

Special Issue

Advances in the Measurement, Utility and Evaluation of Precipitation Observations

Message from the Guest Editors

Precipitation is a critical component of the hydrological cycle, directly impacting various hydrologic processes such as runoff, groundwater recharge, and flood management. The accurate measurement and evaluation of precipitation is vital for enhancing water resource management, refining climate models, and improving disaster preparedness strategies. The goal of this Special Issue is to collect papers (original research articles and review papers) to give insights about a comprehensive understanding of how precipitation observations can be enhanced, applied, and critically assessed to support hydrologic research and applications. This Special Issue will welcome manuscripts that link the following themes:

- Statistical Modeling of Rainfall Patterns;
- Deep Learning Approaches for Precipitation Measurement;
- Leveraging Internet of Things (IoT) for Enhanced Precipitation Estimation;
- Multi-Source Rainfall Observation Fusion;
- Uncertainty and Bias Analysis in Rainfall Data;
- Impacts of Climate Change on Precipitation Trends;
- Remote Sensing Techniques for Precipitation Observation;
- Satellite-Based Precipitation Monitoring and Evaluation.

Guest Editors

Prof. Dr. Jiangjiang Zhang

Yangtze Institute for Conservation and Development, Hohai University, Nanjing 210098, China

Prof. Dr. Junliang Jin

Yangtze Institute for Conservation and Development, Hohai University, Nanjing 210098, China

Deadline for manuscript submissions

closed (12 August 2025)



Hydrology

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Impact Factor 3.2
CiteScore 5.9



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

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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

Italian Hydrological Society, Piazza di Porta San Donato 1, 40126
Bologna, Italy

Author Benefits

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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).