

Special Issue

Advanced Multi-Sensor Fusion and Intelligent Data Processing in Remote Sensing

Message from the Guest Editors

The rapid proliferation of satellite, aerial, and terrestrial platforms has led to an explosion of multi-source remote sensing (RS) data, including high-resolution optical imagery, Synthetic Aperture Radar (SAR), LiDAR point clouds, hyperspectral data, and thermal infrared signals. While single-sensor analysis has matured, the increasing complexity of Earth observation tasks—ranging from urban digitalization to environmental resilience—demands the seamless integration of heterogeneous data. This Special Issue, "Advanced Multi-Sensor Fusion and Intelligent Data Processing in Remote Sensing," aims to showcase cutting-edge methodologies and practical applications that leverage multi-modal data synergy. We are particularly interested in the transition from traditional fusion techniques to AI-driven intelligent processing. With the emergence of Foundation Models, Multimodal Large Language Models (MLLMs), and Generative AI, the capability to interpret complex planetary data has reached new heights. This issue seeks to bridge the gap between advanced signal processing and modern machine learning to provide robust solutions for global challenges.

Guest Editors

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Message from the Editor-in-Chief

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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