

## Special Issue

# Model-Based Irrigation Management

### Message from the Guest Editors

Advanced technologies, including crop physiology and soil environment monitoring systems, wireless communication, remote sensing, machine learning, the Internet of Things (IoT) and big data, have broadened the application of irrigation models for not only irrigation planning, but also for real-time irrigation scheduling. Model-based irrigation management combining soil-, plant- and weather-based monitoring methods with appropriate predictive control will significantly improve crop water use efficiency, as well as reducing negative environmental effects. This Special Issue collects the latest knowledge of model-based irrigation management on both model simulations and field studies, especially including, but not limited to:

- Applications of model-based irrigation management in fields;
- Newly developed model-based irrigation systems;
- Irrigation model calibration and verification;
- Evaluation and optimization of model-based irrigation management;
- Irrigation management response to climate change

For more details, please see:

[https://www.mdpi.com/journal/water/special\\_issues/YIB741R83K](https://www.mdpi.com/journal/water/special_issues/YIB741R83K)

---

### Guest Editors

Dr. Peter Waller

College of Agriculture & Life Sciences / College of Engineering, The University of Arizona, Tucson, AZ, USA

Dr. Tangzhe Nie

School of Water Conservancy and Electric Power, Heilongjiang University, Room 413, Hydropower Building, No. 74 Xuefu Road, Nangang District, Harbin, China

---

### Deadline for manuscript submissions

closed (10 September 2024)



## Water

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.0  
CiteScore 6.0



[mdpi.com/si/132273](https://www.mdpi.com/si/132273)

*Water*

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

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