# Special Issue

# Advances in AI-Driven Synthetic Aperture Radar (SAR): Data Processing to Automatic Interpretation

## Message from the Guest Editors

Synthetic aperture radar (SAR) provides robust imaging capabilities under diverse environmental and illumination conditions. Recent advances in artificial intelligence (AI), particularly in machine learning and data-driven modeling, have demonstrated significant promise in enhancing SAR data processing, facilitating automatic interpretation and broadening the scope of SAR applications.   This Special Issue invites contributions that explore how AI technologies are reshaping SAR data processing and interpretation, covering the full spectrum from foundational advances in signal and image processing to high-level semantic understanding and automated interpretation. Topics may include, but are not limited to, the following:

- AI-based SAR image enhancement and denoising;
- Intelligent classification and segmentation of SAR imagery;
- Target detection and recognition from SAR data;
- Learning-based interferometric and polarimetric SAR processing;
- AI-driven multi-sensor data fusion with SAR;
- Domain adaptation and generalization across SAR scenes;
- Large-scale SAR data analytics and automated mapping.

## Guest Editors

Prof. Dr. Fan Zhang

Prof. Dr. Bing Han

Prof. Dr. Weixian Tan

Dr. Qiang Yin

## Deadline for manuscript submissions

15 November 2025

# 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

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