Special Issue

Advanced Hyperspectral Imaging and AI for Geological Applications

Message from the Guest Editors

Hyperspectral imaging (HSI) has emerged as a transformative tool for geological studies, enabling the detailed identification of mineral compositions, surface alterations, and environmental changes. Coupled with artificial intelligence (AI), HSI has unprecedented capabilities for automating and enhancing the interpretation of complex geological features. This Special Issue seeks to highlight cutting-edge research and applications of HSI and AI in geology, fostering advancements in resource exploration, hazard monitoring, and sustainable land management. We welcome contributions that address innovative methodologies, algorithms, and case studies leveraging HSI and AI for geological purposes. Topics of interest include, but are not limited to, the following:

- Mineral and resource exploration: The AI-driven detection of ore deposits, alteration zones, and critical minerals.
- Geohazard monitoring: The identification of landslides, debris flow, subsidence, and earthquake precursors using HSI.
- Machine learning/deep learning: Novel algorithms for feature extraction, classification, and anomaly detection in HSI data.

Guest Editors

Prof. Dr. Lizhe Wang

Dr. Yingjun Zhao

Dr. Fuping Gan

Dr. Ruyi Feng

Deadline for manuscript submissions

20 February 2026

Remote Sensing

an Open Access Journal by MDPI

Impact Factor 4.1
CiteScore 8.6

mdpi.com/si/248136

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 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)