Curriculum Vitae
Bijaylaxmi Sahoo

Department of Geography and Anthropology
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SUMMARY

Dual master's degree in Atmospheric Sciences and Oceanography with bachelor's in mathematics. Expertise in RS and GIS with 5 years of experience. Excellent coder and skilled in MATLAB programming having expertise in large data handling and in numerical modelling. Enthusiastic learner and able to handle new areas of knowledge. Good oral and written communication skills.

ACADEMIC TRAINING

M.S. – Louisiana State University, Baton Rouge, Louisiana, 2023, Oceanography.
M.Sc. – National Institute of Technology Rourkela, Rourkela, India, 2018, Atmospheric Sciences.
B.Sc. – Utkal University, Bhubaneswar, India, 2016, Mathematics, Minor –Chemistry, Physics.

PROFESSIONAL EXPERIENCE

Jun 2025 – Jul 2025	Intern, Coastal Ecosystem Design Studio, Louisiana State University
Dec 2019 – Nov 2020	Junior Research Fellow, R&D, Indian Institute of Technology Bhubaneswar, India.
May 2019 – Aug 2019	Intern, Indian Institute of Technology Bhubaneswar, India.
May 2017 – Jul 2017	Intern, Indian Institute of Technology Kharagpur, India.

TECHNICAL SKILLS

Programming languages	C, C++, VB, FORTRAN, PYTHON.
Softwares	MATLAB, RS & GIS software (ArcGIS Pro, ArcGIS, Agisoft Metshape, DJI Terra, SEADAS, SNAP, QGIS, Erdas-Imagine, Agisoft, ILWIS), GrADS, BRATS, Hydrolight, Ecolight.
Instrument Skills	RTK GPS, DJI Drone, Phantom Drone, Benchtop Spectrophotometer, ACS, LISST, Hyper-BB, Eco-bb, Fluorometer, C-Ops, HTSRB, PAR sensor, Above water radiometer, Microtop handheld radiometer, AWS, rain-gauge, hygrometer, anemometer, wind-ven, barometer, IR thermometer.
Operating systems	Linux, Windows, Mac.
Numerical Models	WRF, ANN.

FIELD EXPERTISE

Scientific Vessel driving	7 Hours of boat captaining.
UAV Handling	DJI M600 Pro, DJI M300, Phantom 4 Pro.

TEACHING EXPERIENCE

Jan 2025-May 2025	Teaching Assistant in Aerial Photo Interpretation and Image Processing, Department of Geography and Anthropology, Louisiana State University, Baton Rouge, Louisiana.
Aug 2024-Dec 2024 Aug 2025-Dec 2025	Teaching Assistant in Geographic Information Systems and Environmental Remote Sensing, Department of Geography and Anthropology, Louisiana State University, Baton Rouge, Louisiana.
Jan 2023-May 2023	Teaching Assistant in Introduction to Oceanography, Department of Oceanography & Coastal Sciences, Louisiana State University, Baton Rouge, Louisiana.
Jan 2020-Apr 2020	Teaching Assistant in QGIS, School of Earth, Ocean & Climate Sciences, Indian Institute of Technology Bhubaneswar, India.

RESEARCH ASSISTANTSHIPS

May 2023 – Present	Research Assistant, Department of Geography and Anthropology, Louisiana State University, Baton Rouge, Louisiana.
Jan 2021 – May 2023	Research Assistant, Department of Oceanography & Coastal Sciences, Louisiana State University, Baton Rouge, Louisiana.
Dec 2019 – Nov 2020	Junior Research Fellow, R&D, Indian Institute of Technology Bhubaneswar, India.

FUNDED RESEARCH

Jan 2021 – May 2023	NASA, Graduate Student Research Assistantship – MS.

AWARDS

2025 37th Annual Louisiana Remote Sensing & GIS Workshop – Student Poster Competition First Place Award ($200). Sponsored by the Regional Application Center, NASA/ University of Louisiana Lafayette.

2024 William G. Haag Graduate Student Conference Presentation Award – First prize ($200) by Department of Geography and Anthropology, LSU.

2021 Calibration and Validation of Ocean Color Remote Sensing workshop – Selected and funded by NASA.

2016 Joint Admission Test for M.Sc. (JAM).

2010 OSTA Talent Search Scholarship.

2008 National Rural Talent Scholarship.

THESIS

May 2023	20-year assessment of total suspended sediment (TSS) variability in Barataria Bay from MODIS ocean color using a combination of adaptive semi-analytical and neural network algorithms. (M.S. – Department of Oceanography & Coastal Sciences, Louisiana State University, Baton Rouge, Louisiana).
May 2018	Urban response to Anthropogenic heating and some land-surface and near-surface atmospheric parameters over Chennai and Bengaluru. (M.Sc. – Department of Earth and Atmospheric Science, National Institute of Technology Rourkela – Rourkela, India).

PUBLICATIONS

Sahoo, B. (2025). Wetlands Ecology: Eco-Biological Uniqueness of a Ramsar Site (East Kolkata Wetlands, India) Susanta Kumar Chakraborty, Poulomi Sanyal, and Ratnadeep Ray. Cham, Switzerland: Springer Nature Switzerland, 2023. xxii and 511 pp., maps, diagrams, illustrations, notes, bibliography, index. 179.99paper(ISBN978-3-031-09252-7); 179.99 cloth (ISBN 978-3-031-09252-7); 149.99electronic(ISBN978-3-031-09253-4).

Kishore, R., **Sahoo, B.**, Swain, D., & Sahu, K. K. (2020). Analysis of COVID19 Outbreak in India using SEIR model. arXiv preprint arXiv:2010.13610.

CONFERENCES

Sahoo, B., Meng X., 2025. Satellite-Derived Phenology of Phragmites australis in Coastal Louisiana: Implications for Wetland Dieback and Land Loss Mitigation. Coastal and Estuarine Research Federation 28th Biennial Conference, Richmond, Virginia.

Sahoo, B., Jamal A., Lehmann B., Jahan I., Islam M., Summerlin S., 2025. Sinking shores, rising solutions: adaptive future of Port Fourchon. Coastal and Estuarine Research Federation 28th Biennial Conference, Richmond, Virginia.

Sahoo, B., Meng X., 2025. Enhancing Roseau Cane Health Monitoring Using Drone-Based Spectral-Spatial Resolution Merging in the Mississippi River Delta. 37th Annual Louisiana Remote Sensing & GIS Workshop May 6-8 in Baton Rouge.

Sahoo, B., Meng X., Awasthi B., KC M., 2025. Assessing Roseau Cane Health using Scale Insect Density from Field Samples and Diverse Remote Sensing Data in the Mississippi River Delta. American Association of Geographers Annual Meeting 2025, Detroit, Michigan.

Sahoo, B., Meng X., 2024. Unraveling the Scale Insect Infestation on Roseau Cane Health in the Mississippi River Delta: A Remote Sensing Analysis. American Geophysical Union Fall Meeting 2024 (AGU24), Washington, D.C.

Sahoo, B., Meng X., 2024. Monitoring Roseau Cane Die-back using Drone Imageries. American Association of Geographers Annual Meeting 2024, Honolulu, Hawaii.

Sahoo, B., D'Sa, E., 2024. Artificial Neural Network model for Total Suspended Sediment (TSS)

in Barataria Basin. Ocean Sciences Meeting 2024, New Orleans, Louisiana.

Sahoo, B., D'Sa, E., 2023. A Study of Total Suspended Sediment (TSS) Variability in Barataria Basin from MODIS Ocean Color. Coastal and Estuarine Research Federation 27th Biennial Conference, Portland, Oregon.

Sahoo, B., Swain, D., 2020. Land Use Land Cover Changes in Bhubaneswar Urban Area Post Tropical Cyclone 'Fani'. TROPMET 2020, India.

WORKSHOPS

Delta-X Applications Workshop. May 4-5, 2022, The Estuary at the Water Campus, Baton Rouge, Louisiana.

NASA Sponsored Workshop on Calibration and Validation of Ocean Color Remote Sensing. July 19th – August 13th, 2021, Bowdoin College, Schiller Coastal Studies Center (SCSC), Orr's Island, Maine.

Use of Earth Observation data for improved Urban Environmental Monitoring, 10th-11th July 2019, Geography and Environmental Science, University of Southampton and School of Earth Ocean and Climate Sciences, IIT BBS.

PROFESSIONAL MEMBERSHIPS

Coastal and Estuarine Research Federation (Since 2023)

American Association of Geographers (Since 2023)

American Geophysical Union (2024)

International Geographical Honors Society- Gamma Theta Upsilon (Since 2025)

ACTIVITIES

Officer in Indian Student Association in Louisiana State University, 2022-2023.

Volunteered at State Rally Day 2022, 2023,2024 in Louisiana State University.

Volunteered at athletics and cultural events in Ramadevi Women's Autonomous College.