Lei Wang

Professor of Geography
Department of Geography and Anthropology
Louisiana State University
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Research interest

Geocomputation in space and time; field spectroscopy; Water resources; Flood hazards

Education

PhD, Texas A&M University, College Station, 2006.
   Major: Geography

Master of Science, Institute of Remote Sensing Applications (IRSA), Chinese Academy of Sciences, China, 2000
   Major: Geographic Information Science and Cartography

Bachelor of Science, Beijing University, China, 1997.
   Major: Geography

Professional Positions

Professor

Professor, Department of Geography and Anthropology, Louisiana State University (2020 -)

Associate Professor, Department of Geography and Anthropology, Louisiana State University (2013 - 2020)

Assistant Professor of Geography (tenure-track), Department of Geography and Anthropology, Louisiana State University (2007 – 2013)

Postdoctoral

Research Associate, Texas A&M University. (2006 - 2007).

Graduate Assistant

Research Assistant for Knowledge Engineer Lab, Texas A&M University (2005-2006)

Research fellow for the project: "Simulating Surface Water Runoff and Assessing Impacts of Natural and Human-induced Environmental Changes on Hydrologic Processes by Integrating Remote Sensing Data and Hydrologic Models" funded by NASA Earth System Science Fellowship (2002-2005)

Teaching Assistant for Department of Geography, Texas A&M University (2000-2002)

RESEARCH

Published Intellectual Contributions

Refereed Journal Articles (* denotes with graduate advisee)

2024

1. Yin, Lirong, **Lei Wang,** Zhuohang Cai, Siyu Lu, Ruiyang Wang, Ahmed AlSanad, Salman

AlQahtani, et al. "DPAL-BERT: A Faster and Lighter Question Answering Model." *Computer Modeling in Engineering & Sciences* 141, no. 1 (2024): 771–86. https://doi.org/10.32604/cmes.2024.052622.

2. Emmanuel, Habimana, Jaehyung Yu, **Lei Wang**, Sung Hi Choi, Gilljae Lee, and Digne E. Rwabuhungu R. "Classification of Terrestrial Impact Craters Based on Morphometric Parameters Using Remote Sensing Data: A Case Study of Jeokjung-Chogye Impact Crater, South Korea." *Geosciences Journal* 28, no. 3 (2024): 395–407.

3. Wang, Bixi, Wenfeng Zheng, Ruiyang Wang, Siyu Lu, Lirong Yin, **Lei Wang**, Zhengtong Yin, and Xinbing Chen. "Stacked Noise Reduction Auto Encoder–OCEAN: A Novel Personalized Recommendation Model Enhanced." *Systems* 12, no. 6 (2024): 188.

4. Yin, Lirong, **Lei Wang**, Siyu Lu, Ruiyang Wang, Haitao Ren, Ahmed AlSanad, Salman AlQahtani, Zhengtong Yin, Xiaolu Li, and Wenfeng Zheng. "AFBNet: A Lightweight Adaptive Feature Fusion Module for Super-Resolution Algorithms." *Computer Modeling in Engineering & Sciences* 140, no. 3 (2024): 2315–47. https://doi.org/10.32604/cmes.2024.050853.

2023

5. Emmanuel, Habimana, Jaehyung Yu, **Lei Wang**, Sung Hi Choi, and Digne Edmond Rwabuhungu Rwatangabo. "Object-Oriented Remote Sensing Approaches for the Detection of Terrestrial Impact Craters as a Reconnaissance Survey." *Remote Sensing* 15, no. 15 (2023): 3807.

6. Park, Chanhyeok, Jaehyung Yu, Bum-Jin Park, **Lei Wang**, and Yun Gon Lee. "Imaging Particulate Matter Exposed Pine Trees by Vehicle Exhaust Experiment and Hyperspectral Analysis." *Environmental Science and Pollution Research* 30, no. 1 (2023): 2260–72.

7. Seo, Jihee, Jaehyung Yu, and **Lei Wang.** "Indicator Spectral Bands and Logistic Models for Detecting Diesel and Gasoline Polluted Soils Based on Close-Range Hyperspectral Image Data." *IEEE Transactions on Geoscience and Remote Sensing* 61 (2023): 1–13.

8. Shin, Jihye, Jaehyung Yu, **Lei Wang**, Jihee Seo, Huy Hoa Huynh, and Geumhee Jeong. "Spectral Indices to Assess Pollution Level in Soils: Case-Adaptive and Universal Detection Models for Multiple Heavy Metal Pollution under Laboratory Conditions." *IEEE Transactions on Geoscience and Remote Sensing*, 2023.

9. Yin, Lirong, **Lei Wang**, Lijun Ge, Jiawei Tian, Zhengtong Yin, Mingzhe Liu, and Wenfeng Zheng. "Study on the Thermospheric Density Distribution Pattern during Geomagnetic Activity." *Applied Sciences* 13, no. 9 (2023): 5564.

10. Yin, Lirong, **Lei Wang**, Barry D. Keim, Kory Konsoer, Zhengtong Yin, Mingzhe Liu, and Wenfeng Zheng. "Spatial and Wavelet Analysis of Precipitation and River Discharge during Operation of the Three Gorges Dam, China." *Ecological Indicators* 154 (2023): 110837.

11. Yin, Lirong, **Lei Wang,** Jianqiang Li, Siyu Lu, Jiawei Tian, Zhengtong Yin, Shan Liu, and Wenfeng Zheng. "YOLOV4_CSPBi: Enhanced Land Target Detection Model." *Land* 12, no. 9 (2023): 1813.

12. Yin, Lirong, **Lei Wang**, Tingqiao Li, Siyu Lu, Jiawei Tian, Zhengtong Yin, Xiaolu Li, and Wenfeng Zheng. "U-Net-LSTM: Time Series-Enhanced Lake Boundary Prediction Model." *Land* 12, no. 10 (2023): 1859.

13. Yin, Lirong, **Lei Wang**, Tingqiao Li, Siyu Lu, Zhengtong Yin, Xuan Liu, Xiaolu Li, and Wenfeng Zheng. "U-Net-STN: A Novel End-to-End Lake Boundary Prediction Model." *Land* 12, no. 8 (2023): 1602.

14. Yin, Lirong, **Lei Wang,** Jiawei Tian, Zhengtong Yin, Mingzhe Liu, and Wenfeng Zheng. "Atmospheric Density Inversion Based on Swarm-C Satellite Accelerometer." *Applied Sciences* 13, no. 6 (2023): 3610.

2022

15. Omotere, Olumide, Feifei Pan, and **Lei Wang***. 2022. "Using Solar Radiation Data in Soil Moisture Diagnostic Equation for Estimating Root-Zone Soil Moisture." PeerJ 10 (December): e14561.

16. Jeong, Yongsik, Jaehyung Yu, **Lei Wang**, Huy Hoa Huynh, and Hyun-Cheol Kim. 2022. "Monitoring Asbestos Mine Remediation Using Airborne Hyperspectral Imaging System: A Case Study of Jefferson Lake Mine, US." Remote Sensing 14 (21): 5572.

17. Wang, Shujie, Hongxing Liu, Kenneth Jezek, Richard B. Alley, **Lei Wang**, Patrick Alexander, and Yan Huang. 2022. "Controls on Larsen C Ice Shelf Retreat from a 60‑year Satellite Data Record." Journal of Geophysical Research. Earth Surface 127 (3). https://doi.org/10.1029/2021jf006346.

18. Xu, Yaping, Cuiling Liu, **Lei Wang**, and Lei Zou. 2022. "Exploring the Spatial Autocorrelation in Soil Moisture Networks: Analysis of the Bias from Upscaling the Texas Soil Observation Network (TxSON)." WATER 15 (1): 87.

19. Kim, Hyesu, Jaehyung Yu, **Lei Wang**, Chanhyeok Park, Hyuk Soo Han, and Seong-Geon Jang. undefined 2022. "Analysis on Effective UAS Survey Conditions for Classification of Coastal Sediments." *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* 15: 1163–73.

20. *Tian, Dan, and **Lei Wang**. 2022. "Subpixel Melt Index in the Antarctic Peninsula Using Spatially Constrained Linear Unmixing From Time Series Satellite Passive Microwave Images." *IEEE Transactions on Geoscience and Remote Sensing: A Publication of the IEEE Geoscience and Remote Sensing Society* 60: 1–9.

21. *———. 2022. "BLP3-SP: A Bayesian Log-Pearson Type III Model with Spatial Priors for Reducing Uncertainty in Flood Frequency Analyses." *WATER* 14 (6): 909.

22. *Yin, Lirong, **Lei Wang**, Weizheng Huang, Jiawei Tian, Shan Liu, Bo Yang, and Wenfeng Zheng. 2022. "Haze Grading Using the Convolutional Neural Networks." *Atmosphere* 13

(4): 522.

23. *Yin, Lirong, **Lei Wang**, Wenfeng Zheng, Lijun Ge, Jiawei Tian, Yan Liu, Bo Yang, and Shan Liu. 2022. "Evaluation of Empirical Atmospheric Models Using Swarm-C Satellite Data." *Atmosphere* 13 (2): 294.

2021

24. *Yin, Lirong, **Lei Wang**, Weizheng Huang, Shan Liu, Bo Yang, and Wenfeng Zheng. 2021. "Spatiotemporal Analysis of Haze in Beijing Based on the Multi-Convolution Model." *Atmosphere* 12 (11): 1408.

25. Enwright, Nicholas M., **Lei Wang**, P. Soupy Dalyander, Hongqing Wang, Michael J. Osland, Rangley C. Mickey, Robert L. Jenkins, and Elizabeth S. Godsey. 2021. "Assessing Habitat Change and Migration of Barrier Islands." *Estuaries and Coasts* 44 (8): 2073–86.

26. Huynh, Huy Hoa, Jaehung Yu, **Lei Wang,** Nam Hoon Kim, Bum Han Lee, Sang-Mo Koh, Sehyun Cho, and Trung Hieu Pham. 2021. "Integrative 3D Geological Modeling Derived from SWIR Hyperspectral Imaging Techniques and UAV-Based 3D Model for Carbonate Rocks." *Remote Sensing* 13 (15): 3037.

27. Jeong, Yongsik, Jaehyung Yu, **Lei Wang**, and Kwang-Jae Lee. 2021. "Bulk Scanning Method of a Heavy Metal Concentration in Tailings of a Gold Mine Using SWIR Hyperspectral Imaging System." *International Journal of Applied Earth Observation and Geoinformation* 102 (October): 102382.

2020

28. H. Kim, J. Yu, **Lei Wang**, Y. Jeong, and J. Kim, "Variations in Spectral Signals of Heavy Metal Contamination in Mine Soils Controlled by Mineral Assemblages," *Remote Sensing*, vol. 12, no. 20, p. 3273, Oct. 2020, Accessed: Oct. 09, 2020. [Online].

29. **Wang, Lei**, Min Xu, Yang Liu, Hongxing Liu, Richard Beck, Molly Reif, Erich Emery, Jade Young, and Qiusheng Wu. 2020. "Mapping Freshwater Chlorophyll-a Concentrations at a Regional Scale Integrating Multi-Sensor Satellite Observations with Google Earth Engine." *Remote Sensing* 12 (20): 3278.

30. Shin, H., J. Yu, **Lei Wang**, Y. Jeong, and J. Kim. 2020. "Spectral Interference of Heavy Metal Contamination on Spectral Signals of Moisture Content for Heavy Metal Contaminated Soils." *IEEE Transactions on Geoscience and Remote Sensing: A Publication of the IEEE Geoscience and Remote Sensing Society* 58 (4): 2266–75.

31. Chung, Baru, Jaehyung Yu, **Lei Wang**, Nam Hoon Kim, Bum Han Lee, Sang-Mo Koh, and Sangin Lee. 2020. "Detection of Magnesite and Associated Gangue Minerals Using Hyperspectral Remote Sensing—A Laboratory Approach." *Remote Sensing* 12 (8): 1325.

32. *Yu, Siyi, Zuoqi Chen, Bailang Yu, **Lei Wang**, Bin Wu, Jianping Wu, and Feng Zhao. 2020. "Exploring the Relationship between 2D/3D Landscape Pattern and Land Surface Temperature Based on Explainable eXtreme Gradient Boosting Tree: A Case Study of Shanghai, China." *The Science of the Total Environment* 725 (July): 138229.

33. Xu, Y., Wang, L., Ma, Z., Li, B., Bartels, R., Liu, C., Zhang, X., and Dong, J. (2020). Spatially Explicit Model for Statistical Downscaling of Satellite Passive Microwave Soil Moisture. IEEE Trans. Geosci. Remote Sens. 58, 1182–1191.

2019

34. Bae, Sungji, Jaehyung Yu, **Lei Wang**, Yongsik Jeong, Jieun Kim, and Dong-Yoon Yang. 2019. "Experimental Analysis of Sand Grain Size Mapping Using UAV Remote Sensing." *Remote Sensing Letters* 10 (9): 893–902.

35. Sungji Bae, Jaehyung Yu, **Lei Wang**, Jieun Kim, and Chanhyeok Park. 2019. "Experiments on Unmanned Aerial Vehicle Survey for Detection of Micro Beach Features." *Journal of Coastal Research* 90 (sp1): 354–61.

36. Shin, Ji Hye, Jaehyung Yu, **Lei Wang**, Jieun Kim, and Sang-Mo Koh. 2019. "Investigation of Spectral Variation of Pine Needles as an Indicator of Arsenic Content in Soils." *Minerals* 9 (8): 498.

37. *Enwright, Nicholas M., **Lei Wang**, Sinéad M. Borchert, Richard H. Day, Laura C. Feher, and Michael J. Osland. 2019. "Advancing Barrier Island Habitat Mapping Using Landscape Position Information." *Progress in Physical Geography: Earth and Environment*, April, 0309133319839922.

38. *Enwright, Nicholas M., **Lei Wang,** Hongqing Wang, Michael J. Osland, Laura C. Feher, Sinéad M. Borchert, and Richard H. Day. 2019. "Modeling Barrier Island Habitats Using Landscape Position Information." *Remote Sensing* 11 (8): 976.

39. Lim, J., J. Yu, **Lei Wang**, Y. Jeong, and J. H. Shin. 2019. "Heavy Metal Contamination Index Using Spectral Variables for White Precipitates Induced by Acid Mine Drainage: A Case Study of Soro Creek, South Korea." *IEEE Transactions on Geoscience and Remote Sensing: A Publication of the IEEE Geoscience and Remote Sensing Society*, 57(7), 4870--4888.

40. Qiao, Xuning, Yangyang Gu, Changxin Zou, Deling Xu, **Lei Wang**, Xin Ye, Yue Yang, and Xianfeng Huang. 2019. "Temporal Variation and Spatial Scale Dependency of the Trade-Offs and Synergies among Multiple Ecosystem Services in the Taihu Lake Basin of China." *The Science of the Total Environment* 651 (Pt 1): 218–29.

41. Shin, J. H., J. Yu, L. Wang, J. Kim, S. Koh, and S. Kim. 2019. "Spectral Responses of Heavy Metal Contaminated Soils in the Vicinity of a Hydrothermal Ore Deposit: A Case Study of Boksu Mine, South Korea." *IEEE Transactions on Geoscience and Remote Sensing: A Publication of the IEEE Geoscience and Remote Sensing Society* 57 (6): 4092–4106.

42. **Wang, Lei**, Hongxing Liu, Haibin Su, and Jun Wang. 2019. "Bathymetry Retrieval from Optical Images with Spatially Distributed Support Vector Machines." *GIScience and Remote Sensing 56* (3): 323–37.

43. Wu, Qiusheng, Charles R. Lane, **Lei Wang**, Melanie K. Vanderhoof, Jay R. Christensen, and Hongxing Liu. 2019. "Efficient Delineation of Nested Depression Hierarchy in Digital Elevation Models for Hydrological Analysis Using Level-Set Method." *Journal of the American Water Resources Association* 55 (2): 354–68.

2018

44. Qiao, Xuning, Yangyang Gu, Changxin Zou, **Lei Wang**, Juhua Luo, and Xianfeng Huang. 2018. "Trade-Offs and Synergies of Ecosystem Services in the Taihu Lake Basin of China." *Chinese Geographical Science* 28 (1): 86–99.

45. Jeong, Yongsik, Jaehyung Yu, **Lei Wang**, Haein Shin, Sang-Mo Koh, and Gyesoon Park. 2018. "Cost-Effective Reflectance Calibration Method for Small UAV Images." *International Journal of Remote Sensing* 39 (21): 7225–50..

46. Jeong, Yongsik, Jaehyung Yu, **Lei Wang**, and Ji Shin. 2018. "Spectral Responses of As and Pb Contamination in Tailings of a Hydrothermal Ore Deposit: A Case Study of Samgwang Mine, South Korea." *Remote Sensing* 10 (11): 1830.

47. Li, Mengya, Qingyu Huang, **Lei Wang**, Jie Yin, and Jun Wang. 2018. "Modeling the Traffic Disruption Caused by Pluvial Flash Flood on Intra-Urban Road Network." *Transactions in GIS* 22 (1): 311–22.

48. Liu, Shan, **Lei Wang***, Hongxing Liu, Haibin Su, Xiaolu Li, and Wenfeng Zheng. 2018. "Deriving Bathymetry From Optical Images With a Localized Neural Network Algorithm." *IEEE Transactions on Geoscience and Remote Sensing: A Publication of the IEEE Geoscience and Remote Sensing Society*, 56(99): 5334-5342.

49. Shu, Song, Hongxing Liu, Frédéric Frappart, Yan Huang, Shujie Wang, Kenneth M. Hinkel, Richard A. Beck, B. Yu, B.M. Jones, C.D. Arp, **Lei Wang**, Z. Yel. 2018. "Estimation of Snow Accumulation over Frozen Arctic Lakes Using Repeat ICESat Laser Altimetry Observations – A Case Study in Northern Alaska." *Remote Sensing of Environment* 216 (October): 529–43.

50. Wang, Jun, Si Yi, Mengya Li, **Lei Wang**, and Chengcheng Song. 2018. "Effects of Sea Level Rise, Land Subsidence, Bathymetric Change and Typhoon Tracks on Storm Flooding in the Coastal Areas of Shanghai." *The Science of the Total Environment* 621 (April): 228–34..

51. **Wang, Lei**, Liu, H. (2018). [Antarctica] Seasonal melt extent and duration. [in "State of the Climate in 2017"], *Bulletin of the American Meteorological Society*, 99(8), s181-s183.

52. *Xu, Yaping, **Lei Wang**, Kenton W. Ross, Cuiling Liu, and Kimberly Berry. 2018. "Standardized Soil Moisture Index for Drought Monitoring Based on Soil Moisture Active Passive Observations and 36 Years of North American Land Data Assimilation System Data: A Case Study in the Southeast United States." *Remote Sensing* 10 (2): 301.

2017

53. *Enwright, Nicholas M., **Lei Wang**, Sinéad M. Borchert, Richard H. Day, Laura C. Feher, and Michael J. Osland. 2017. "The Impact of Lidar Elevation Uncertainty on Mapping Intertidal Habitats on Barrier Islands." *Remote Sensing* 10 (1). Multidisciplinary Digital Publishing Institute:5.

54. **Wang, Lei**, Liu, H. (2017). Antarctica -Seasonal melt extent and duration. [in "State of the Climate in 2016"], *Bulletin of the American Meteorological Society*, 98(8), Si-S280.

55. Shin, H., J. Yu, Y. Jeong, **Lei Wang**, and D. Y. Yang. 2017. "Case-Based Regression Models Defining the Relationships Between Moisture Content and Shortwave Infrared Reflectance of Beach Sands." *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* PP (99):1–10.

56. Xu, Yanqing, **Lei Wang***, Cong Fu, and Tim Kosmyna. 2017. "A Fishnet-Constrained

Land Use Mix Index Derived from Remotely Sensed Data." *Annals of GIS* 23 (4). Taylor & Francis:303–13.

57. *Xu, Yaping, **Lei Wang***, Chengliang Liu, Cuiling Liu, 1 Department of Geography and Anthropology, Louisiana State University, Baton Rouge, LA 70803, USA, and 2 School of Urban and Regional Science, East China Normal University, Shanghai 200062, China. 2017. "Identifying Unlawful Constructions in Cultural Relic Sites Based on Subpixel Mapping—a Case Study in Mangshan Tombs, China." *AIMS Geosciences* 3 (2): 268–83.

58. Meng, Xuelian, Xukai Zhang, Rodolfo Silva, Chunyan Li, and **Lei Wang**. 2017. "Impact of High-Resolution Topographic Mapping on Beach Morphological Analyses Based on Terrestrial LiDAR and Object-Oriented Beach Evolution." *ISPRS International Journal of Geo-Information* 6 (5): 147.

2016

59. Wu, Qiusheng, Hongxing Liu, **Lei Wang**, and Chengbin Deng. 2016. "Evaluation of AMSR2 Soil Moisture Products over the Contiguous United States Using in Situ Data from the International Soil Moisture Network." I*nternational Journal of Applied Earth Observation and Geoinformation* 45 (March): 187–99.

60. Kim, J., J. Yu, **Lei Wang**, H. Liu, and H. Shin. 2016. "Morphological Characteristics of the Ice Margins of Antarctic Ice Shelf and Outlet Glacier Extracted from ICESat Laser Altimetry Along-Track Profiles." TAO: *Terrestrial, Atmospheric and Oceanic Sciences* 27 (4), 451-462.

61. Li, Xiaolu, **Lei Wang***, and Shan Liu. 2016. "Geographical Analysis of Community Resilience to Seismic Hazard in Southwest China." *International Journal of Disaster Risk Science* 7 (3): 257–76.

62. **Wang, Lei**, Liu, Hongxing. (2016). Seasonal melt extent and duration in ["State of the Climate in 2015"]. *Bulletin of the American Meteorological Society, 97*(8), S161–S163.

2015

63. Leitner, Michael, Nina N. S. Lam, Fahui Wang, **Lei Wang**, Shelley Meng, and Joshua Kent. 2015. "Geographic Information Science and Technology at Louisiana State University." *Cartography and Geographic Information Science* 42 (sup1): 84–90.

64. Xu, Yanqing, and **Lei Wang***. 2015. "GIS-Based Analysis of Obesity and the Built Environment in the US." *Cartography and Geographic Information Science* 42 (1): 9–21.

65. **Wang, Lei**, Hongxing Liu, Sujie Wang, and Song Shu, (2015), [Antarctica] 2013/14 Seasonal melt extent and duration [in "State of the Climate in 2014"]. *Bulletin of the American Meteorological Society*, 96(7), S155-158.

2014

66. **Wang, Lei**, Liu, Hongxing, Shujie Wang, and Song Shu, 2014, [Antarctic] 2012/13 Seasonal melt extent and duration [in "State of the Climate in 2013"]. *Bulletin of the American Meteorological Society*, S95, pp. S149-S150.

67. Carle, Melissa Vernon, **Lei Wang**, and Charles E. Sasser. 2014. "Mapping Freshwater Marsh Species Distributions Using WorldView-2 High-Resolution Multispectral Satellite Imagery." *International Journal of Remote Sensing* 35 (13): 4698–4716.

68. Joseph, Myrtho, Fahui Wang, and **Lei Wang**. 2014. "GIS-Based Assessment of Urban Environmental Quality in Port-Au-Prince, Haiti." *Habitat International* 41 (January): 33–40.

69. Su, H., H. Liu, **Lei Wang**, A. M. Filippi, W. D. Heyman, and R. A. Beck. 2014.

"Geographically Adaptive Inversion Model for Improving Bathymetric Retrieval From Satellite Multispectral Imagery." I*EEE Transactions on Geoscience and Remote Sensing*: 52 (1): 465–76.

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2013

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73. Hu, Beibei, Jun Zhou, Shiyuan Xu, Zhenlou Chen, Jun Wang, Dongqi Wang, **Lei Wang**, Jifa Guo, and Weiqing Meng. 2013. "Assessment of Hazards and Economic Losses Induced by Land Subsidence in Tianjin Binhai New Area from 2011 to 2020 Based on Scenario Analysis." *Natural Hazards* 66 (2): 873–86.

74. **Wang, Lei,** Andrew G. Birt, Charles W. Lafon, David M. Cairns, Robert N. Coulson, Maria D. Tchakerian, Weimin Xi, Sorin C. Popescu, and James M. Guldin. 2013. "Computer-Based Synthetic Data to Assess the Tree Delineation Algorithm from Airborne LiDAR Survey." *GeoInformatica* 17 (1): 35–61.

2012

75. Joseph, Myrtho, **Lei Wang**, and Fahui Wang. 2012. "Using Landsat Imagery and Census Data for Urban Population Density Modeling in Port-Au-Prince, Haiti." *GIScience and Remote Sensing* 49 (2): 228–50.

76. Liu, Hongxing, **Lei Wang,** Sheng-Jung Tang, and Kenneth C. Jezek. 2012. "Robust Multi-Scale Image Matching for Deriving Ice Surface Velocity Field from Sequential Satellite Images." *International Journal of Remote Sensing* 33 (6): 1799–1822.

77. *Tang, Quan, and **Lei Wang**. 2012. "Urban Land-Use, Land-Cover Classification through Watershed Segmentation in the V–I–S Feature Space." *Remote Sensing Letters* 3 (8): 677–85.

78. *Tang, Quan, **Lei Wang**, Bin Li, and Jaehyung Yu. 2012. "Towards a Comprehensive Evaluation of V-I-S Sub-Pixel Fractions and Land Surface Temperature for Urban Land-Use Classification in the USA." *International Journal of Remote Sensing* 33 (19): 5996–6019.

79. **Wang, Lei**. 2012. "Deriving Spatially Varying Thresholds for Real-Time Snowmelt Detection from Space-Borne Passive Microwave Observations." *Remote Sensing Letters* 3 (4): 305–13.

80. **Wang, Lei**, and Jaehyung Yu. 2012. "Modelling Detention Basins Measured from High-Resolution Light Detection and Ranging Data" *Hydrological Processes* 26 (19): 2973–84.

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duration [in "State of the Climate in 2011"]. *Bulletin of the American Meteorological Society*, 93, pp. S156-157.

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83. Liu, Hongxing, **Lei Wang**, Douglas J. Sherman, Qiusheng Wu, and Haibin Su. 2011. "Algorithmic Foundation and Software Tools for Extracting Shoreline Features from Remote Sensing Imagery and LiDAR Data." *Journal of Geographic Information System* 03 (02): 99–119.

84. **Wang, Lei**., and Jaehyung Yu. 2011. "Spatiotemporal Segmentation of Spaceborne Passive Microwave Data for Change Detection." *IEEE Geoscience and Remote Sensing Letters* 8 (5): 909–13.

85. **Wang, Lei** and Liu, H., 2011, [Antarctica] 2009/10 seasonal melt extent and duration [in. State of the Climate in 2010.]. *Bulletin of the American Meteorological Society*, 92, pp. S167.

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86. Liu, Hongxing, **Lei Wang**, Douglas Sherman, Yige Gao, and Qiusheng Wu. 2010. "An Object-Based Conceptual Framework and Computational Method for Representing and Analyzing Coastal Morphological Changes." *International Journal of Geographical Information Science*: 24 (7): 1015–41.

87. **Wang, Lei**, and Liu, H., 2010, Antarctica seasonal melt extent and duration [in .State of the Climate in 2009.]. *Bulletin of the American Meteorological Society*, 91, pp. S130-S131.

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88. Bhattacharya, Indrajit, Kenneth C. Jezek, **Lei Wang**, and Hongxing Liu. 2009. "Surface Melt Area Variability of the Greenland Ice Sheet: 1979–2008." *Geophysical Research Letters* 36 (20): 165.

2008

89. Liu, H., **Wang, Lei**. (2008). Mapping detention basins and deriving their spatial attributes from airborne LiDAR data for hydrological applications. *Hydrological processes, 22*(13), 2358–2369.

90. Xi, Weimin, **Lei Wang**, Andrew G. Birt, Maria D. Tchakerian, Robert N. Coulson, and Kier D. Klepzig. 2008. "An Integrated Approach to Mapping Forest Conditions in the Southern Appalachians (North Carolina)." *Ecological Restoration*, Vol. 26(4): 290-302. https://www.fs.usda.gov/treesearch/pubs/34199.

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91. Liu, H., **Wang, Lei**, and Jezek, K., 2007, Antarctica seasonal melt extent and duration [in .State of the Climate in 2006.]. *Bulletin of the American Meteorological Society*, 88, pp. S75-S75.

2006

92. **Wang, Lei**, Liu, H. (2006). An efficient method for identifying and filling surface depressions in digital elevation models for hydrologic analysis and modelling. *International Journal of Geographical Information Science, 20*(2), 193–213.

93. Liu, Hongxing, **Lei Wang**, and K. C. Jezek. 2006a. "Automated Delineation of Dry and Melt Snow Zones in Antarctica Using Active and Passive Microwave Observations from Space." *IEEE Transactions on Geoscience and Remote Sensing*: 44 (8): 2152–63.

94. Liu, Hongxing, **Lei Wang**, and Kenneth C. Jezek. 2006b. "Spatiotemporal Variations of

Snowmelt in Antarctica Derived from Satellite Scanning Multichannel Microwave Radiometer and Special Sensor Microwave Imager Data (1978–2004)." *Journal of Geophysical Research* 111 (F1): 787.

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95. Liu, Hongxing, **Lei Wang**, and Kenneth C. Jezek. 2005. "Wavelet-transform Based Edge Detection Approach to Derivation of Snowmelt Onset, End and Duration from Satellite Passive Microwave Measurements." *International Journal of Remote Sensing* 26 (21): 4639–60.

Other scholarly publications

1. Enwright, Nicholas M., Sinéad M. Borchert, Richard H. Day, Laura C. Feher, and Osland Michael J., **Wang, Lei**, and Wang, Hongqing. 2017. "Barrier Island Habitat Map and Vegetation survey—Dauphin Island, Alabama, 2015." Open-File Report 2017-1083. https://doi.org/10.3133/ofr20171083.

2. Xi, W., **Wang, L.**, M. D. Tchakerian & R. N. Coulson. 2009. Mapping South Pine Beetle hazard in the southern Appalachian Mountains. In ESRI Map Book: Mapping Forestry, ed. P. Eredics, 57-60. Redland, CA: ESRI Press.

3. CARLE, M. V., SASSER, C., **WANG, L.**, and TWILLEY, R., 2011, Mapping deltaic wetland vegetation at the species-level using WorldView-2 multispectral imagery http://dgl.us.neolane.net/res/img/b7e069481eb86a90e18bdfacc9fbff5d.pdf

4. **Wang, L.** (2006). Investigating impacts of natural and human-induced environmental changes on hydrological processes and flood hazards using a GIS-based hydrological/hydraulic model and remote sensing data. Texas A&M University.

Presentations Given

1. Tian, Dan and Lei Wang. 2022. BLP3-SP: A Bayesian Log-Pearson Type III Model with Spatial Priors for Reducing Uncertainty in Flood Frequency Analyses. 2022 Frontiers in Hydrology. San Juan, Puerto Rico, June 19-24, 2022 (forthcoming).

2. Tian, Dan and Lei Wang. 2022. Improving Log-Pearson Type III flooding frequency distribution functions using a Bayesian inference model with spatial priors. 2022 American Association of Geographers' Annual Meeting. New York City, NY, February 25 - March 1.

3. Tian, Dan and Lei Wang. 2020. Spatiotemporal Analysis of the Antarctic Ice Melting By Subpixel Analysis Using Spatial Sensor Microwave Imager Data. 2020 American Association of Geographers' Annual Meeting. Denver, CO, April 2020 (Session cancelled due to Covid-19 pandemic)*.

4. Nicholas M. Enwright*, Lei Wang, Hongqing Wang, Michael J. Osland, Laura C. Feher, Sinéad M. Borchert, Richard H. Day, (April 2019) The importance of the treatment of elevation uncertainty and landscape position for barrier island habitat mapping and modeling. Annual Conference of American Association of Geographers,Washington D.C., United States.

5. Lei Wang*, Yaping Xu, (April 2019) Soil moisture downscaling using space-time geospatial statistics and localized methods. Annual Conference of American Association of Geographers,Washington D.C., United States.

6. Yaping Xu*, Lei Wang, Cuiling Liu, Rudy Bartels (April 2019) Stepwise Downscaling of SMAP Satellite Soil Moisture Data Using Spatial Statistical Models and Random Forests. Poster presentation. Annual Conference of American Association of

Geographers,Washington D.C., United States.

7. Yu, S., Yu, B., Wang, L., (April 2018) Identifying development patterns of 3D urban morphology and analyzing its influence on thermal environment, Oral Presentation, Annual Conference of American Association of Geographers, New Orleans, LA, United States.

8. Enwright, N., Wang, L., (April 2018) Advancing barrier island habitat mapping through the treatment of elevation uncertainty and morphology, Oral Presentation, Annual Conference of American Association of Geographers, New Orleans, LA, United States.

9. LIANG, X., Wang, J., Wang, L., (April 2018) Analysis and trend prediction of long-term evolution of estuarine morphology: A case study of South Branch in the Yangtze River Delta, China, Oral Presentation, Annual Conference of American Association of Geographers, New Orleans, LA, United States.

10. Wang, L., Yu, J., (April 2018) Automatic ripple mark delineation from unmanned aerial survey data, Oral Presentation, Annual Conference of American Association of Geographers, New Orleans, LA, United States.

11. Wang, J., Wang, L., Li, M., (April 2018) Effects of sea level rise, land subsidence, bathymetric change and typhoon tracks on storm flooding in the coastal areas of Shanghai, Oral Presentation, Annual Conference of American Association of Geographers, New Orleans, LA, United States.

12. Wang, L., (April 2017) Mapping Blue Algae Using Random Forests from Landsat 8, Oral Presentation, 2017 AAG Annual Meeting, American Association of Geographers, Boston, MA, United States.

13. Xu, Y. (Author & Presenter), Wang, L. (Author), Fu, C. (Author), AAG 2016 Annual Meeting, "Deriving Land Use Mix from remotely sensed data for analyzing obesity in the U.S," American Association of Geographers, San Francisco, CA, United States. (April 2, 2016).

14. Wang, L., AAG 2016 Annual Meeting, "Modelling gaged precipitation data with an integrated spatio-temporal approach," American Association of Geographers, San Francisco, CA, United States. (March 30, 2016).

15. Yang, B. (Author & Presenter), Liu, H. (Author), Kang, E. L. (Author), Beck, R. (Author), Hinkel, K. (Author), Wang, L. (Author), AAG 2016 Annual Meeting, "Spatio-temporal Cokriging: A Multi-scale Assimilation Method for Downscaling, Hindcasting, and Forecasting," American Association of Geographers, San Francisco, CA, United States. (March 30, 2016).

16. Shu, Song, Liu Hongxing, Kenneth M. Hinkel, Richard A. Beck, Lei Wang, and Bailang Yu. (2015). "Analysis of snow depth and lake elevation variability in Alaskan Arctic Coastal Plain using ICESat-1 laser altimetry observations." 2015 AAG Annual Meeting, Chicago, Illinois.

17. Wang, Lei, Shan Liu, and Hongxing Liu. (2015). "LOCALIZED ENSEMBLE NEURAL NETWORKS FOR BATHYMETRY MAPPING FROM SATELLITE IMAGES." International Geoscience and Remote Sensing Society 2015, Milan, Italy, July 26-31,2015. **(Peer Reviewed)**

18. Wang, Shujie, Hongxing Liu, and Lei Wang. (2015). "Investigation of the flow dynamics of the rapidly retreating ice shelves, Antarctica." 2015 Annual Conference of American Association of Geographers, Chicago, Illinois.

19. Yang, Bo, Hongxing Liu, Emily Kang, Richard Beck, Kenneth Hinkel, and Lei Wang. (2015). "Spatio-temporal assimilation of multi-scale spatial data sets within a cokriging

framework." 2015 Annual Conference of American Association of Geographers, Chicago, Illinois.

20. WANG, L. (2015), Measuring Walkability with land use mix indices derived from remote sensing, Epidemiology Lunchtime Seminar Series, School of Public Health, LSU Health New Orleans, Louisiana State University. January 2015.

21. WANG, L. (2014), Measuring land use land cover at large scales, In 8th International Symposium on Geospatial Health, New Orleans, Louisiana, October 31 – November 2, 2014.

22. WANG, S., H. LIU, L. WANG, (2014) Spatio-temporal variability of ice flow and its association with the dynamics of surface morphological features on Larsen Ice Shelf, Antarctic Peninsula, Annual Conference of American Association of Geographers, Tampa, FL, April 8-12, 2014.

23. S. SHU, H. LIU, K. HINKEL, R. BECK, L. WANG, (2014) Spatio-temporal Variability of Lake Ice Surface Elevation and Water Stage of Alaskan Arctic Lakes from ICESat Laser Altimetry Observations, 2003-2009, Annual Conference of American Association of Geographers, Tampa, FL, April 8-12, 2014.

24. WANG, L., and TANG, Q., 2013, Population regression model in the V-I-S feature space, Annual Conference of American Association of Geographers, Los Angeles, CA.

25. Wang, L. 2013. Population loss and policy inferences from regression models: a case study of New Orleans. In The 21st International GeoInformatics Conference. Henan University, Kaifeng.

26. LIU, H., WANG, S., and WANG, L., 2013, DETECTION AND ANALYSIS OF POLAR ICE FLOW VARIATIONS BASED ON TIME SERIES MULTI-SENSOR IMAGES AND AUTOMATED IMAGE MATCHING TECHNIQUE, IEEE International Geoscience and Remote Sensing Symposium, Melbourne, Australia. **(Peer Reviewed)**

27. WANG, L. 2013, Remote sensing of impervious surface: methods and applications, Invited talk to University of Cincinnati, OH, Feb 2013

28. WANG, L., 2012, Morphologic feature detection from LiDAR data using BU algorithm, The 20th International Conference on GeoInformatics, Hongkong, China

29. WANG, L., 2012, Morphologic feature detection from profiling and scanning LIDAR data, 2012 Annual Conference of American Association of Geographers, New York, NY.

30. Wang, L. 2012, Impervious Surface, Urban land use and floods, talk given to the 2012 CPGIS Young Scholar Workshops in China, Guangzhou & Kaifeng, China

31. LIU, H., WANG, L., JEZEK, K., and GUO, W., 2012, Derivation of time series surface velocity measurements for Antarctic glaciers from multi-sensor remote sensing images, 2012 Annual Conference of American Association of Geographers, New York, NY.

32. YU, J., LIU, H., WANG, L., and TANG, Q., 2010, Quantitative Analysis of Antarctic Coastal Geomorphology based on ICESat Laser Altimetry along-track profiles, Annual Conference of American Association of Geographers (AAG), Washington D.C.

33. WANG, L., and YU, J., 2010, Coastal morphologic feature detected from profiling and scanning laser altimetry data: 26th Annual Louisiana Remote Sensing and GIS Workshop.

34. WANG, L., and LIU, H., 2010, An object-oriented approach to generating hydrologic response units for distributed hydrologic modeling, Annual Conference of American Association of Geographers, Washington D.C., USA.

35. QUAN, T., and WANG, L., 2010, A Stratified Local Regression on Population Segregation

Mapping and Estimation using Remote Sensing, Annual Meeting of the Association of American Geographers (AAG), Washington D.C.

36. LIU, H., SU, H., WANG, L., FILIPPI, A., and HEYMAN, W., 2010, GLOBAL, REGIONAL AND LOCALIZED INVERSION METHODS FOR MAPPING BATHYMETRY BASED ON MULTI-SPECTRAL IMAGERY: 2010 IEEE International Geoscience and Remote Sensing Symposium. **(Peer Reviewed)**

37. WANG, L., 2009, Modeling Stormwater Detention Basins for Flood Control, Annual Conference of American Association of Geographers, Las Vegas, NV.

38. WANG, L., LIU, H., TANG, S., and JEZEK, K., 2008, Multi-scale image matching for deriving surface velocity field from sequential satellite images, 24th Annual Louisiana Remote Sensing and GIS workshop, New Orleans, LA.

39. LIU, H., and WANG, L., 2008, Deriving Morphological Information of Stream Channel Network from LIDAR DEMs, the Sixteenth International Conference on GeoInformatics and Joint Conference on GIS and Built Environment, Guangzhou, China.

40. BHATTACHARYA, I., JEZEK, K., WANG, L., and LIU, H., 2008, Greenland Surface Melt Trends From SSM/I And QuikSCAT Data: American Geophysical Union, Fall Meeting, p. 0485.

41. Annual Geography Faculty Development Alliance Workshop, June 14 ~ 20, 2008, Boulder, Colorado.

42. WANG, L., and LIU, H., 2007, Investigating Impacts of Natural and Human-induced Environmental Changes on Hydrological Processes and Flood Hazards Using a GIS-based Hydrologic/Hydraulic Model and Remote Sensing Data, Annual Conference of American Association of Geographers, San Francisco, CA.

43. Xi, W., John D. Waldron, David M. Cairns, Charles W. Lafon, Robert N. Coulson, Maria D. Tchakerian, Lei Wang, Andrew G. Birt, Kier D. Klepzig. 2007. Modeling ecological restoration effects on yellow pine forests following Southern Pine Beetle infestations in the southern Appalachian Mountains. Presented at the Annual Ecological Society of America/The Society for Ecological Restoration Joint Meeting, San Jose, California, USA

44. Xi, W., Lei Wang, Andrew G. Birt, Robert N. Coulson, Maria D. Tchakerian, David M. Cairns, Charles W. Lafon, John D. Waldron, Kier D. Klepzig, 2007. An integrated approach to map forest conditions in Southern Appalachians. Presented at the Annual Meeting of US-IALE, Tucson, Arizona, USA

45. Xi, W., John D. Waldron, David M. Cairns, Charles W. Lafon, Robert N. Coulson, Maria D. Tchakerian, Lei Wang, Andrew G. Birt, Kier D. Klepzig, 2007. Landscape modeling for forest restoration following insect outbreaks. Presented at the 50th Southern Forest Insect Work Conference. July 23-26, 2007. Jekyll Island, GA, USA

46. WANG, L., 2007, Assessing the use of small footprint LIDAR data and watershed segmentation algorithm on deriving forest stand information, Southwest Division of American Association of Geographers Annual Conference, Bryan, TX.

47. Xi, W., J. D. Waldron, Andrew G. Birt, Lei Wang, Robert N. Coulson. 2006. LANDIS as a modeling environment for predicting southern pine beetle infestations & restoration strategies: Visualization & analytical tools. Presented at the LANDIS II Developers Workshop, Madison, WI, October 30-November 1, 2006.

48. WANG, L., OLIVERA, F., and LIU, H., 2006, Incorporating high resolution LIDAR DEM into a GIS-based distributed hydrological model with variable spatial scales, Annual Conference of American Association of Geographers, Chicago, IL.

49. WANG, L., 2004, Identification and Filling of Surface Depressions in DEMs for Hydrologic

Modeling, Annual Conference of American Association of Geographers, Philadelphia, PA.

50. WANG, L., LIU, H., and MEYER, W., 2003, Derivation of Hydrologic Parameters and Stream Network from Airborne LiDAR data, Annual Conference of American Association of Geographers, New Orleans, USA.

51. WANG, L., LIU, H., and JEZEK, K., 2003, Spatial and Temporal Variations of Snow Melting in Antarctic Ice Sheet Derived from Satellite Passive Microwave Measurements ASPRS Annual Conference, Anchorage, USA.

Contracts, Grants and Sponsored Research

Grant and Grant Activities

Funded

PI, Cloud-based implementation and dissemination tool for long-term river diversion and land restoration assessment near the Mid-Barataria Basin in South Louisiana, Coastal Science Assistantship Program (CSAP), $75,000, awarded. (June 1, 2023 - May 31, 2026)

Institutional PI, Advancing Water Quality Monitoring and Prediction Capability of USGS NGWOS Program with Satellite and Drone Remote Sensing Technologies. NOAA Cooperative Institute for Research to Operations to Hydrology, $137,277, 06/01/2023 – 05/31/2026.

Institutional PI, River Flow Velocity, Discharge, and Channel Morphologic Data Acquisition and SWOT-enabled Sedimentation Investigation in the Mobile River Basin in USA and the Gandaki River Basin in Nepal, NASA TH, $116,658, awarded, March 2023 - February 2026

Co-PI (with Leiner et al.) Teaching Technology for the Humanities, Social-, Natural-, Environmental-, and Engineering Sciences in the Digital Age and Era of Big Data, Louisiana State University, $118,939 proposed, $118,939 awarded. (April 2022 - Present)

PI- Wang, Spatiotemporal continuous shallow water bathymetry from a Kriged Kalman filter, College of HSS Manship Summer Research Grant, $5,000 awarded. (June 1, 2023 - August 20, 2023)

PI- Wang, L.,Subpixel snowmelt detection from passive microwave data, College of HSS Manship Summer Research Grant, $5,000 awarded. (June 1, 2019 - August 20, 2019)

Co-PI (with Jun Wang et al.), Storm surge hazard simulation to identify key contributing factors in the Yangtze River Delta area. National Natural Science Foundation of China, grant no. 41671095, $110,000, (2017-2020).

Co-PI (with Leitner et al.), Geospatial Data Collection Technology for the Social, Natural, Environmental, and Engineering Sciences, Louisiana State University, $69,077 awarded. (January 1, 2017 - Present)

PI- Wang, L., College of HSS Summer Research Grant, $5,000 awarded. (June 1, 2016 - August 20, 2016)

Co-PI (with Meng et al.), Acquisition of the Terrestrial Laser Scanner for Multidisciplinary Coastal Research, LSU Office of Research & Economic Development (ORED), $109,286, Louisiana State University 2012.

PI- Lei Wang, Flood hazard resiliency and accessibility of retail infrastructure in New Orleans, Louisiana Board of Regents, $72,308 awarded, June 2011 – June 2013.

Research fellow for NASA Earth System Science Fellowship project "Simulating Surface Water Runoff and Assessing Impacts of Natural and Human-induced Environmental Changes on Hydrologic Processes by Integrating Remote Sensing Data and Hydrologic Models". 2002-2005, $72,000.

Unfunded/Pending

PI, GIS-hub for elevation certification with low-cost LiDAR on smart devices, Louisiana Board of Regents, PoC/P subprogram, $39,938. (Pending, submitted Oct 2024)

Co-PI, Assessing and predicting salinity changes over the Lake Pontchartrain and Borgne region for water resources planning and management, USGS Climate Adaptation Science Center (CASC), $399,986. (Pending, submitted: Oct 2024)

PI, Evaluating the accessibility to life-saving facilities of elderly people during events of extreme flooding using Cloud computing, Louisiana Board of Regents, RCS program, $100,891 proposed, Declined. (Submitted: November 2021)

Co-PI (with Cai, C.et al), Developing An Interactive Assessment and Decision-Making Assisting Platform (ADMAP) for the Resilience of Coastal Infrastructures, The National Academy of Sciences, Engineering and Medicine, $75,8257 proposed, Declined. (Submitted: December 5, 2018)

PI - Lei Wang, Soil Moisture Modeling through Satellite and Geospatial Data to Improve Flood Forecasting, National Aeronautics & Space Administration - NASA Earth System Science Fellowship, $45,000 proposed, not funded (2018)

Co-PI (with Cai, C.), An Integrated Modeling and Decision Making Tool for Resilient Coastal Community, National Oceanic and Atmospheric Administration, fund requested $282,291, Not funded, 2017

Co-PI (with Cai et al.) Resilience Enhancement for Coastal Transportation Infrastructures under Multi-Hazard Environment, Submitted to NSF in 2015, Not Funded.

Co-PI (with Cai et al.) on "Hazards SEES: Towards a sustainable and resilient transportation infrastructure-adapting coastal climate uncertainties", proposal submitted to National Science Foundation, SEES program in 2015, $2,333,619 requested, Not Funded.

PI- Lei Wang: "Integrated spatio-temporal data modeling for natural processes". Proposal submitted to Louisiana Board of Regents, $10,000 requested in 2014, not funded.

PI – Lei Wang: "Surface melt and formation of melt ponds on Antarctic ice shelves influenced by warming climate", proposal submitted to National Science Foundation, Polar Program in 2014, $202,535 requested, not funded.

Co-PI (with Deng et al.) on "Development of Satellite-Assisted Norovirus Early Alert System for Gulf Coast Oysters", submitted to NASA in 2014, $1,132,355 requested, not funded.

Co-PI (with Trepanier et al.), Bring the Environment Inside: An Earth Science Laboratory, Louisiana Board of Regents, Traditional and Undergraduate Enhancement Fund, $96,369, 2012, not funded.

PI: Lei Wang. Mapping coastal erosion and storm surge hazards on the western Louisiana coast. Submitted to Louisiana Board of Regents in 2009, not funded.

Co-PI (with Sherman et al.) Mapping and modeling erosion and storm surge hazards along the upper Texas and Western Louisiana Gulf Coast using airborne Lidar and hyperspectral remote sensing data. Submitted to National Sea Grant and NOAA in 2009. Not funded.

PI: Lei Wang, 2008. Optimizing the siting of stormwater detention basins for flood hazard mitigation in the Baton Rouge and New Orleans Metropolitan Area. Board of Regents. Not funded.

Co-PI (with Deng et al.), Development of Wireless Sensor Station-Networked Water Quality Monitoring and Analysis System. Submitted To NSF in 2007. Not funded.

University Service

Faculty advisor, Chinese Student and Scholar Association at Louisiana State University. (August 20, 2015 - Present).

Faculty advisor, GIScience Club at Louisiana State University. (August 2018 - present)

Chair, Friday Forum Speakers Committee. (August 20, 2015 - 2020).

Chair, Graduate Certificate Program of Geographic Information System. (August 20, 2015 - Present).

Advisor, GIS minor program.

Professional Service

Academic Editor, PeerJ (Environment). (November 1, 2017 - Present).

Guest Editor of the special issue "Remote Sensing for 3D Urban Morphology ", Remote Sensing. (January 1, 2016 - Present).

Organizing committee, reviewer, International Conference on Geographical Information System Theory, Applications, and Management, Funchal, Madeira. (2016 - Present).

Scientific Program Committee, 13th APRU Multi-Hazards Symposium 2017, Beijing China. Association of Pacific Rim Universities.

Director, Remote Sensing Specialty Group, American Association of Geographers. (August 15, 2016 - 2018).

Reviewer of Journal Articles

International Journal of Digital Earth, PLOS ONE, Transactions on Geoscience and Remote Sensing, Journal Article, ISPRS International Journal of Geo-Information, Journal Article, GIScience & Remote Sensing, Applied Geography, The Arab World Geographer, Chinese Geographical Science, GeoJournal, International Journal of Geographical Information Sciences, Journal of the American Water Resources Association, Landscape and Urban Planning, Cartography and GIS, Remote Sensing of Environment

Teaching Evaluations

Semester	GIS	Remote Sensing of Environment	Advanced RS	Advanced GIS	Department average
Spring 2023	4.2		4.9		4.2
Fall 2022	4.6			4.3	4.4
Spring 2022	4.5		4.7		
FALL 2021	4.2			4.8	4.6
SPRING 2021	Sabbatical				
FALL2020		3.9		4.4	4.5
SPRING 2020	4.7		4.9		4.5
FALL 2019	4.4			4.9	4.5
SPRING 2019		3.8	4.8		4.4
FALL 2018	4.2			4.9	4.4
SPRING 2018		3.8	4.31		4.39
FALL 2017	4.07			4.42	4.32
SPRING 2017		4.37	4.45		4.33
FALL 2016	4.53			4.87	4.37
SPRING 2016	4.33	4.02	4.93		4.57
FALL 2015	4.48				4.49
SPRING 2015	3.75	4.63			4.54
FALL 2014	4.22		4.48		4.42
SPRING 2014	Sabbatical				
FALL 2013	4.1			3.32	4.12
SPRING 2013	4.36		4.69		4.28
FALL 2012	3.68			4.49	4.29
SPRING 2012	3.88	4.38			4.01
FALL 2011	4.33	4.43			4.17
SPRING 2011	course release				
FALL 2010	4.17 & 4.60				4.25
SPRING 2010	4.48	4.27			4.15
FALL 2009	4.24			4.3	4.15

SPRING 2009	4.37		4.44		3.97
FALL 2008	4.18 & 4.32				4.21
SPRING 2008	3.64			3.34	4.17
Fall 2007	3.38				4.05

THESIS AND DISSERTATION DIRECTED

Ph.D. (Current = 4)

Dissertation Committee Co-Chair, "A Quantitative Method for Adult Age-at-Death Estimation of the Pelvic Joints". Student name: **Krista Bennet (ABD)**

Dissertation Committee Chair, "Modeling Water Quality Using Machine Learning and Google Earth Engine for Louisiana Fish Assemblage ". Student name: **Olumide Omotere (ABD)**

Dissertation Committee Chair Student name: **Lirong Yin0 (ABD)**

Dissertation Committee Chair Student name: **Yue Wu**

Ph.D. (Completed = 8)

Dissertation Committee Chair, "Mapping and predicting extreme flood events and evaluating the social-economic impacts with cloud computing". Student name: **Dan Tian (Fall 2018-Spring 2023)**

Dissertation Committee Chair, "THE IMPORTANCE OF LANDSCAPE POSITION INFORMATION AND ELEVATION UNCERTAINTY FOR BARRIER ISLAND HABITAT MAPPING AND MODELING".

Student Name: **Nicholas Enwright**. (Fall 2016 - Spring 2019).

Dissertation Committee Chair, "MAPPING SOIL MOISTURE FROM REMOTELY SENSED AND IN-SITU DATA WITH STATISTICAL METHODS".

Student Name: **Yaping Xu**. (Fall 2014 - Spring 2019) (**2019 Dissertation Year Fellowship)**

Dissertation Committee Co-Chair. "Sediment and Plant Dynamics in a Degrading Coastal Louisiana Landscape".
Student Name: **Glenn Suir**. (Fall 2014 - 2018).

Dissertation Committee Chair. "ASSESSING MORPHODYNAMICS OF THE LOWER MISSISSIPPI RIVER FROM 1985 TO 2015 WITH REMOTE SENSING AND GIS TECHNIQUES".
Student Name: **Bo Wang** (Spring 2012 - Fall 2017)

Dissertation Committee Chair. "APPLICATION OF AN OBJECT-BASED METHOD USING LIDAR TO ANALYZE COASTAL MORPHOLOGICAL CHANGES INDUCED BY HURRICANES".
Student Name: **Bedoor Mohammad** (Spring 2012 - Spring 2015)

Dissertation Committee Chair. "SPATIO-TEMPORAL MODELING OF LOUISIANA LAND SUBSIDENCE USING HIGH-RESOLUTION GEO-SPATIAL DATA".
Student Name: **Hanyu Xiang** (Fall 2012 - Fall 2017)

Dissertation Committee Chair. "GIS-based urban land use characterization and population modeling with subpixel information measured from remote sensing data"
Student Name: **Quan Tang** (Fall 2009 - Fall 2013)

MS (Completed = 9)

Master's Thesis Committee Chair, "Downscaling SMAP Soil Moisture Data Using MODIS Data."
Student Name: **Moses Okonkwo**. (Fall 2018- Spring 2021)

Master's Thesis Committee Chair, "The correlation analysis of the precipitation and river
discharge with the injection and discharge of The Three Gorges Dam and Reservoir."
Student Name: **Lirong Yin**. (Fall 2019- Spring 2021)

Master's Thesis Committee Chair, "Downscaling SMAP Soil Moisture Data Using MODIS Data."
Student Name: **Bienvenu Massamba**. (Fall 2017 - Spring 2020)

Master's Thesis Committee Chair, "Downscaling SMAP Soil Moisture Data Using MODIS Data."
Student Name: **Le Tu**. (Fall 2016 - Spring 2019)

Master's Non-Thesis Option Committee Chair, Department of Natural Sciences.
Student Name: **Kyle Zulpo**. (Fall 2014 - Spring 2017)

Master's Thesis Committee Chair, "Detecting the Spatial Patterns of Blue-green Algae in Harsha
Lake using Landsat 8 Imagery."
Student Name: **Jing Huang**. (Spring 2013 - Summer 2016)

Master's Thesis Committee Chair. "Measuring Primary Health Care Accessibility in Mississippi
State Using an Extended Kernel Density 2SFCA Method"
Student Name: **Lijie Zhang** (Fall 2013 - Summer 2015).

Master's Thesis Committee Chair, "A STATISTICAL, DATA-DRIVEN ASSESSMENT OF
CLIMATE EXTREMES AND TRENDS FOR THE CONTINENTAL U.S."
Student Name: **Xinbo Huang** (Fall 2013 - Winter 2016).

Master's Thesis Committee Chair, "SHALLOW WATER DEPTH INVERSION BASED ON DATA
MINING MODELS" (Fall 2013 - Summer 2015).
Student Name: **Shu Gao**

Thesis committee member

1. Rubayet Mostafiz, Ph.D., Completed 2022
2. Nazla Bushra, Ph.D., Completed 2021
3. Deirdre Smith, Ph.D. Completed 2020
4. Krista Bennet, MS., Completed 2020
5. Ashlee Taylor, MS., Completed 2020
6. Haojie Zhu, Ph.D., Completed 2020
7. Xuan Kuai, Ph.D., Completed 2019
8. Lei Zou, Ph.D., Completed 2017
9. Yujie Hu, Ph.D., Completed 2016
10. Lauren Pharr, Ph.D., Completed 2015
11. Jiao Wang, Ph.D., Completed 2015
12. Katherine Renken, Ph.D., Completed 2015
13. Cong Fu, Ph.D., Completed 2015
14. Yanqing Xu, Ph.D., complete 2014
15. Karl Mokross, Ph.D. , Completed 2014
16. Andrew Tweel, Ph.D., Complete 2014
17. Myrtho Joseph, Ph.D., Completed 2014

18. Melissa Carle, Ph.D., Complete 2013
19. Mandy Green, Ph.D., Completed 2012
20. Yuliang Chen, Ph.D., 2011
21. Anzhelika Antipova, Ph.D, 2010
22. Andrew Augustine, Ph.D., 2010
23. Xuan Kuai, M.S., Completed 2015
24. Rebekah Jones, M.S., complete 2014
25. Nickolas R. Smith, M.S., complete 2014
26. Samina Z Ikram, Masters, Complete 2013
27. Keenan Robert, Masters, Complete 2013
28. Jesil James Dsilva, Masters, Complete May, 2012
29. Leslie Couvillion, Masters, Completed November 2011
30. David Harlan, MS, Completed 2010
31. Tania Pal, MS, Completed 2008

None-thesis Master degree committee member:

1. Shilpa Nuanapati, 2008
2. Naresh Kumar Sriramoju, 2008
3. Srilaxmi Kamojwala, 2008
4. Jyothi Sonti, MS, 2009
5. Sruthi Deva, MS, 2009
6. Sai Devaiahgari, 2009
7. Hemalatha Mekala, 2009
8. Shilpa Nutanapati, 2009
9. Naresh Sriramoju, 2009
10. Jingjing, Shi, 2009
11. Pratap Alluri, 2010
12. Vindhya Reddy, 2010
13. Rukmangadhar Neelam, 2010

Visiting scholars:

Jun Wang

Xuning Qiao

Chunqin Chang

Xinxin Liang

Hao Yu

JIanfen Liu

Yongsik Jong

Siyi Yu

Dean's representative:

Kyle Breen, Sociology, "Race, gender, and environmental justice in the civilian rescue

movement", 2019 - 2022