Special Issue

Deep Learning-Based Interpretation and Processing of Remote Sensing Images

Message from the Guest Editors

The rapid growth of satellite, aerial, and UAV remote sensing has generated vast amounts of multi-source, high-resolution imagery. Interpreting this data is vital for understanding environmental dynamics, advancing sustainable development, and managing natural disasters. Recent advances in deep learning—including foundation models, large pre-trained architectures, and vision-language models—have revolutionized remote sensing image processing. These technologies enable powerful data-driven feature extraction, semantic understanding, and automated analysis, transforming applications in environmental monitoring, urban analysis, agriculture, forestry, and climate science. This Special Issue highlights innovative deep learning approaches for remote sensing image interpretation, covering foundation models, vision-language models, multi-modal learning, and related AI architectures. We seek contributions that connect theory with practice, improve model robustness and interpretability, and advance intelligent geospatial data understanding. Topics align with the journal's interdisciplinary scope, integrating remote sensing, computer vision, AI, and environmental science.

Guest Editors

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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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