Special Issue

AI Applications to Remote Sensing of Cloud and Precipitation: Monitoring, Modeling, and Prediction

Message from the Guest Editors

Clouds and precipitation are integral components of Earth's hydrological and energy cycles, exerting profound impacts on climate dynamics, weather extremes, water resource management, and disaster mitigation. In this Special Issue, we invite submissions of scientific research papers that use remote sensing analysis and those on AI methodologies to address cloud and precipitation monitoring and prediction challenges. The scope for this Special Issue includes the following research directions: Remote sensing of clouds and precipitation;

- AI applications and ML;
- Multi-sensor data fusion and assimilation;
- Precipitation nowcasting ;
- Cloud macro- and microphysics
- Aerosol–cloud–precipitation interactions;
- RS applications to cloud seeding theories and techniques;
- Hydrological modeling and water resource management;
- Satellite analysis in extreme precipitation forecasting;
- Extreme weather event detection (floods, droughts, cyclones, etc.);
- RS applications in studying climate change impacts on precipitation regimes;
- GPS/GNSS meteorology.

Guest Editors

Dr. Junqiang Yao

Dr. Jinfang Yin

Dr. Haoran Li

Dr. Chang Yi

Dr. Ismail Gultepe

Deadline for manuscript submissions

30 December 2025

Remote Sensing

an Open Access Journal by MDPI

Impact Factor 4.1
CiteScore 8.6

mdpi.com/si/236100

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

mdpi.com/journal/remotesensing

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)