

Special Issue

High-Resolution Mapping and Monitoring of Estuarine Systems Using Multi-Sensor Remote Sensing and Machine Learning

Message from the Guest Editor

Accurate, high-resolution mapping and monitoring estuarine systems are essential to safeguard their biodiversity, functions, and resilience. Recent advances in multi-sensor remote sensing, coupled with machine learning and artificial intelligence, are transforming our ability to characterize estuarine environments at unprecedented levels of detail, enabling precise and real-time assessment of estuarine dynamics, habitat distribution, and water quality. This Special Issue aims to showcase the latest advancements in applying remote sensing and machine learning techniques to overcome the challenges of monitoring estuarine systems. By integrating data from diverse platforms—including satellite, aerial, and drone-based sensors—with sophisticated computational algorithms, researchers can now achieve unprecedented accuracy and resolution in ecosystem assessment. Authors are invited to submit original research articles, reviews, and technical notes addressing topics, including, but not limited to, the following: estuarine habitat mapping; water quality assessment; detection of marine litter and debris; sediment and shoreline dynamics; estuarine plumes dispersion.

Guest Editor

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Message from the Editorial Board

Remote Sensing is now a prominent international journal of repute in the world of remote sensing and spatial sciences, as a pioneer and pathfinder in open access format. It has highly accomplished global remote sensing scientists on the editorial board and a dedicated team of associate editors. The journal emphasizes quality and novelty and has a rigorous peer-review process. It is now one of the top remote sensing journals with a significant Impact Factor, and a goal to become the best journal in remote sensing in the coming years. I strongly recommend *Remote Sensing* for your best research publications for a fast dissemination of your research.

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