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Hydrological Modeling in Water Cycle Processes

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Message from the Guest Editors

Modeling water cycle processes is always a critical strategy for hydrologic research and has long been the goal of all hydrologists. Hydrological models are in general designed to meet one of two primary objectives. One is to gain a better understanding of the hydrological phenomena operating in a catchment and of how changes in catchment may affect these phenomena. Another is the generation of synthetic sequences of hydrological data (in both gauged and/or ungauged regions) for facility design or for use in forecasting. In past decades, they were also used to study the potential impacts of changes in land use or climate, real-time hydrodynamic streamflow routing, etc. Though great progress has been achieved, challenges still exist in this area—for example, the lack of a profound mechanism understanding of the impacts of a changing environment on water cycle processes, and corresponding effective modeling methodology, as well as uncertainty issues related to data, model parameters and structure—and further studies are required. Discussing these challenges, finding solutions, and presenting the latest achievements are the key purposes of this Special Issue.



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Special Issue



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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.

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