

Special Issue

Advances and Challenges in Hydro-Climatological Modeling and Uncertainty Analysis

Message from the Guest Editors

When multiple hydro-climatological extreme or nonextreme events (such as floods; drought; precipitation; extreme temperatures, humidity, and wind speed; heatwaves; etc.) occur simultaneously or successively, the compound effect amplifies the overall stress level compared to their individual consideration. Also, because of CC and/or LULC, the methods used to identify, attribute, and measure their frequency of occurrence or severity must be reviewed, as these processes are no longer stationary or time-invariant. Statistical methods have a long history of analysing such complex hydro-climatological data for designing, planning, infilling, and forecasting. Time-frequency analysis, hydrological modelling, multivariate statistical techniques, uncertainty analysis, artificial intelligence, etc., are powerful tools for the stationary and nonstationary modelling of hydro-climatological events in static and dynamic settings. We are particularly interested in and welcome contributions from a diverse community of studies related to innovative stochastic and statistical model development in climatology and hydrology, as well as their uncertainty analysis using historical.....

Guest Editors

Dr. Md Shahid Latif

Canada Research Chair in Statistical Hydro-Climatology, National Institute of Scientific Research (INRS-ETE), Quebec City, QC G1K 9A9, Canada

Prof. Dr. Taha B. M. J. Ouarda

Canada Research Chair in Statistical Hydro-Climatology, National Institute of Scientific Research (INRS-ETE), Quebec City, QC G1K 9A9, Canada

Deadline for manuscript submissions

31 July 2025



Water

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 6.0



mdpi.com/si/197358

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

[mdpi.com/journal/
water](https://mdpi.com/journal/water)





Water

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 6.0



[mdpi.com/journal/
water](https://mdpi.com/journal/water)



About the Journal

Message from the Editor-in-Chief

In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

Editor-in-Chief

Dr. Jean-Luc PROBST

Centre de Recherche sur la Biodiversité l'Environnement (CRBE) UMR
CNRS/UPS/INPT/IRD, Centre National de la Recherche Scientifique
(CNRS), University of Toulouse, Campus ENSAT, Auzeville Tolosane,
Toulouse, France

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, GEOBASE, GeoRef, PubAg, AGRIS, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Water Resources) / CiteScore - Q1 (Aquatic Science)