Special Issue

Advancing Sustainable Hydrological Modelling and Smart Water Resource Management

Message from the Guest Editors

This Special Issue centres on the advancement of sustainable hydrological modelling and smart water resource management in the context of climate change. It aims to explore cutting-edge methodologies that integrate machine learning, data assimilation, and hybrid modelling frameworks to improve the accuracy, robustness, and adaptability of hydrological predictions. Emphasis is placed on the development of intelligent scheduling and allocation strategies that can dynamically respond to spatiotemporal variability and uncertainty in water systems. This Special Issue seeks to bridge the methodological gap between physical models and data-driven techniques, providing novel insights into model fusion, scenario-based regulation, and real-time decision making. By highlighting interdisciplinary research at the intersection of hydrology, climate science, and artificial intelligence, this collection will complement the existing literature with forward-looking approaches and contribute to building resilient and adaptive water systems for a changing world.

Guest Editors

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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

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