

Special Issue

Deep Learning Methods for Remote Sensing Images and Their Applications in Ecological Resources

Message from the Guest Editors

In recent years, deep learning has revolutionized the analysis of remote sensing imagery, offering unprecedented capabilities for interpreting complex spatial, spectral, and temporal patterns in ecological systems. These advanced methods—including convolutional neural networks (CNNs), recurrent neural networks (RNNs), transformers, and generative adversarial networks (GANs)—have demonstrated remarkable success in enhancing the accuracy, efficiency, and scalability of ecological resource monitoring. However, challenges remain in adapting these techniques to the unique characteristics of remote sensing data, such as high dimensionality, multi-modal inputs, and spatial heterogeneity. This Special Issue aims to highlight innovative research and practical applications of deep learning in leveraging remote sensing imagery for ecological resource management. We invite contributions that explore novel algorithms, models, and frameworks tailored to remote sensing data, with a focus on addressing real-world ecological challenges. Both original research and comprehensive review articles are welcome.

Guest Editors

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Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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