Special Issue

Object Detection in Remote Sensing Images Based on Artificial Intelligence

Message from the Guest Editors

Recent breakthroughs in artificial intelligence (AI), particularly deep learning (DL), have revolutionized object detection in remote sensing images (RSIs). Techniques like convolutional neural networks (CNNs), transformer-based architectures, and hybrid models have demonstrated remarkable capabilities in addressing domain-specific challenges, enabling higher accuracy, robustness, and efficiency. Despite these advances, critical gaps remain, including the need for lightweight models for edge deployment, generalization across heterogeneous datasets, interpretability of AI decisions, and handling of low-resolution or weakly annotated data. Furthermore, emerging trends such as multimodal data fusion and few-shot learning demand deeper exploration. This Special Issue seeks to compile cutting-edge research on AI-driven object detection in RSIs, emphasizing novel algorithms, benchmark datasets, and real-world applications. By fostering interdisciplinary collaboration, we aim to accelerate progress in this field, bridging the gap between theoretical innovation and practical implementation to meet the growing demands of global remote sensing communities.

Guest Editors

Dr. Jianming Hu

Dr. Xiyang Zhi

Dr. Yongqiang Mao

Dr. Longfei Ren

Deadline for manuscript submissions

29 May 2026

Remote Sensing

an Open Access Journal by MDPI

Impact Factor 4.1
CiteScore 8.6

mdpi.com/si/242737

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

mdpi.com/journal/remotesensing

MDPI

Remote Sensing

an Open Access Journal by MDPI

Impact Factor 4.1
CiteScore 8.6

mdpi.com/journal/remotesensing

About the Journal

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.

Editors-in-Chief

Dr. Prasad S. Thenkabail
Senior Scientist (ST), U. S. Geological Survey (USGS), USGS Western Geographic Science Center (WGSC), 2255, N. Gemini Dr., Flagstaff, AZ 86001, USA

Prof. Dr. Dongdong Wang
Institute of Remote Sensing and Geographic Information Systems, Peking University, Beijing, China

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), Ei Compendex, PubAg, GeoRef, Astrophysics Data System, Inspec, dblp, and other databases.

Journal Rank:

JCR - Q1 (Geosciences, Multidisciplinary) / CiteScore - Q1 (General Earth and Planetary Sciences)

MDPI