Special Issue

Advances in Flood Frequency and Inundation Modeling: Application of Statistical, Hydrodynamic, Remote Sensing, and Machine Learning Tools

Message from the Guest Editors

We invite original research articles that contribute to the continuing efforts to understand complex hydrological and hydraulic processes and accurately estimate flood frequency, duration, inundation, and waterbody connectivity. This Special Issue also welcomes manuscripts on uncertainty analysis and application of flood modeling to support decision making. The topics for this Special Issue include but are not limited to:

- Flood frequency analysis: advances in methods, regional case studies, variability, and trend analysis;
- Inundation modeling: advances in computational methods and computing facilities comparison between methods and models;
- Inundation mapping: advances in remote sensing techniques, strength/limitations of satellite data (e.g., MODIS, Landsat, Sentinel);
- Integration of remote sensing and hydrodynamic modeling;
- Flood hazard assessment and risk mapping;
- Impacts of climate change on flood magnitude and frequency;
- Sea-level rise and coastal flooding;
- Uncertainty in flood modeling;
- Application of machine learning tools for flood inundation modeling.

Guest Editors

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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

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