Special Issue

Flood Forecasting Using Machine Learning Methods

Message from the Guest Editors

Early flood warning systems with different lead times are promising countermeasures against flood. A collaborative assessment from multiple disciplines, comprising hydrology, remote sensing and meteorology, of the impacts of flood hazards beneficially contributes to model integrity and the precision of flood forecasting. Computing technologies, coupled with big-data mining, have boosted data-driven applications, among which Machine Learning (ML) technology bearing flexibility and scalability in pattern extraction has modernized not only scientific thinking but also predictive applications. In the context of flood hazard mitigation, methodologically-oriented countermeasures may involve forecasting on reservoir or river flow, tropical cyclone track, and flooding at different lead times and/or scales through modern technologies such as, but not limited to, MLs, big-data mining, multiple data aggregation/ensembling, and model ensembling. Analyses of impacts, risks, uncertainty, vulnerability, resilience and scenarios coupled with policy-oriented suggestions will give insight into flood hazard mitigation. A GIS for visual presentation of inundation is also helpful in decision-making.

Guest Editors

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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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