



*water*

an Open Access Journal by MDPI



## Hydrological Simulation and Forecasting Based on Artificial Intelligence

Guest Editor:

**Dr. Guangyuan Kan**

Research Center on Flood &  
Drought Disaster Reduction of  
the Ministry of Water Resources,  
China Institute of Water  
Resources and Hydropower  
Research, Beijing, China

Deadline for manuscript  
submissions:

**20 August 2024**

### Message from the Guest Editor

With the development of modern artificial intelligence and parallel computing, the applications of these novel technologies in the field of hydrological and hydrodynamic modeling, flood simulation and forecasting, risk and uncertainty analysis, etc., have significantly improved accuracy, reliability, and computational efficiency in the domain of disaster defense. This Special Issue mainly focuses on the application and novel methods of flood simulation, forecasting and modeling, model parameter estimation, risk and uncertainty analysis, and data analysis, based on modern artificial intelligence and/or parallel computing technologies. We invite submissions including, but not limited to, the following topics:

- (1) Artificial-intelligence-aided hydrological simulation and forecasting.
- (2) Hydrodynamic modelling based on artificial intelligence technologies.
- (3) Flood risk analysis, hydrological or hydrodynamic model uncertainty analysis based on intelligence optimization algorithms or other related artificial intelligence techniques.
- (4) Model parameter optimization algorithms based on intelligence optimization algorithms.....



[mdpi.com/si/163327](https://mdpi.com/si/163327)

# Special Issue



*water*



an Open Access Journal by MDPI

## Editor-in-Chief

### Dr. Jean-Luc PROBST

Laboratory of Functional Ecology  
and Environment, Centre  
National de la Recherche  
Scientifique (CNRS), University of  
Toulouse, Campus ENSAT,  
Auzeville Tolosane, France

## 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.

## 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 (*Water Science and Technology*)

## Contact Us

---

Water Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/water](http://mdpi.com/journal/water)  
[water@mdpi.com](mailto:water@mdpi.com)  
[X@Water\\_MDPI](https://twitter.com/Water_MDPI)