urban Properties in Tampa Due to Climate Change. *Water*. <https://doi.org/10.3390/w14010013>. (IF 3.53)
17. Li, X, Yang, Y, **Meng, Q.** 2021. Comparative Analysis of Three Governance Modes for Resource-Based Urban Sustainability in China Based on Residents' Perception: An Empirical Study of Pingdingshan City, Henan, China. *Sustainability*, 2021, 13, 13658. (IF 3.9).
18. Man, S., Wu, X., Yang, Y. **Meng, Q.** 2021. An assessment approach to urban economic resilience of the rust belt in China. *Complexity*. <https://doi.org/10.1155/2021/1935557>. (IF 2.12)
19. Shammi†, S. A., **Meng Q.** 2021. Modeling the impact of climate changes on crop yield: irrigated vs. non-irrigated zones in Mississippi. *Remote Sensing*, 2021,13, 2249. (IF 5.35)

20. Shammi†, S., **Meng, Q.** 2021. Use time series NDVI and EVI to develop dynamic crop growth metrics for yield modeling. *Ecological Indicators*. 121, 107124. (IF 6.9)
21. Barela, I.A., Burger, L.M., Wang, G., Evans, K.O., **Meng, Q.** and Taylor, J.D. 2021. Spatial transferability of expert opinion models for American beaver habitat. *Ecological Informatics*. 61. 101211.(IF 5.1)
22. Niu, W., Xia, H., Wang, R., Pan, L., **Meng, Q.** etc. 2021. Research on Large-Scale Urban Shrinkage and Expansion in the Yellow River Affected Area Using Night Light Data. *ISPRS International Journal of Geo-Information* 10 (1), 5. (IF 3.4)
23. Li†, T., **Meng, Q.** Du., Q. 2020. Application of Random Effects to Explore the Gulf of Mexico Coastal Forest Dynamics in Relation to Meteorological Factors. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*. 13:5526-5535. (IF 5.5)
24. Hossain†, M.K., **Meng, Q.** 2020. A fine-scale spatial analytics of the assessment and mapping of buildings and population at different risk levels of urban flood. *Land Use Policy*, 2020, 99, 104829. (IF 7.1)
25. Hossain†, M.K., **Meng, Q.** 2020. A Multi-Decadal Spatial Analysis of Demographic Vulnerability to Urban Flood: A Case Study of Birmingham City, USA. *Sustainability* 12 (21), 9139. (IF 3.9)
26. Li†, T., **Meng, Q.** 2020. Forest Dynamics in Relation to Meteorology and Soil in the Gulf Coast of Mexico. *Science of the Total Environment*, 134913. (IF 10.75)
27. Hossain†, M.K., **Meng, Q.** 2020. A thematic mapping method to assess and analyze potential urban hazards and risks caused by flooding. *Computers, Environment and Urban Systems* 79, 101417. (IF 6.8)
28. Hu, R. Xu, X., Wu, F., Sun, Z., Xia, H., **Meng, Q.**, etc. 2020. Estimating Forest Stock Volume in Hunan Province, China, by Integrating In Situ Plot Data, Sentinel-2 Images, and Linear and Machine Learning Regression Models. *Remote Sensing*, 12(1), 186. (IF 5.35)
29. **Meng, Q.** 2019. Characterizing and modeling environmental emergency of unconventional oil and gas spills in the USA: Life-year versus spill factors. *Journal of Cleaner Production*. 237, 117794. (IF 11.07)
30. Xu, J., Gu, H., **Meng, Q.**, Cheng, J., Liu, Y., Jiang, P., Sheng, J., Deng, J. 2019. Spatial pattern analysis of Haloxylon ammodendron using UAV imagery - A case study in the Gurbantunggut Desert. *International Journal of Applied Earth Observation and Geoinformation*. 83, 101891. (IF 7.67)
31. Xia, H., Qin, Y., Feng, G. **Meng, Q.**, Cui, Y., Song, H., Ouyang, Y., Liu, G. 2019. Forest Phenology Dynamics to Climate Change and Topography in a Geographic and Climate Transition Zone: The Qinling Mountains in Central China. *Forests*. 10, 1007; doi:10.3390/f10111007. (IF 2.9)
32. Xia, H., Zhao, J., Qin, Y., Yang, J., Cui, Y., Song, H., Ma, L., Jin, N., **Meng, Q.** 2019. Changes in Water Surface Area during 1989–2017 in the Huai River Basin using Landsat Data and Google Earth Engine. *Remote Sensing*. 11 (15), 1824. (IF 5.35)
33. Ma, L, Xia, H., **Meng, Q.** 2019. Spatiotemporal Variability of Asymmetric Daytime and Night-Time Warming and Its Effects on Vegetation in the Yellow River Basin from 1982 to 2015. *Sensors*. 19 (8), 1832. (IF 3.9)

34. **Meng, Q.** 2019. Climate Change and Extreme Weather Drive the Declines of Saline Lakes: A Showcase of the Great Salt Lake. *Climate*. 7 (2), 19.6 (IF 3.7)
35. Li†, T., **Meng, Q.** 2018. A mixture emissivity analysis method for urban land surface temperature retrieval from Landsat 8 Data. *Landscape and Urban Planning*, 179, 63-71.(IF 9.1)
36. **Meng, Q.** 2018. Environmental and health risks of hydraulic fracturing. *Current Opinion in Environmental Science & Health*. 3, A1-A4. (IF 7.59)
37. **Meng, Q.** 2018. Fracking equity: A spatial justice analysis prototype. *Land Use Policy*. 70, 10-15. (IF 7.1)
38. **Meng, Q.** 2018. Rethink potential risks of toxic emissions from natural gas and oil mining. *Environmental Pollution*. 240, 848-857 (IF 9.99)
39. Bise, R.D., Rodgers, J.C., Magiugan, M., Beaulieu, B., Keith, W., **Meng, Q.** Magiugan, C., 2018. Sidewalks as measures of infrastructure inequities. *Southeastern Geographer*, 58, 39-57 5. (IF 0.22)
40. Li†, T. and **Meng, Q.**, 2017. Forest dynamics to precipitation and temperature in the Gulf of Mexico coastal region. *International Journal of Biometeorology*. 61(5):869-879. DOI:10.1007/s00484-016-1266-0. (IF 3.74)
41. Yang, Y., Zhang, D., **Meng, Q.**, Yu, W., & Yuan, L. 2017. Stratified evolution of urban residential spatial structure in China through the transitional period: A case study of five categories of housings in Chengdu. *Habitat International*. 69:78-93(IF 6.8)
42. **Meng, Q.**, 2017. The impacts of fracking on the environment: A total environmental study paradigm. *Science of the Total Environment*. 580:953-957.(IF 10.75)
43. Yang, Y., **Meng, Q.**, McCarn, C., Cooke, W., Rodgers, J., Shi, K. 2016. Effects of path dependencies and lock-ins on urban spatial restructuring in China: A historical perspective on governments role in Lanzhou since 1978. *Cities*. 56, 24-34. (IF 6.7)
44. **Meng, Q.**, 2016. The spatiotemporal characteristics of environmental hazards caused by offshore oil and gas operations in the Gulf of Mexico. *Science of The Total Environment*. 565, 663–671. (IF 10.75)
45. Maguigan, M., Rodgers, J., Dash, P., **Meng, Q.** 2016. Assessing net primary production in montane wetlands from proximal, airborne, and satellite remote sensing. *Advances in Remote Sensing*, 5(2), 118-130. (IF 0 or N/A)
46. **Meng, Q.** 2015. Spatial analysis of environment and population at risk of natural gas fracking in the state of Pennsylvania, USA. *Science of the Total Environment*. 515516:198-206. (IF 10.75)
47. **Meng, Q.** 2015. Regional landscape mapping through a method of chain standardization of Landsat images. *Landscape and Urban Planning*, 134:1-9. (IF 9.1)
48. **Meng, Q.** 2015. Modeling and prediction of natural gas fracking pad landscapes in the Marcellus Shale region, USA. A rejoinder to Klein and Manda. *Landscape and Urban Planning*, 136, 52-53. (IF 9.1)
49. Yang, Y. Zhang, D., **Meng, Q.**, McCarn, C. 2015. Urban residential land use reconstruction under dual-track mechanism of market socialism in China: A case study of Chengdu. *Sustainability*, 7(12), 16849-16865. (IF 3.9)

50. **Meng, Q.** and Ashby, S. 2014. Distance: A critical aspect for environmental impact assessment of hydraulic fracking. *The Extractive Industries and Society* (<http://www.sciencedirect.com/science/article/pii/S2214790X14000513>). (IF 3.81)
51. **Meng, Q.** 2014. Modeling and prediction of natural gas fracking pad landscapes in the Marcellus Shale region, USA. *Landscape and Urban Planning* 121:109-116. (IF 9.1)
52. **Meng, Q.** 2014. Regression kriging versus geographically weighted regression for spatial Interpolation. *International Journal of Advanced Remote Sensing and GIS*, 3(1): 598-605. (IF 0 or N/A)
53. **Meng, Q.,** Cooke, B., Rodgers, J. 2013. Derivation of 16-day time-series NDVI data for environmental studies using a data assimilation approach. *GIScience & Remote Sensing* 50(5): 500-514. (IF 6.39)
54. **Meng, Q.,** Liu, Z., Borders. B. 2013. Assessment of regression kriging for spatial interpolation - Comparisons of seven available GIS interpolation methods. *Cartography and Geographic Information Science*, 40: 28-39. (IF 2.7)
55. **Meng, Q.,** Meentemeyer, R. 2011. Modeling of multi-strata forest fire severity using LandsatTM data. *International Journal of Applied Earth Observation and Geoinformation*. 13:120-126. (IF 7.67)
56. Lamsal, S, Cobb, C.; Cushman, J. H., **Meng, Q.,** Rizzo, D., Meentemeyer., Ross K. 2011. Spatial estimation of the density and carbon content of host populations for *Phytophthora ramorum* in California and Oregon. *Forest Ecology and Management*, 262:989-998. (IF 3.7)
57. Bacchus, S., Masour, J., Madden, M. Jordan, T., **Meng, Q.** 2011. Geospatial analysis of depressional wetlands near Peace River watershed phosphate mines, Florida, USA. *Environmental & Engineering Geoscience*, Vo. XVII, No. 4, pp391-415. (IF 0.78)
58. **Meng, Q.,** Borders, B.E., and Madden, M. 2010. High spatial resolution image fusion using regression kriging. *International Journal of Remote Sensing*. 31 (7):1857-1876. (IF 3.53)
59. **Meng, Q.,** Cieszewski, C.J., Strub, M.E. and Borders, B.E. 2009. Spatial regression modeling of tree height-diameter relationships. *Canadian Journal of Forest Research*, 39(12):2283-2293. (IF 2.33)
60. **Meng, Q.,** Borders, B.E., Cieszewski, C.J., and Madden, M. 2009. Closest spectral fit for removing clouds and cloud shadows. *Photogrammetric Engineering & Remote Sensing*. 75(5): 569-576. (IF 1.47)
61. **Meng, Q.,** Cieszewski, C.J., and Madden, M. 2009. Large area forest inventory using Landsat ETM+: A geostatistical approach. *ISPRS Journal of Photogrammetry and Remote Sensing*. 64(1): 27-36. (IF 12.7)
62. Lowe, R.C., Cieszewski, C.J., Liu, S., **Meng, Q.,** Siry, J.P, Zasada, M., Zawadzki, J. 2009. Assessment of Stream Management Zones and Road Beautifying Buffers in Georgia, USA, Based on Remote Sensing and Various Ground Inventory Data. *Southern Journal of Applied Forestry* 33(2), 91-100. (IF 0.89)
63. **Meng, Q.,** Cieszewski, C.J., Madden, M., and Borders, B.E. 2007. A linear mixed-effects model of biomass and volume of trees using Landsat ETM+ images. *Forest Ecology and Management*. 244 (1-3): 93-101. (IF 3.7)

64. **Meng, Q.**, Cieszewski, C.J., Madden, M. and Borders, B.E. 2007. K nearest neighbor method for forest inventory using remote sensing data. *GIScience & Remote Sensing*. 44(2): 149-165. (IF 6.39)
65. **Meng, Q.**, and Cieszewski, C.J. 2006. Spatial clusters and variability analysis of tree mortality. *Physical Geography*. 27(6): 534-553. (IF 2.08)  
(IF was based on the 2023 release)

### ***Book chapters***

66. **Meng, Q.** 2022. The Impacts of Fracking on Climate Change. In: *Lackner M., Sajjadi B., Chen WY. (eds) Handbook of Climate Change Mitigation and Adaptation*. Springer, New York, NY. [https://doi.org/10.1007/978-1-4614-6431-0\\_62-2](https://doi.org/10.1007/978-1-4614-6431-0_62-2)
67. Meng, Q. 2017. Fracking. In: Chen, WY., Suzuki, T., Lackner, M. (eds) *Handbook of Climate Change Mitigation and Adaptation*. Springer, Cham. [https://doi.org/10.1007/978-3-319-14409-2\\_62](https://doi.org/10.1007/978-3-319-14409-2_62).
68. **Meng, Q.** 2010. Aerial imagery: Data. In B. Warf (Ed.), *Encyclopedia of Geography*. (pp. 1823). Thousand Oaks, CA: SAGE Publications, Inc. doi: <http://dx.doi.org/10.4135/9781412939591.n10>.
69. **Meng, Q.** 2009. DVD of GIS resources and datasets. In: M. Madden (Ed) *Manual of Geographic Information Systems*. 1<sup>st</sup> edition, ASPRS Publisher.

### ***Refereed full articles in conference proceedings***

70. B Tang, W Xie, **Q Meng**, RJ Moorhead, G Feng. 2022. Soil Moisture Estimation Using Hyperspectral Imagery Based on Metric Learning. IEEE 21st IEEE International Conference on Machine Learning and Applications (ICMLA). Pages 1392-1396. DOI: 10.1109/ICMLA55696.2022.00220.
71. Li<sup>†</sup>, T., and **Meng, Q.** 2017. Application of random effects to explore dynamics of Gulf forests in relation to meteorological factors. In the Proceedings of the 11<sup>th</sup> Southern Forestry and Natural Resource Management GIS Conference. University of Georgia. Athens, GA.  
[https://soforgis.uga.edu/files/2017/SOFORGIS\\_Proceedings\\_Li\\_Meng\\_2017.pdf](https://soforgis.uga.edu/files/2017/SOFORGIS_Proceedings_Li_Meng_2017.pdf).
72. Li<sup>†</sup>, T. and **Meng, Q.** 2016. Development of an emissivity mixture technique to assess spatial thermal pattern in New Orleans. pp39-48. In the Proceedings of the 10<sup>th</sup> Southern Forestry and Natural Resource Management GIS Conference. University of Georgia. Athens, GA.  
[https://soforgis.uga.edu/files/2015/SOFORGIS\\_Proceedings\\_Li\\_Meng\\_2015.pdf](https://soforgis.uga.edu/files/2015/SOFORGIS_Proceedings_Li_Meng_2015.pdf).
73. **Meng, Q.** 2010. Two local spatial interpolators: regression kriging versus geographically weighted regression. Published online:  
[http://www.ucgis.org/ealerts/August\\_2010\\_UCGIS\\_eAlert\\_4/August\\_2010\\_UCGIS\\_eAlert\\_4.htm](http://www.ucgis.org/ealerts/August_2010_UCGIS_eAlert_4/August_2010_UCGIS_eAlert_4.htm)
74. Singh<sup>†</sup>, K.K., Vogler, J.B., **Meng, Q.**, Meentemeyer, R.K. 2010. Mapping land use patterns in an urbanizing landscape using LiDAR intensity data. in *Optical Remote*

Sensing of the Environment, OSA Technical Digest (CD) (Optical Society of America, 2010), paper OMC2.

75. **Meng, Q.** 2006. Geostatistical prediction and mapping for large area forest inventory using remote sensing data. *2006 UCGIS (University Consortium for Geographic Information Science) Summer Assembly*. Published online: <http://ucgis.org/summer2006/studentssessions.htm>.
76. **Meng, Q.,** and Cieszewski, C.J. 2006. Using geo-spatial methods for derivation of fine resolution forest inventory in Georgia from ground inventory data and Landsat imagery. *Proceedings of SOFOR GIS, 5<sup>th</sup> Southern Forestry and Natural Resources GIS Conference*. pp 51-62.
77. **Meng, Q.,** and Cieszewski, C.J. 2004. Modeling biomass and timber volume by using anallometric growth model from Landsat TM images. *Proceedings of 2<sup>nd</sup> International Conference on Forest Measurements and Quantitative Methods and Management & the 2004 Southern Mensurationists Conference*. pp 15-27.
78. **Meng, Q.,** Cieszewski, C.J., Lowe, R., and Zasada, M. 2003. A three-step approach to model tree mortality in the state of Georgia, *Proceedings of 5<sup>th</sup> Annual Forest Inventory and Analysis Symposium*. pp 96-101.
79. **Meng, Q.,** and Cieszewski, C.J. 2003. Spatial pattern analysis of forest tree mortality in the state of Georgia, *Proceedings of 2003 Joint Conference of the Southern Mensurationists and Northeastern Mensurationists Organization*. pp 2-11.

#### ***Scientific report, Featured in news, and Conference proceedings***

80. WHO.WHAT.WHY. World Cracked Open: When Fracking Came to Town. November 26, 2019, by Lana Cohen. <https://whowhatwhy.org/science/environment/world-cracked-open-when-fracking-came-to-town/>
81. **Meng, Q.** 2017. Fracking is fracturing the total environment of the Earth. *Atlas of Science*. <https://atlasofscience.org/fracking-is-fracturing-the-total-environment-of-the-earth/>
82. Merry, K., Bettinger, P., Crosby, M., Hung, I.K., Lee, T., Lowe, R., **Meng, Q.,** Siry, J., Song, B. 2019. *The Proceedings of 12<sup>th</sup> Southern Forestry and Natural Resource Management GIS Conference*. University of Georgia. Athens, GA. [http://soforgis.uga.edu/files/2019/SOFORGIS\\_Proceedings\\_FINAL\\_2019.pdf](http://soforgis.uga.edu/files/2019/SOFORGIS_Proceedings_FINAL_2019.pdf).
83. Merry, K., Bettinger, P., Brown, T., Cieszewski, C. Fan. J., Hubbard, B., **Meng, Q.,** Siry, J., Song, B., Unger, D., Weaver, S. 2015. *The Proceedings of 10<sup>th</sup> Southern Forestry and Natural Resource Management GIS Conference*. University of Georgia. Athens, GA. [http://www.soforgis.net/2015/files/2015\\_SOFOR\\_Proceedings\\_for\\_web.pdf](http://www.soforgis.net/2015/files/2015_SOFOR_Proceedings_for_web.pdf).
84. Merry, K., Bettinger, P., Brown, T., Cieszewski, C. Fan. J., Hubbard, B., Hung, I.K., Lowe, T., **Meng, Q.,** Siry, J. 2013. *The Proceedings of 9<sup>th</sup> Southern Forestry and Natural Resource Management GIS Conference*. University of Georgia. Athens, GA. <http://www.soforgis.net/2013/>.



## ***Geospatial Big Data Analysis Report and Product***

85. Meng, Q. 2017. *Ecological Systems Classification 2011 Update for the Eastern GCPO LCC Geography*. Accessible at:  
<https://gcpolcc.databasin.org/galleries/8ff705a6e3a14e3ea1cfd00feb2d9b12>  
<https://databasin.org/datasets/fdef47f3fe7d4f1492ec3e6fa8e3f5f7>

### **Teaching**

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#### Instructor:

Current teaching at Dept. of Geosciences, Mississippi State University	2012-
GR 8303	Advanced Geodatabase Systems
GR 4/6363	Python GIS Programming (Spring)
GR 4/6353	Geodatabase Design (Spring, an even year)
GR 4/6323	Cartographic Science (Fall)
GR 4/6313	Advanced GIS (Fall)
GR 4/7373	Web GIS (Spring, an odd year)
Courses instructed in Dept. of Geography and Planning, SUNY-Albany	2010-2012
GOG 484	RS I, Remote Sensing of Environment
GOG 485	RS II, Advanced Remote Sensing
GOG 406	Topics in Geographic Information Systems
GOG 597	Advanced GIS
GOG 697	GIS Programming
GOG 101	Introduction to the Physical Environment
Courses instructed in Dept. of Geography and Geosciences, University of North Carolina –Charlotte	2008-2010
GEOG 6030	Advanced GIS
GEOG 6030	Remote Sensing of the Environment
Courses instructed in the Northern Georgia University	2005-2006
GEOG 1111	Introduction to Physical Geography
GEOG 1112	Introduction to Weather and Climate
Courses instructed in the University of Georgia	2005
FORS 7210	Spatial Analysis for Natural Resources

#### Guest lecture:

ESCI 4000/5000 Environmental Modeling with GIS. *An overview of Geostatistics*.  
University of North Carolina – Charlotte, October 2008

GEOG 8450 Geospatial Technologies for Landscape Analysis. *Model, Equation, Algorithm, and Landscape Analysis*, September 2006 and September 2007

FORS4710/6710 Quantitative Decision Method for Forest Management. *Applications of Linear Programming and GIS for Forest Land Management*, November 2006.

### **Guest Speaker and Discussion Panelist**

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Meng, Q. Urban water crisis: Health, Vulnerability, and Inequity. The 17<sup>th</sup> Health Disparities Conference, New Orleans, LA, April 7 – 9, 2024.  
Discussion: Nutritious Foods, Physical Activities, and Polluted Air & Water. The 17<sup>th</sup> Health Disparities Conference, New Orleans, LA, April 7 – 9, 2024.

### **Academic Presentations** (†denotes graduate students)

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2024

Meng, Q. Service line materials produce significant effects on Pb and Cu contaminants in drinking Water. AGX 2024, Texas State University, Oct. 7 – 9, 2024.  
Meng, Q. Jackson water crisis and its relationship to health inequities against black communities IMGS 2024. Atlanta GA, July 14 – 19, 2024.  
Ahmed†, S. and Meng, Q. Geospatial modeling of soil moisture using integrated multispectral and SAR remote sensing. AGX 2024, Texas State University, Oct. 7 – 9, 2024.  
Marlaker†, T. and Meng, Q. Spatial and temporal modeling of urban water issue using boil water notice data, AGX 2024, Texas State University, Oct. 7 – 9, 2024 (Poster).

2023

Meng, Q. Locational analytics of inequality for environmental justice assessment. Pittsburgh, PA, October 25-28, 2023.

2020

Xie†, W., Meng Q. Social Vulnerability assessment of flooding with sea level rise in Tampa Florida. 43<sup>rd</sup> Applied Geography Conference (Online).  
Hodges, B, J.O. Paz, M.L. Tagert, Q. Meng. 2020. Assessing in-Field Soil Moisture Variability Using the Decision Support System for Agrotechnology Transfer (DSSAT) Model. 2020 ASA-CSSA-SSSA international Annual Meeting. (virtual meeting)  
B.C. Hodges, M.L. Tagert, J.O. Paz, and Q. Meng. A geospatial analysis of in-field soil moisture. 2020 ASABE Virtual Annual International Meeting. July 12-15, 2019  
Meng, Q. and Gu, H. Spatial pattern analysis of *Haloxylon ammodendron* using UAV imagery. 12th SOFOR GIS Conference. University of Georgia, December 9-10, 2019.  
Meng, Q. A thematic mapping method to assess and analyze potential urban flooding hazards. 12th SOFOR GIS Conference. University of Georgia, December 9-10, 2019.  
Meng, Q. Characterizing and modeling environmental emergency of unconventional oil and gas spills. 42<sup>nd</sup> Applied Geography Conference. Charlotte, NC. October 23-25, 2019.

2018

Meng, Q. A quantitative modeling approach for regional landslide susceptibility analysis. The 6th Mississippi Geospatial Conference, Long Beach, Mississippi, Oct. 11-12, 2018.  
Meng, Q. Understand the decline dynamics of world saline lakes: A case study of the Great Salt Lake 1904 – 2016. The 3rd Annual Water Policy Summit, University of Alabama, March 27 – 29, 2018.

2017

- Meng, Q. Dynamics of Gulf Coast forests in relation to meteorological factors. 11<sup>th</sup> SORFO GIS Conference, Athens, GA December 11-12, 2017.
- Li<sup>†</sup>, T and Meng, Q. Application of random effects to explore dynamics of Gulf forests in relation to meteorological factors. 11<sup>th</sup> SORFO GIS Conference, Athens, GA December 11-12, 2017.
- Li<sup>†</sup>, T and Meng, Q. Gulf Coast forests Dynamics to meteorological factors and Soil. 11<sup>th</sup> SORFO GIS Conference, Athens, GA December 11-12, 2017.
- Li<sup>†</sup>, T and Meng, Q. Mixture analysis of emissivity for estimation of urban surface temperature using Landsat 8 imagery. 2017 AAG conference. Boston, MA. 04/05-09, 2017.
- 2016
- Meng, Q. The impacts of uncertainty in imagery processing on quantitative modeling. 2016 Applied Geography Conference, Louisville, KY, 10/26-28, 2016.
- Meng, Q. The efficiency of imagery chain standardization in reducing uncertainty impacts on massive remote sensing data based on geovisualization and geocomputation. 2016 Applied Geography Conference, Louisville, KY, 10/26-28, 2016.
- Meng, Q. A variogram modeling approach for spatial dependence and correlation of offshore oil and gas hazards. 2016 Applied Geography Conference, Louisville, KY, 10/26-28, 2016.
- 2015
- Meng, Q. Large scale multi-temporal satellite imagery chain standardization for remote sensing big data analysis (invited presentation at Electrical and Compute Engineering, MSU), April, 27, 2015
- Meng, Q. Develop a remote sensing protocol to characterize wetlands at Northern Gulf Coastal Zone of Mexico, 2015 American Society of Agricultural and Biological Engineering Annual Meeting. New Orleans, LA, July 26-29, 2015.
- Li<sup>†</sup>, T. and Meng, Q. Spatial patterns of vegetation in response to climate change in Gulf of Mexico coastal region USA. AAG 2015 Annual Meeting, Chicago, IL April 21-25, 2015.
- 2014
- Meng, Q. LS2SRC: Landsat Scene to State and Regional Landscape Ecological Classification and Mapping (Poster). 2014 National Workshop on Large Landscape Conservation. Washington D.C. October 23-24, 2014.
- Meng, Q. Residential spatial restructuring forms a new center-periphery in China. Applied Geography Conference. Atlanta, GA. Oct. 15-17, 2014.
- Meng, Q. Large area landscape mapping through a method of chain standardization of Landsat images, 2014 US-IALE Conference, Anchorage, AK. May 18-22, 2014.
- Li<sup>†</sup>, T. and Meng, Q. Study of urban land surface temperature inversion based on emissivity mixture analysis at sub-pixel scale. ASPRS 2014 Annual Conference, Louisville, Kentucky, March 23-28, 2014.
- 2013
- Meng, Q. Mapping of Natural Gas Fracking Landscape Using Five Machine Learning Classifiers SOFORGIS 2013. Athens, GA. December 8 – 10, 2013.
- Meng, Q. Modeling and prediction of natural gas fraction landscapes. 2013 US-IALE Conference. Austin, TX, April 14-18, 2013.

2010

Meng, Q. Two local- spatial interpolators: regression kriging vs. geographically weighted regression, *2010 UCGIS Summery Assembly*, Hilton Head Island, SC. June 15-16, 2010.

Meng, Q. Multi-strata forest fire severity modeling in heterogeneous landscapes using hyperspectral imagery. *2010 Annual AAG (American Association of Geographers) Meeting*. Washington D.C. April 14-18, 2010.

Meng, Q. Large area multi-strata forest fire severity modeling using alternative remote sensing of Landsat, AVIRIS, and MASTER. *The 2010 US-IALE Symposium*. Athens, GA. April 5-9, 2010.

2009

Meng, Q. A New Model for Reconstructing Spatial Dispersal Progress of Point-source Pathogen, *2009 AAG Annual Conference*. Las Vegas, NV. March 22-26, 2009.

Meng, Q. Spatial and Landscape Heterogeneity of Fire Severity, *The 2009 US-IALE Symposium*. Snowbird, UT. April 12-16, 2009.

Meng, Q. Mapping the Impacts of Sudden Oak Death Tree Mortality on Severity of the Big Sur Basin Complex Fire, *The 4<sup>th</sup>SOD Science Symposium*. Santa Cruz, CA. June 15-18, 2009.

2008

Meng, Q. Spatial Dispersal Modeling of Sudden Oak Death in Oregon, *SEDAAG: 2008 Annual Meeting*. Greensboro, NC. Nov. 22-25, 2008.

2007

Meng, Q. Two Simple Methods for Removing Clouds and Cloud Shadows from Satellite Images. *American Society for Photogrammetry and Remote Sensing (ASPRS) 2007 Annual Conference*. Tampa, FL. May 7-11, 2007.

2007

Meng, Q. Nearest Neighbor Analysis: A Simple and Powerful Geographic Information Science Function, *The ASPRS 2007 Annual Conference*. Tampa, FL. May 7-11,

2007.

Meng, Q. Nearest Neighbor Method: A Simple and Powerful GIScience Function, *The 2007 AAG Conference*. San Francisco, CA. April 17-21, 2007.

2006

Meng, Q. Comparisons of Methods for Large Area Forest Inventory Using Remotely Sensed Data, *8<sup>th</sup> Annual Forest Inventory and Analysis Symposium*. Monterey, CA. Oct. 16-19, 2006.

Meng, Q. Spatial Clusters, Dependence and Variation of Tree Mortality, *The 8<sup>th</sup>Annual Forest Inventory and Analysis Symposium*. Monterey, CA. Oct. 16-19, 2006.

Meng, Q. Spatial Autoregressive Modeling Tree Height-diameter Relationships, *The 2006 Southern Mensurationists Conference*. Charleston, SC. Oct.10-13, 2006.

Meng, Q. Geostatistical Prediction and Mapping for Large Area Forest Inventory Using Remote Sensing Data, *2006 UCGIS Summer Assembly*. Vancouver, WA. June 28-July 1, 2006.

Meng, Q. Using Geospatial Methods for Derivation of Fine Resolution Forest Inventory in Georgia from Ground Inventory Data and Landsat Imagery, *The Fifth Southern Forestry and Natural Resource Management GIS Conference*. Asheville, NC. June 12-14, 2006.

2005

Meng, Q. Discussion on the K Nearest Neighbor Methods Applied in Remote Sensing Data, *The 2005 Southeastern Ecology and Evolution Conference*. Athens, GA. March 11-13, 2005.

Meng, Q. Fine Scale Forest Inventory by Using a Geostatistical Approach, *The 2005 Annual Conference of Southern Mensurationists*. Wilmington, NC. July 11-13, 2005.

2005

Meng, Q. K Nearest Neighbor Methods for Forest Inventory Using Remote Sensing Data, *The 2005 Mid-Southern Conference of American Society of Photogrammetry and Remote Sensing*. Athens, GA. November 10-11, 2005.

2005

Meng, Q. Geostatistical Mapping for Large Area Forest Inventory Using Remote Sensing Data, *The 2005 Mid-Southern Conference of American Society of Photogrammetry and Remote Sensing*. Athens, GA. November 10-11, 2005.

2004

Meng, Q. Modeling Biomass and Timber Volume by Using an Allometric Growth Model from Landsat TM Images, *The 2<sup>nd</sup> International Conference on Forest Measurements and Quantitative Methods and Management & 2004 Southern Mensurationists Conference*. Hot Springs, AR. June 15-18, 2004.

Meng, Q. Modeling Biomass and Timber Volume from Landsat Images, *The 2004 Western Mensurationists' Conference*. Warm Springs, OR. June 20-22, 2004.

2003

Meng, Q. Geostatistical Approach to Mortality Pattern Analysis Using Remote Sensing and Large-scale Inventory Ground Measurements, *The 2003 Joint conference of the Southern Mensurationists and Northeastern Mensurationist*. Organization, Roanoke, VA. Oct. 5-7, 2003.

Meng, Q. A Three-step Approach to Model Tree Mortality in the State of Georgia, *The 5th Annual Forest Inventory and Analysis Science Symposium*. New Orleans, LA. Nov. 17-22, 2003.

## **Student Advising**

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### ***Major Professor/Advisor:***

#### **PhD students:**

1. Shaibal Ahmed (PhD, 2023-2026)

Dissertation: in preparation

2. Tanmoy Malaker (PhD, 2023-2026)

Dissertation: in preparation

3. Weiwei Xie (PhD student, graduated 2024; ORISE Postdoc Fellowship)

Dissertation title: Impacts of Natural Disasters on Urban Areas Due to Climate Change

4. Tazmul Islam (PhD, graduated 2023; Senior GIS Analyst, Otter Tail Power)

Dissertation title: Urban Flood Mapping and Vulnerability Assessment in the US Southeast Big Cities.

5. Sadia Shammi (PhD, graduated 2021; Post-doc, Tufts University)

Dissertation title: A remote sensing driven geospatial approach to regional crop growth and yield modeling.

6. Khalid Hossain (PhD, graduated 2020; Operations Research Advisor, FedEx)

Dissertation title: Spatial vulnerability analysis and thematic mapping of urban floods: A case study of 100-year floodplain areas of Birmingham, Alabama.

7. Tianyu Li (PhD, graduated 2017; Assistant Professor, Southern Illinois University Edwardsville)

Dissertation title: Spatial Analysis of Landscape Dynamics to Meteorological Changes in the Gulf of Mexico Coastal Region.

### **MS students:**

8. Hunter Smith (MS)

Thesis title: “Spatial analysis of crop yield modeling” in preparation.

9. Weiwei Xie (MS, graduated 2021)

Thesis title: Impacts of sea-level rise on urban properties in Tampa due to climate change.

10. Abdalla Sherif (MS, graduated 2020, Cleco)

Thesis title: Urban Landscape Assessment of the Mississippi and Alabama Gulf Coast using Landsat Imagery 1973-2015.

11. Corey McCarn (MS, graduated 2015, Syngenta)

Thesis title: Spatial Pattern Analysis of Agricultural Soil Properties using GIS.

### **Advisee’s awards:**

1. **Tanmoy Malaker** (PhD), Best Poster in Applied Geography, 2024 SWAAG/AGX Conference. Texas State University, TX 10/5 -10/8, 2024
2. **Tanmoy Malaker** (PhD), First Place Graduate Student Poster, 2024 SWAAG/AGX Conference. Texas State University, TX 10/5 -10/8, 2024
3. **Weiwei Xie** (PhD), 2024 ORISE Postdoctoral Fellowship
4. **Shaibal Ahmed** (PhD), 2024 NASA DEVELOP Analytical Mechanics Associates Scholarship
5. **Shaibal Ahmed** (PhD), 2024 NASA DEVELOP Internship

6. **Shaibal Ahmed** (PhD), 2024 Esri Developer Summit Student Assistantship
7. **Tanmoy Malaker** (PhD), 2024 USDA ARS Internship
8. **Tazmul Islam** (PhD), 2023 USDA ARS Internship
9. **Sadia Shammi** (PhD), 1st place, 2021, Mississippi State University Graduate Student Research Symposium
10. **Sadia Shammi** (PhD), 1st place, 2020, Mississippi State University Graduate Student Research Symposium
11. **Abdulla Sherif** (MS), Final list, 2018, 3MT (3 Minutes Thesis Research Competition), Mississippi State University
12. **Tianyu Li** (PhD), 2nd place, 2017 Mississippi State University Graduate Student Research Symposium
13. **Tianyu Li** (PhD), 2nd place, 2016 Mississippi State University Graduate Student Research Symposium
14. **Tianyu Li** (PhD), 2nd place, 2015 Mississippi State University Graduate Student Research Symposium

**Dissertation Research Committee:**

Ramon Kalski (PhD, in process)

Ali Asger (PhD), 2022. A multi-method exploration of health disparities and COVID-19 incidence and mortality in the United States

Jacob Wiley (PhD), 2022. Synoptic-scale identification and classification of lake-effect snowstorms off the North American Great Lakes

Taylor Lee (PhD), 2021. A machine learning approach to predicting seafloor properties and their application in estimating a global methane hydrate inventory

John Cartwright (PhD), 2021. Identifying Potential Sedimentation Sources through a Remote Sensing and Gis Analysis of Landuse/Landcover for the Weeks Bay Watershed, Baldwin County, Alabama

Yan Xu (PhD in ECE), 2019. Efficient Analysis of Hyperspectral Remote Sensing Imagery

Long Tian (PhD in ECE,), 2019. Low-Rank and Sparse Decomposition for Hyperspectral Image Enhancement and Clustering

Saurav Silwal (PhD), 2018. Quantification of Harmful Algal Blooms in Multiple Water Bodies of Mississippi Using in-situ, Analytical and Remote Sensing Techniques

Jamie McFadden (PhD, wildlife), 2018. Using Geospatial Techniques to Assess Responses of Black Bear Populations to Anthropogenically Modified Landscapes: Conflict & Recolonization

Pushkar Inamdar (PhD), 2017. A Reconciled Estimation of the State of Cryospheric Components in the Southern Andes and California Using Geospatial Techniques

Chris Zazar (PhD, graduated), 2017. Assessment of Remotely Sensed Image Processing Techniques for Unmanned Aerial System (Uas) Applications

Mike Maguigan (PhD), 2015. An Examination of Net Primary Production in Southern Appalachian Wetlands Ravi Sadasivuni

### **Thesis Research Committee:**

Bashit, S. (MS), 2024. Bridging Scales: Integrating Satellite-Derived with Airborne and UAS-Collected Bathymetry for Coastal and Inland Water Management.

Adonte Knight (MS), 2024. Outbreak Intensity Ranking Indices for Primary Severe Weather Modes

Jacob Freeman (MS), 2023. Automated mapping of oblique imagery collected with unmanned vehicles in coastal and marine environments

Gabriel Hernandez (MS), 2023. Evaluating the relationship between methane seeps and seafloor geomorphology on the northern US Atlantic margin

Rai Nitant (MS in forestry), 2022. Mapping forest structure in Mississippi using LiDAR remote sensing

Bruce Hodges (MS in ABE), 2020. Understanding in-field soil moisture variability and associated impact on irrigation

Isidro Barela (MS in wildlife), 2018. Transferability of MaxEnt and Expert Opinion Models for American Beaver

Randi Robison (MS), 2018. Exploration of Experiential STEM Education Programs in Mississippi and Their Use by Mississippi K-12 Educators

Caitlin Ruby (MS), 2017. Application Of Coastal And Marine Ecological Classification Standard (Cmecs) To Remotely Operated Vehicle (Rov) Video Data For Enhanced Geospatial Analysis Of Deep Sea Environments

Sarah Smith (MS), 2017. GIS-based Evaluation of Landslide Susceptibility for Eastern



Tennessee

Robert Devon Bise (MS), 2015. A GIS Analysis of Sidewalk Infrastructure in Starkville, MS

Lucy Tetteh (MS), 2014. A Multi-Decadal Remote Sensing Study on Glacial Change in the North Patagonia Ice Field Chile

Kapindra Joshi (MS), 2012. Geodetic Method to Estimate Mass Balance of Himalayan Glaciers: A Case Study of the Sagarmatha National Park, Nepal

**Minor Professor for Geospatial Sciences:**

Treven Knight (MS, Meteorology), 2024

Nitant Rai (MS, Forestry), 2022

Isidro A Barela (MS, Wildlife), 2018

**Advisor for undergraduate students from 2018:**

2023: Kyle Barrett, Molly Bears, Sydney Clark, William Edwards, Ryland Mccann, Michael Moore, Cooper Orman, Alejandro Ortiz

2022: Ethan Adkins, McKenna Alden, Kyle Barrett, Sydney Clark, Michael Haffner, Ryland Mccann, Michael Moore, Gabriel Oduwa, Cooper Orman, Alejandro Ortiz, Christin Weak

2021: Ethan Adkins, McKenna Alden, Kyle Barrett, Ashley Griffith, Michael Haffner, Ryland Mccann, Michael Moore, Gabriel Oduwa, Jessica Schroeder, Christin Weak

2020: Ethan Adkins, McKenna Alden, Kyle Barrett, Ashley Griffith, Michael Haffner, Ryland Mccann, Hannah Mizell, Michael Moore, Gabriel Oduwa, Jessica Schroeder, Christin Weak

2019: Ethan Adkins, Koby Dobbs, Ashley Griffith, Hannah Mizell, Michael Moore, Gabriel Oduwa, Jessica Schroeder, Ronald Walker, Christin Weak, Dylan Williams

2018: George Berry, Trevor Cole, Dkota Davis, Koby Dobbs, Ashley Griffith, Hannah Mizell, Michael Moore, Robert Parish, Brett Purnell, Gabriel Oduwa, Jessica Schroeder, Ronald Walker, Christin Weak, Dylan Williams

**Professional Service**

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**Editor-in-Chief:** *Papers in Applied Geography* (Taylor & Francis) October 2024 –

**Editorial Board:** *Social Sciences & Humanities Open* (Elsevier) 2024 –

**Editorial Board:** *Prevention and Treatment of Natural Disasters* (UK SCIP) 2024 –

**Editorial Board:** *Current Opinion in Environmental Science & Health* (Elsevier) 2018–

**Associate Editor:** *Frontiers in Public Health* (Frontiers) 2023 –

**Associate Editor:** *Papers in Applied Geography* (Taylor & Francis) 2020 –2024

**Topic Editor:** *Sustainability* (MDPI) 2018

-

**Topic Editor:** *Water* (MDPI) 2018 –

**Senior Editor** *International Journal of Advanced Remote Sensing and GIS* (Could Journals), 2014 –

**Guest Editor** Special Issue 2023, “GIS Implementation in Sustainable Urban Planning” In *Sustainability*

**Guest Editor** Special Issue 2022, "Big Data and Sustainable Cities: Applications of Geospatial Data in Urban Hazards" in *Sustainability*

**Guest Editor** Special Issue 2018, “Environmental and health risks of hydraulic fracturing” in *Current Opinion in Environmental Science & Health*

**Guest Editor** Special Issue 2014: Geospatial Information Sciences: Landscape and Ecosystem Applications, in *International Journal of Advanced Remote Sensing and GIS*

**Proceedings Editor** 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> *SOFOR GIS* (Southern Forestry and Natural Resource Management GIS Conference) 2013, 2015, 2017, and 2019

**Grant review panelist** US Environmental Protection Agency (2024)

**Proposal review** United Kingdom Natural Environment Research Council (2018)

**Grant review panelist** US Environmental Protection Agency (2010)

**Proposal reviewer** NSF GSSP programs (2009, 2014, 2018)

**Proposal reviewer** U.S. Geological Survey (2015)

**Reviewer** for book proposals – Springer (2019)

**Reviewer for peer-reviewed journals**

*Nature Communications*

*Nature Food*

*PNAS*

*Environmental Science & Technology*

*Environmental Health Perspectives*

*International Journal of GIScience*

*Science of the Total Environment*

*Computers, Environment and Urban Systems*

*Environmental Earth Sciences*

*Cartography and Geographic Information Science*

*The Extractive Industries and Society*  
*International Journal of Digital Earth*  
*Environments*  
*Inter. Journal of Advanced Remote Sensing and GIS*  
*IEEE Transactions on Geoscience and RS*  
*Journal of Petroleum Science and Engineering*  
*Annals of Botany*  
*Photogrammetric Engineering and Remote Sensing Forest Science*  
*IEEE Journal of Selected Topics in Applied Earth*  
*Canadian Journal of Forest Research*  
*Observations and Remote Sensing*  
*Forest Ecology and Management*  
*Geoscience & Remote Sensing*  
*Plos ONE*  
*ISPRS Journal of Photogrammetry & RS*  
*Ecological Indicator*  
*ISPRS International Journal of Geo-Information Biomass and Bioenergy*  
*GISciences and Remote Sensing*  
*J. of Petroleum Science and Engineering*  
*Remote Sensing of Environment*  
*Papers in Applied Geography*  
*Ecological Indicators*  
*J. of the Franklin Institute*  
*Remote Sensing*  
*Land Degradation & Development*  
*Sensors*  
*Landscape and Urban Planning*  
*Urban Geography*  
*Regional Studies*  
*Applied Geography*  
*Climate*  
*Atmosphere*  
*Complexity*  
*Water*  
*Sustainability*  
*Sustainable Cities and Society*  
*Computers & Geosciences*  
*Remote Sensing Applications: Society and Environment*  
*Geography and Sustainability*  
*Energies*  
*Habitat International*  
*Applied Sciences*  
*Socio-Ecological Practice Research*  
*Petroleum Science*  
*International Journal of Hydrogen Energy*  
*International Journal of Environmental Health Research*

*Journal of Marine Science and Engineering*  
*Agricultural and Forest Meteorology*  
*Journal of Housing and the Built Environment*  
*Society & Natural Resources*  
*Frontiers of Earth Science*  
*Environment Earth Science*  
*Journal of Applied Meteorology and Climatology*  
*Journal of Environmental Management*  
*International Journal of Disaster Risk Reduction*  
*Environmental Challenges*  
*Natural Resources Research*  
*Environmental International*  
*Journal of Bioscience and Bioengineering*  
*HELIYON*

**Reviewer for conference proceedings**

32<sup>nd</sup> and 33<sup>rd</sup> Applied Geography Conference

2008, 2009, and 2010 IEEE International Geoscience and Remote Sensing Symposium

The Proceedings of the 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> SOFOR GIS (Southern Forestry and Natural Resource Management GIS) Conference, 2013, 2015, 2017, 2019

**University, college, and department service**

University Committee on Courses and Curricula, MSU 2015 – 21

The University B.R.I.D.G.E.S Scholars' Mentor 2018– 21

College of Arts & Sciences Scholarship Committee, 2021– 24

College of Arts & Sciences Faculty Mentorship– Mentor 2019- 20

Search Committee Chair, Assistant professor in Human Geography and Geospatial Science, 2021 – 22

College of Arts & Sciences Senate, MSU 2015 – 2017

Ad hoc Geosciences Centennial Committee, Geosciences, MSU 2016-2017

Ad hoc Department Space Committee, Department of Geosciences, MSU 2014

Judge, the MSU Graduate Student Research Symposium, 2013

IT Committee Chair, Center for Applied GIS, UNC at Charlotte, 2008–2010

Search Committee, Assistant or Associate Professor Position (Forest Economics), School of Forestry and Natural Resources, University of Georgia, 2006.

Consultant, "Mapping Soil Organic Carbon Using Color Aerial Photos." Department of Crop & Soil Science, University of Georgia. Summer, 2004.

Consultant, "Herb Plant Classification." Biomedical and Health Science Institute, University of Georgia. Spring, 2004.

**Conference Session Chair**

Economic and Energy Issues, 2019 Applied Geography Conference  
Spatial Analysis, 2019 SOFOR GIS Conference

**Conference planning committee**

The 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, 12<sup>th</sup> *SOFOR GIS* (Southern Forestry and Natural Resource Management GIS) Conference in 2013, 2015, 2017, 2019

**Professional Affiliations**

Esri Imagery & RS Educators Community of Interest (2024 - )  
AGX (Conference | Papers | Engagement) Board Leadership (2024 - )