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Flood Forecasting Using Machine Learning Methods

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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.



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Special issue



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Message from the Editor-in-Chief

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