

Special Issue

Modeling of Flow and Transport in Saturated and Unsaturated Porous Media

Message from the Guest Editors

This Special Issue focuses on recent advances and future developments in the modeling of flow, mass and heat transfer in porous media. This includes, but is not limited to: saturated/unsaturated flow, multiphase flow, multicomponent reactive transport, heat transfer and coupled hydraulic, thermal, mechanical, chemical and biological processes. All modeling steps (mathematical models, data assimilations, numerical methods, simulation, parallel computing, post-processing, validation, benchmarking, calibration, comparison against laboratory experiments, sensitivity and uncertainty analysis, field applications) are included.

- Extension of mathematical models for improving model realism
- Modeling and simulation studies for new physical insights
- Development and evaluation of models, new algorithms and numerical techniques
- Stochastic and probabilistic modeling
- Analytical and semi-analytical solutions, benchmarking issues
- Inverse problems and characterization of soil and aquifer properties
- Uncertainty and sensitivity analysis
- Lab experimental studies and comparison against numerical simulations
- Field applications of models, upscaling and calibration.

Guest Editors

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Deadline for manuscript submissions

closed (31 March 2021)



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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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