Special Issue

Intelligent Water Networks: Advanced Sensing, Real-Time Analytics, and Adaptive Management for Future Water Challenges

Message from the Guest Editors

Water systems worldwide face increasing pressure from climate change, population growth, aging infrastructure, and water quality concerns. Traditional strategies often fall short in addressing these challenges. This Special Issue promotes transformative technologies that turn data into actionable water resource management, with a focus on intelligent water networks using advanced sensing, real-time analytics, and adaptive management to enhance resilience and support global sustainability. We welcome research articles, reviews, and case studies on innovative solutions across the water cycle. Topics include, but are not limited to:

- Novel sensors for monitoring water quality and quantity
- Edge computing and IoT in water infrastructure
- Real-time data processing, analytics, and visualization
- Machine learning and AI for predictive modeling and decision-making
- Digital twins for simulation and optimization of water systems
- Smart decision support tools and cyber-physical integration
- Adaptive management for climate resilience and water security
- Multi-scale integrated monitoring networks

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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
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