



ALICIA SENDROWSKI, PH.D.

Remote Sensing Scientist

Alicia has expertise in environmental and water resources engineering with extensive experience in river corridor remote sensing including mapping large wood using Earth Observation data. She has experience conducting field campaigns, working with high-resolution imagery, advanced computing, geographic information systems, and machine learning applications. She also brings knowledge of advanced correlation statistics, including information theory, applied to hydrodynamic data in river deltaic systems.

ORGANIZATION ROLE

Remote Sensing
Scientist

PROJECT ROLE / FOCUS AREAS

Remote sensing

Data analysis

Hydrology

EDUCATION

PhD, Civil Engineering,
University of Texas at
Austin

MS, Environmental
and Water Resources
Engineering, University
of Texas at Austin

BS, Environmental
Engineering, University
of Florida

PROFESSIONAL MEMBERSHIPS

American Geophysical
Union

PROFESSIONAL EXPERIENCE

2024-Present: Remote Sensing Scientist, The Water Institute

2022-2024: Research Engineer/Scientist 1, Michigan Tech Research Institute

2020-2022: Research Associate, Michigan State University

2018-2020: Postdoctoral Research Associate, Colorado State University

2013-2018: Graduate Assistant, University of Texas at Austin



SELECTED PROJECTS

Wood-based carbon discharge to the Arctic Ocean.

Research funded by the National Science Foundation. (2018-2020). Postdoctoral Research Associate. Led the remote sensing of carbon stored as large wood on the surface of the Mackenzie River Delta in the Northwest Territories, Canada. Developed machine learning pipelines for the classification of large wood in 30-60 cm satellite imagery and conducted a field campaign surveying large wood deposits.

SELECTED PUBLICATIONS

1. Sendrowski, A., Wohl, E., Hilton, R., Kramer, N., & Ascough, P. (2023). Wood-Based Carbon Storage in the Mackenzie River Delta: The World's Largest Mapped Riverine Wood Deposit. *Geophysical Research Letters*, 50(7), e2022GL100913.
2. Sendrowski, A., & Wohl, E. (2021). Remote sensing of large wood in high-resolution satellite imagery: Design of an automated classification work-flow for multiple wood deposit types. *Earth Surface Processes and Landforms*, 46(12), 2333-2348.
3. Livers, B., Lininger, K. B., Kramer, N., & Sendrowski, A. (2020). Porosity problems: Comparing and reviewing methods for estimating porosity and volume of wood jams in the field. *Earth Surface Processes and Landforms*, 45(13), 3336-3353.
4. Sendrowski, A., Castañeda-Moya, E., Twilley, R., & Passalacqua, P. (2021). Biogeochemical and hydrological variables synergistically influence nitrate variability in coastal deltaic wetlands. *Journal of Geophysical Research: Biogeosciences*, 126(9), e2020JG005737.
5. Sendrowski, A., & Passalacqua, P. (2017). Process connectivity in a naturally prograding river delta. *Water Resources Research*, 53(3), 1841-1863.
6. Sendrowski, A., Sadid, K., Meselhe, E., Wagner, W., Mohrig, D., & Passalacqua, P. (2018). Transfer entropy as a tool for hydrodynamic model validation. *Entropy*, 20(1), 58.
7. Abhishek, A., Phanikumar, M. S., Sendrowski, A., Andreadis, K. M., Hashemi, M. G., Jayasinghe, S., ... & Das, N. N. (2023). Dryspells and Minimum Air Temperatures Influence Rice Yields and their Forecast Uncertainties in Rainfed Systems. *Agricultural and Forest Meteorology*, 341, 109683.