

## Special Issue

# 4D (Multi-Temporal) Remote Sensing: Opportunities, Challenges and Issues for Environmental Monitoring over Time

### Message from the Guest Editors

In recent decades, multitemporal high-resolution topography (HRT; e.g., photogrammetry, LiDAR, GNSS) data sets are becoming increasingly available, improving our ability and opportunities to monitor landscape evolution at different scales and times. Indeed, some HRT techniques allow performing multitemporal (4D) surveys with adequate frequency to detect changes at an appropriately temporal scale at which surface processes operate. However, in order to obtain comparable results over time, it is necessary to implement methodologies and workflows that consider the issues associated with 4D surveys. Topics may cover any type of technology, from historical data (e.g., historical images) to novel HRT techniques (e.g., UAS-LiDAR). Hence, multisource data integration (e.g., multispectral, hyperspectral, and thermal), multiscale approaches or studies focused on data fusion and comparison of HRT techniques are welcome. Articles may address but are not limited to the following monitoring applications:

- Geomorphological changes;
- Soil erosion process;
- Land use changes;
- Agricultural and crop dynamics;
- Forest changes;
- Glacial and periglacial dynamics.

### Guest Editors

Dr. Sara Cucchiaro

Dr. Eleonora Maset

Dr. Manel Llana

Dr. He Zhang

Dr. Mihai Niculiță

### Deadline for manuscript submissions

closed (15 July 2025)



## Remote Sensing

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.1  
CiteScore 8.6



[mdpi.com/si/129847](https://mdpi.com/si/129847)

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