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Numerical Modelling of Single and Multi-Phase Flow

Guest Editor:

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Deadline for manuscript submissions:
closed (20 August 2022)

Message from the Guest Editor

Single and multiphase flow in porous media are common phenomena in nature and engineering. The numerical modeling and simulation of single and multiphase flow are crucial for a wide range of scientific and industrial applications at various spatial and temporal scales, with increased interests in recent years. Significant advances have been witnessed in numerical modeling and simulation techniques for single and multiphase flow, because of its importance to understand, predict, and optimize multiple scientific and industrial processes.

Potential topics of this Special Issue mainly include, but are not limited to:

•Advanced physical models of single and multiphase flow;

•Novel numerical methods for single and multiphase flow;

•Mesh adaptation, model reduction and fast solvers;

•Multiscale and multiphysics modeling and simulation;

•Compositional multiphase flow and multicomponent modeling;

•Multiphase turbulent flow and its modeling;

•Stochastic process in multiphase flow and transport;

•Multiphase inverse modeling.

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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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