Special Issue

Advancing Synthetic Aperture Radar: Imaging, Processing, and Applications in Remote Sensing

Message from the Guest Editors

Synthetic Aperture Radar (SAR), with its all-day, all-weather, and global observation capabilities, has become an indispensable device for Earth observation across diverse environmental and operational conditions. Currently, SAR has achieved significant technological breakthroughs in the following critical aspects: resolution enhancement from meter-level to submeter-level, imaging mode evolution from conventional stripmap mode to advanced azimuth beam steering techniques like spotlight mode, system expansion from single-channel to multi-channel architectures, and polarization advancement from basic single-polarization to comprehensive full-polarization measurements. With continuous technological progress in sensor design and information processing, future SAR will achieve further breakthroughs in innovative imaging concepts, advanced technical approaches, and novel imaging modes. These advancements specifically include high-resolution wide-swath imaging solutions that overcome traditional resolution-swath tradeoffs, multi-static SAR configurations with distributed platforms, payload and intelligence-embedded systems incorporating AI-driven processing.

Guest Editors

Dr. Shiqi Xing

Dr. Sinong Quan

Dr. Tao Zhang

Deadline for manuscript submissions

31 October 2025

Remote Sensing

an Open Access Journal by MDPI

Impact Factor 4.1
CiteScore 8.6

mdpi.com/si/238931

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

MDPI

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.

Editor-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

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)