

Special Issue

Advances in Hydrodynamics for Pumping Systems: Modeling, Optimization, and Applications, 2nd Edition

Message from the Guest Editors

Pumping systems are integral to industrial processes, water supply, and energy systems, where hydrodynamic performance directly impacts efficiency, reliability, and sustainability. This Special Issue explores cutting-edge advancements in the hydrodynamics of pumping systems, focusing on theoretical, numerical, and experimental approaches to optimize their design and operation. Topics of interest include (but are not limited to) flow instabilities, cavitation phenomena, turbulence modeling, energy-efficient pump designs, and the application of machine learning for predictive maintenance. Contributions addressing multiphase flows, renewable energy integration, and smart pumping technologies are also encouraged.

This Issue aims to bridge the gap between fundamental fluid dynamics research and practical engineering solutions, fostering innovation in sectors such as agriculture, wastewater management, oil and gas, and HVAC. We invite original research articles, case studies, and reviews that address emerging trends, sustainability, and cost-effective strategies in this critical field. [...]

For further reading:

https://www.mdpi.com/journal/water/special_issues/L1B8M9F3B2

Guest Editors

Dr. Qiaorui Si

Dr. Asad Ali

Dr. Yandong Gu

Deadline for manuscript submissions

25 February 2027



Water

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 6.7



mdpi.com/si/284224

Water
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
water@mdpi.com

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





Water

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 6.7



[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 (Aquatic Science)