Special Issue

Feature Papers for AI and Big Data in Earth Science

Message from the Guest Editor

The rapid advancement of artificial intelligence, machine learning, and big data analytics is revolutionizing how we observe, model, and understand the Earth system. The increasing availability of diverse remote sensing data, such as radar, optical, and LiDAR acquired through multiplatform (drone and satellite) and multi-resolution systems, is reshaping how Earth processes are observed, analyzed, and modeled. The integration of heterogeneous datasets with AI-driven methodologies offers new opportunities to develop more accurate, interpretable, and scalable models of environmental dynamics.

This Special Issue welcomes manuscripts addressing, but not limited to, the following themes:

AI and machine learning applications in geoscience, climate, and environmental modeling.
Big data analytics and data fusion for remote sensing and Earth observation.
Integration of radar, optical, and LiDAR data from multiplatform and multi-resolution systems.
Open-source and cloud-based frameworks for large-scale environmental data analysis.
Interpretable AI, uncertainty quantification, and model validation in Earth system studies.

Guest Editor

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Deadline for manuscript submissions

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About the Journal

Message from the Editor-in-Chief

Earth journal is a publishing platform to promote discoveries related to the Earth and its components (atmosphere, oceans, land, cryosphere, biosphere, and humans). The journal serves as a publishing venue that views Earth from a holistic perspective and disseminates scientific papers with emphases on multidisciplinary approaches to understand the complexities and interactions occurring on a variety of spatial and temporal scales. Rapid turnaround time and full open access offer the opportunity to make research results immediately available to scientific communities and the general public.

Editor-in-Chief

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Author Benefits

High Visibility:

indexed within ESCI (Web of Science), Scopus, GeoRef, AGRIS, and other databases.

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 21.3 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the second half of 2025).

Journal Rank:

JCR - Q2 (Geosciences, Multidisciplinary) / CiteScore - Q1 (Earth and Planetary Sciences (miscellaneous))

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