Special Issue

Research on Mathematical Models of Floods

Message from the Guest Editors

In recent years, flood frequencies and flooding damage appear to be increasing, with worsening social and economic impacts. The development and application of mathematical models capable to predict floods are therfore essential for their management. Models that solve the two-dimensional Shallow Water Equations (2D-SWE) on structured or unstructured grids have become nowadays a common tool, but there are still some challenges that have to be faced to obtain fast and accurate solutions for flood covering vaste areas. Some of them are the following:

- Reduce the computational time even with high-resolution meshes: efforts have been made to increase the performance of models through MPI techniques or GPU parallelization, but there is still room for improvements on this topic;
- Levee breaching modelization:[.....]

For further reading, please follow the link to the Special Issue Website at:
https://www.mdpi.com/journal/water/special_issues/Mathematical_Models_Floods

Guest Editors

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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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