

Special Issue

Deep Learning for SAR Target Detection and Instance Segmentation

Message from the Guest Editors

Synthetic aperture radar (SAR) has become an essential remote sensing technology due to its all-weather, day-and-night, and high-resolution imaging capabilities. SAR imagery is widely used in maritime surveillance, disaster response, urban observation, and defense-related applications. In these scenarios, accurate target detection and instance segmentation are crucial for obtaining fine-grained information, including target location, category, shape, and orientation. Recent advances in deep learning have greatly promoted SAR image interpretation by enabling powerful feature representation and end-to-end optimization. Object detection networks, transformer architectures, self-supervised learning, few-shot learning, and multimodal fusion have shown great potential for improving accuracy and robustness. However, SAR target detection and instance segmentation remain challenging due to speckle noise, complex backgrounds, geometric distortion, dense and multiscale targets, and limited annotated datasets. Practical applications also require strong generalization, efficiency, and interpretability under diverse imaging conditions.

Guest Editors

Dr. Yingying Kong

Prof. Dr. Henry Leung

Prof. Dr. Kefeng Ji

Dr. Jinglu He

Deadline for manuscript submissions

31 January 2027



Remote Sensing

an Open Access Journal
by MDPI

Impact Factor 4.3
CiteScore 9.4



mdpi.com/si/283226

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

[mdpi.com/journal/
remotesensing](https://mdpi.com/journal/remotesensing)





Remote Sensing

an Open Access Journal
by MDPI

Impact Factor 4.3
CiteScore 9.4



[mdpi.com/journal/
remotesensing](https://mdpi.com/journal/remotesensing)



About the Journal

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.

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)