

Special Issue

Advances in Cold Regions' Hydrology and Hydrogeology

Message from the Guest Editors

The goal of this Special Issue is to collect papers (original research articles and review papers) to give insights about advanced research on hydrological and hydrogeological processes in cold environments. We hope to advance insights into the mechanisms of ice–water interactions, groundwater dynamics in thawing permafrost, and the impacts of climate change on the cryosphere system. This Special Issue will welcome manuscripts that link the following themes:

- Permafrost hydrogeology: Groundwater storage, thermokarst development, and solute transport.
- Glacial and snowmelt systems: Mass balance modeling, meltwater contributions to rivers/oceans.
- Cold-region hydrogeochemistry: Legacy pollutants, nutrient cycling, and carbon release.
- Climate adaptation: Predictive tools for extreme events (e.g., floods, droughts) and resilient infrastructure design.
- Emerging technologies: AI-driven models, UAV-based monitoring, and multi-scale data integration.

Guest Editors

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Deadline for manuscript submissions

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About the Journal

Message from the Editor-in-Chief

Hydrology is the study of the waters of the Earth. Hydrology has close ties with hydraulics, hydrogeology and the multiple sciences that study the atmosphere, the land surface, the soil and the subsoil, and ranges from complex problems of risk, forecasting and optimization of water resources to interactions with ecological, urban, social and economic systems. The purpose of *Hydrology* is then to provide a journal where research results and real-world problems can be presented and discussed in order to bridge the traditional gaps between the academic world and the professionals and decision makers. Therefore, *Hydrology*, invites authors to submit their original theoretical, field, experimental, and numerical studies on hydrology with strong emphasis on multidisciplinary approaches and interdisciplinary topics, which cross the typical boundaries of our science.

Editor-in-Chief

Prof. Dr. Ezio Todini

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Author Benefits

High Visibility:

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

Journal Rank:

JCR - Q2 (Water Resources) / CiteScore - Q1
(Oceanography)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.9 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).