Special Issue

Modelling, Monitoring and Assessment of Soil Hydrology and Ecological Processes

Message from the Guest Editors

This Special Issue focuses on the simulation, monitoring, and assessment research of soil hydrology and ecological processes. Automated monitoring, multi-element remote sensing, interpretation by new synthetic aperture radar satellites, big data analysis, machine learning, and other emerging technologies are used to measure and calculate the key variables of soil hydrology to improve the accuracy of soil moisture monitoring. Through comprehensive methods, such as multi-source data fusion, physical processes simulation, and deep learning, the soil hydrology processes at different spatiotemporal scales are studied, and the mechanism connections among different scales are explored. In addition, the influence of soil moisture changes on the terrestrial hydrological ecosystem are clarified and the coupling mechanism of "soil–vegetation–hydrology" are analyzed.

This Special Issue aims to establish a research paradigm for the simulation, monitoring, and assessment of hydrology-ecological processes, providing scientific basis and decision support for improving the quality of ecosystems and ensuring the sustainable utilization of water resources.

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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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