

Special Issue

Current Challenges in Ecohydrology: Advanced Numerical and Experimental Analysis on Water Resources Management in Natural Watersheds, with a Special Focus on Flooding and Drought

Message from the Guest Editors

Both natural and urbanized watersheds are especially vulnerable to climate change and anthropogenic pressures, making our understanding of hydrological and hydraulic processes crucial for their sustainable management. Key factors shaping these environments include temperature, rainfall phenomena, flow discharges, sediment concentration and composition, geomorphological features, riverine and riparian vegetation, and hydrodynamics. This Special Issue aims to improve our knowledge of advances in ecohydrology and ecohydraulics, promote the integration of methodologies, and support the development of sustainable strategies. Topics of interest include (but are not limited to) the following:

- hydrodynamic and morphodynamic evolution;
- impacts of climate change and human activities;
- agricultural water resources management;
- vegetation-induced turbulence dynamics;
- monitoring techniques and novel observation methods;
- modeling approaches for prediction and management.

Guest Editors

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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

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(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).