

## Special Issue

# CFD Modelling of Turbulent Free Surface Flows

### Message from the Guest Editors

Computation of free surfaces is very complex because of the continuous change in the location of fluid particles. This Special Edition aims to highlight research on improvements in special methods developed for the computation of free surface flows. Although the Modelling of Turbulent Free Surface Flows has been an extensively studied issue for a very long time and many answers have been found, a huge number of problems are still open, and a number of new interesting numerical techniques are constantly emerging contributing to ever-more accurately simulating Turbulent Free Surface Flows. This can include research studies on the capillary and wetting phenomena in free surface flows, geophysical free surface flows (rivers, lakes, glaciers, and ocean), hydraulic jumps, diffraction of water waves induced by fluid structure interaction, sloshing dynamics and vortical structures. This Special Issue aims to gather original research, review, and state-of-the-art articles focused on modelling the free surface flows following numerical approaches.

**Keywords:** free surface flows; computational methods; waves; fluid structure interaction; hydraulic jumps; diffraction

---

### Guest Editors

Dr. Agostino Lauria

Department of Engineering for Innovation, University of Salento, Lecce, Italy

Dr. Domenico Ferraro

Department of Civil Engineering, University of Calabria, Cosenza, Italy

---

### Deadline for manuscript submissions

closed (20 May 2024)



## Water

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.0  
CiteScore 5.8



[mdpi.com/si/167251](https://mdpi.com/si/167251)

*Water*

MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[water@mdpi.com](mailto:water@mdpi.com)

[mdpi.com/journal/  
water](https://mdpi.com/journal/water)





# Water

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.0  
CiteScore 5.8



[mdpi.com/journal/  
water](https://mdpi.com/journal/water)



## About the Journal

### 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

Centre de Recherche sur la Biodiversité l'Environnement (CRBE) UMR CNRS/UPS/INPT/IRD, Centre National de la Recherche Scientifique (CNRS), University of Toulouse, Campus ENSAT, Auzeville Tolosane, Toulouse, France

---

### 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)