

Qingmin Meng

Department of Geosciences

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Education

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

Professional Experience

Assistant Professor	Department of Geosciences, Mississippi State University	2012 -
Visiting Assistant Professor	Dept. of Geography & Planning, SUNY at Albany	2010 – 2012
Associate Director of Computing & Technology	Center for Applied GIS	2008 – 2010
Post-doc Researcher	University of North Carolina at Charlotte	
	School of Forestry and Natural Resources	2007 – 2008
	University of Georgia	

Research and Teaching Interest

GIS, Remote Sensing, Geospatial Statistics, and Geospatial Big Data

Ecosystems, Conservation, Fracking, Landscape Ecology, Spatial Epidemiology, Gulf Coast

Awards

CHANS Fellowship. 2010. International Network of Research on Coupled Human and Natural Systems, National Science Foundation and Michigan State University

UCGIS / ESRI Junior Faculty Award. 2010. The University Consortium for Geographic Information Science (UCGIS)

UCGIS Student Paper Award. 2006. The University Consortium for Geographic Information Science (UCGIS) 2006 Summer Assembly, Vancouver WA, June 28 –July 1, 2006.

3rd 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 († denotes students or visiting scholars)

Book chapters

1. **Meng, Q.** 2017. “Fracking” in Handbook of Climate Change Mitigation and Adaptation, Chen, Wei-Yin, Suzuki, Toshio, Lackner, Maximilian (Eds, 2017 Edition). Springer,

ISBN 978-3-319-14410-8.

2. **Meng, Q.** 2010. Aerial imagery: Data. In B. Warf (Ed.), *Encyclopedia of geography*. (pp. 18-23). Thousand Oaks, CA: SAGE Publications, Inc. doi: <http://dx.doi.org/10.4135/9781412939591.n10>.
3. **Meng, Q.** 2009. DVD of GIS resources and datasets. In: M. Madden (Ed) *Manual of Geographic Information Systems*. 1st edition, ASPRS Publisher.

Peer-reviewed journal papers

4. **Meng, Q.**, 2016. The impacts of fracking on the environment: A total environmental study paradigm. *Science of the Total Environment*. 580:953-957. <https://doi.org/10.1016/j.scitotenv.2016.12.045>
5. Li[†], T. and **Meng, Q.**, 2016. 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.
6. **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.
7. 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.
8. 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.
9. **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*. 515-516:198-206.
10. **Meng, Q.** 2015. Regional landscape mapping through a method of chain standardization of Landsat images. *Landscape and Urban Planning*, 134:1-9.
11. **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.
12. 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.
13. **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>).
14. **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.
15. **Meng, Q.** 2014. Regression kriging versus geographically weighted regression for spatial Interpolation. *International Journal of Advanced Remote Sensing and GIS*, 3(1): 598-605.
16. **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.
17. **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.
18. **Meng, Q.**, Meentemeyer, R. 2011. Modeling of multi-strata forest fire severity using Landsat TM data. *International Journal of Applied Earth Observation and Geoinformation*. 13:120-126.
 19. 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.
 20. 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.
 21. **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.
 22. **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.
 23. **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.
 24. **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.
 25. 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.
 26. **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.
 27. **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.
 28. **Meng, Q.**, and Cieszewski, C.J. 2006. Spatial clusters and variability analysis of tree mortality. *Physical Geography*. 27(6): 534-553.

Refereed full papers in proceedings:

29. Li[†], 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 11th Southern Forestry and Natural Resource Management GIS Conference. University of Georgia. Athens, GA.
30. Li[†], 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 10th Southern Forestry and Natural Resource Management GIS Conference. University of Georgia. Athens, GA.
31. **Meng, Q.** 2010. Two local spatial interpolators: regression kriging versus

- geographically weighted regression. Published online: http://www.ucgis.org/e-alerts/August_2010_UCGIS_eAlert_4/August_2010_UCGIS_eAlert_4.htm
32. Singh[†], 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.
 33. **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/studentsessions.htm>.
 34. **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, 5th Southern Forestry and Natural Resources GIS Conference*. pp 51-62.
 35. **Meng, Q.**, and Cieszewski, C.J. 2004. Modeling biomass and timber volume by using an allometric growth model from Landsat TM images. *Proceedings of 2nd International Conference on Forest Measurements and Quantitative Methods and Management & the 2004 Southern Mensurationists Conference*. pp 15-27.
 36. **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 5th Annual Forest Inventory and Analysis Symposium*. pp 96-101.
 37. **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.

Peer-reviewed articles in review or revision

38. Uncertainty in remote sensing modeling: Comparison of surface reflectance, digital number, radiance, and top of atmosphere reflectance
39. Fracking equity: a spatial justice analysis prototype
40. Dynamics of the Gulf coast forests in relation to meteorological factors and soil
41. A mixture emissivity analysis method for urban land surface temperature retrieval from Landsat 8 Data
42. Hybrid evolution of Urban Residential Spatial Structure in China through the Transitional Period: A case study of five categories of housings in Chengdu

Conference proceedings

43. Merry, K., Bettinger, P., Brown, T., Cieszewski, C. Crosby, M., Fan, J., Lowe, T., **Meng, Q.**, Siry, J., Torbett, M., Weaver, S. 2017. *The Proceedings of 11th Southern Forestry and Natural Resource Management GIS Conference*. University of Georgia. Athens, GA.
44. 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 10th 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.
45. 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 9th Southern Forestry and Natural Resource Management GIS Conference*. University of Georgia. Athens, GA.
<http://www.soforgis.net/2013/>.

Teaching

Instructor:

Current teaching at Dept. of Geosciences, Mississippi State University	2012-
GR 8303 Advanced Geodatabase Systems (Fall)	
GR 4/6363 Python GIS Programming (Spring)	
GR 4/6353 Geodatabase Design (Spring)	
GR 4/6323 Cartographic Science (Fall)	
GR 4/6313 Advanced GIS (Fall)	
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 at University of Georgia	2005
FORS 7210 Spatial Analysis for Natural Resources	