Special Issue

Hydrological Processes and Soil Moisture Dynamics in Cold Regions and High-Altitude Environments

Message from the Guest Editor

Soil hydrological processes (SHPs) play a crucial role in the water, energy, and biogeochemical cycles. Understanding these processes is challenging due to the need for accurate descriptions of spatial heterogeneity and the parameterization of soil properties, which significantly impact hydrological modeling. Additionally, the strong spatiotemporal variability of soil moisture and the difficulty in capturing processes such as infiltration and lateral subsurface flow further complicate this understanding. This Special Issue is dedicated to exploring the latest advancements in soil hydrological processes. We invite contributions that cover, but are not limited to, the following topics: Spatial heterogeneity of soil properties and the pedotransfer functions of soil properties across different scales; Temporal variations in soil properties due to land management and climate change, and their parameterizations; Innovative methods for determining soil properties and soil moisture dynamics; Dynamics of soil moisture under various land covers and across different scales; Soil hydrological processes, including infiltration, rainfall redistribution, and lateral subsurface flow.

Guest Editor

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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.

Editor-in-Chief

Dr. Jean-Luc PROBST
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