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

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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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manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.7 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the first half of 2025).