

Special Issue

Remote Sensing of Water Dynamics in Permafrost Regions

Message from the Guest Editors

Permafrost is highly sensitive to climate change, with thaw-induced shifts in water dynamics profoundly affecting hydrology, ecosystems, and infrastructure stability. Processes such as thermokarst formation, wetland drying, and active layer deepening alter surface and subsurface water regimes. With advances in satellite and UAV platforms, thermal, radar, and optical sensors now provide critical insights into freeze–thaw cycles, soil moisture, and hydrological connectivity. Understanding these dynamics is key to predicting environmental responses and supporting sustainable development in cold-region environments.

This Special Issue aims to advance the scientific understanding of water dynamics in permafrost regions by promoting innovative applications of remote sensing technologies. It seeks to highlight methodological developments, multi-sensor data integration, and new insights into hydrological processes such as surface water change, soil moisture variability, freeze–thaw transitions, and landscape–hydrology interactions.

Guest Editors

Dr. Zeyong Gao

Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, Lanzhou, China

Dr. Lingxiao Wang

School of Geographical Sciences, Nanjing University of Information Science & Technology, Nanjing, China

Deadline for manuscript submissions

30 June 2026



Remote Sensing

an Open Access Journal
by MDPI

Impact Factor 4.1
CiteScore 8.6



mdpi.com/si/242271

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 4.1
CiteScore 8.6



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