



Research on Mathematical Models of Floods

Guest Editors:

Prof. Dr. Paolo Mignosa

Department of Engineering and Architecture, Università degli Studi di Parma, 43121 Parma, Italy

Dr. Renato Vacondio

Department of Engineering and Architecture, Università degli Studi di Parma, Parma 43121, Italy

Prof. Dr. Marco D'Oria

Department of Engineering and Architecture, University of Parma, 43121 Parma, Italy

Deadline for manuscript submissions:

closed (31 August 2020)

Message from the Guest Editors

Dear Colleagues,

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 therefore 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





water



an Open Access Journal by MDPI

Editor-in-Chief

Dr. Jean-Luc PROBST

Laboratory of Functional Ecology and Environment, Centre National de la Recherche Scientifique (CNRS), University of Toulouse, Campus ENSAT, Auzeville Tolosane, France

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), Ei Compendex, GEOBASE, GeoRef, PubAg, AGRIS, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank: JCR - Q2 (*Water Resources*) / CiteScore - Q1 (Water Science and Technology)

Contact Us

Water Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/water
water@mdpi.com
[X@Water_MDPI](https://twitter.com/X@Water_MDPI)