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

Prof. Dr. Xiaodong Yu

Prof. Dr. Jianhua Ren

Dr. Xuyang Teng

Dr. Xiaohui Li

Deadline for manuscript submissions

25 July 2026

Sensors

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed

mdpi.com/si/263700

Sensors
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
sensors@mdpi.com

mdpi.com/journal/sensors

Sensors

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed

mdpi.com/journal/sensors

MDPI

About the Journal

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.

Editor-in-Chief

Prof. Dr. Vittorio M. N. Passaro
Department of Electrical and Information Engineering, Politecnico di Bari, Via Orabona 4, 70126 Bari, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Ei Compendex, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Instruments and Instrumentation) / CiteScore - Q1 (Instrumentation)