

Jing Miao

Department of Geography, University at Buffalo

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EDUCATION

University at Buffalo

Ph.D. student in Geography

Aug. 2023 – present

- Advisor: Prof. Le Wang
- Research Topics: Mangrove Forests, Remote Sensing
- Current GPA: 4.0/4.0

Shenzhen University, China

M.S. in Geo-information and Smart City

Sep. 2020 – Jun. 2023

- Advisor: Dr. Junjie Wang
- GPA: 3.66/4.0
- Thesis on Retrieval of mangrove canopy equivalent water thickness using multiple satellite-based observations and hybrid model.

Shandong Agricultural University, China

B.S. in Surveying and Mapping Engineering

Sep. 2016 – Jun. 2020

- GPA: 3.89/5.0
- Thesis on Recognition of vertical band spectrum of mountain Tai based on “DEM-RVI-land cover map”.

TEACHING

- GEO 105: Earth, Environment and Climate lab, 2023 Fall
- GEO 381: Cartography lab session, 2024 Spring
- GEO 479/559: GIS for Environmental Modeling lab session, 2024 Spring

PUBLICATIONS

Journal Articles

1. Miao, J., Wang, J., Zhao, D., Shen, Z., Xiang, H., Gao, C., ... & Wu, G. (2024). Modeling strategies and influencing factors in retrieving canopy equivalent water thickness of mangrove forest with Sentinel-2 image. *Ecological Indicators*, 158, 111497. [[link](#)]
2. Shen, Z., Miao, J., Wang, J., Zhao, D., Tang, A., & Zhen, J. (2023). Evaluating Feature Selection Methods and Machine Learning Algorithms for Mapping Mangrove Forests Using Optical and Synthetic Aperture Radar Data. *Remote Sensing*, 15(23), 5621. [[link](#)]
3. Miao, J., Zhen, J., Wang, J., Zhao, D., Jiang, X., Shen, Z., ... & Wu, G. (2022). Mapping Seasonal Leaf Nutrients of Mangrove with Sentinel-2 Images and XGBoost Method. *Remote Sensing*, 14(15), 3679. [[link](#)]
4. Jiang, X., Zhen, J., Miao, J., Zhao, D., Shen, Z., Jiang, J., ... & Wang, J. (2022). Newly-developed three-band hyperspectral vegetation index for estimating leaf relative chlorophyll content of

mangrove under different severities of pest and disease. *Ecological Indicators*, 140, 108978. [\[link\]](#)

5. Zhao, D., Wang, J., **Miao, J.**, Zhen, J., Wang, J., Gao, C., ... & Wu, G. (2022). Spectral features of Fe and organic carbon in estimating low and moderate concentration of heavy metals in mangrove sediments across different regions and habitat types. *Geoderma*, 426, 116093. [\[link\]](#)
6. Zhao, D., Zhen, J., Zhang, Y., **Miao, J.**, Shen, Z., Jiang, X., ... & Wu, G. (2022). Mapping mangrove leaf area index (LAI) by combining remote sensing images with PROSAIL-D and XGBoost methods. *Remote Sensing in Ecology and Conservation*. [\[link\]](#)
7. Zhao, D., Wang, J., Jiang, X., Zhen, J., **Miao, J.**, Wang, J., & Wu, G. (2022). Reflectance spectroscopy for assessing heavy metal pollution indices in mangrove sediments using XGBoost method and physicochemical properties. *CATENA*, 211, 105967. [\[link\]](#)
8. Jiang, X., Zhen, J., **Miao, J.**, Zhao, D., Wang, J., & Jia, S. (2021). Assessing mangrove leaf traits under different pest and disease severity with hyperspectral imaging spectroscopy. *Ecological Indicators*, 129, 107901. [\[link\]](#)
9. Zhen, J., Jiang, X., Xu, Y., **Miao, J.**, Zhao, D., Wang, J., ... & Wu, G. (2021). Mapping leaf chlorophyll content of mangrove forests with Sentinel-2 images of four periods. *International Journal of Applied Earth Observation and Geoinformation*, 102, 102387. [\[link\]](#)

Conference Presentations

1. **American Association of Geographers 2024 Annual Meeting**
 - 18 April 2024, Honolulu, Hawaii
 - Poster presentation on leveraging phenological information from HLS satellite imagery for mangrove species mapping in Florida.
2. **The 4th Chinese Congress on Remote Sensing of Wetlands**
 - 13 August 2022 Beijing, China & online
 - Oral report on remote sensing retrieval of mangrove leaf nutrients using machine learning method.
3. **2022 Journal of Remote Sensing Postgraduate Academic Forum**
 - 29 October 2022, China & online
 - Oral report on exploring the influence of ecological and geographical factors on mangrove leaf nutrients.

AWARDS

- 2024, Student Illustrated Paper Competition Award, American Association of Geographers
- 2023, SEDA-JIA Scholarship Individual Program Excellence Award, Shenzhen University
- 2022, First class Academic Scholarship, Shenzhen University
- 2022, Outstanding Presentation Award, Journal of Remote Sensing Postgraduate Academic Forum
- 2020-2021, Second class Academic Scholarship, Shenzhen University
- 2019, Second Prize in National University Student Scientific and Technical Thesis Competition on Surveying and Mapping, Chinese Institute of Surveying