# Special Issue

# CFD 2022--Recent Advances in Lattice Boltzmann Methods

## Message from the Guest Editor

This Special Issue is concerned with recent advances in the Lattice Boltzmann Method (LBM). The LBM has recently matured as a viable alternative to conventional Computational Fluid Dynamics (CFD) approaches that employ Finite Volume, Finite Difference or Finite Element approximations of continuum physics equations, mostly Navier-Stokes (NS). Whilst modeling essentially similar physics as classical continuum mechanics NS procedures, LBM features a number of advantages, particularly concerning data locality and parallel computing, but also in terms of stability and dispersion properties. As the method originates from the Boltzmann equation (being a superset of NS), multi-scale modeling (even up to specific kinetic turbulence models) is possible. This Special Issue aims at highlighting the current state-of-the-art in the field of LBM and future research directions. Both submissions with an academic background as well as more application-oriented contributions are welcome.

## Guest Editor

Dr. Christian F. Janßen

Institute for Fluid Dynamics and Ship Theory, Hamburg University of Technology (TUHH), Am Schwarzenberg-Campus 4, 21073 Hamburg, Germany

## Deadline for manuscript submissions

closed (31 August 2023)

**Computation**

**an Open Access Journal by MDPI**

**Impact Factor 1.9**
**CiteScore 4.1**

mdpi.com/si/110770

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

mdpi.com/journal/computation

# Computation

an Open Access Journal by MDPI

Impact Factor 1.9
CiteScore 4.1

mdpi.com/journal/computation

# About the Journal

## Message from the Editor-in-Chief

You are invited to submit the results of your research for consideration and publication in *Computation,* an international open access journal, which is published monthly online by MDPI.
The editorial board and staff of *Computation* are dedicated to establishing a benchmark journal for the world scientific and engineering communities for original research articles, reviews, conference proceedings (i.e., peer reviewed full articles), and communications, in the cutting-edge areas of computational biology, computational chemistry, computational social science and computational engineering.

## Editor-in-Chief

Prof. Dr. Ali Cemal Benim
Center of Flow Simulation (CFS), Department of Mechanical and Process Engineering, Duesseldorf University of Applied Sciences, D-40476 Duesseldorf, Germany

## Author Benefits

### High Visibility:

indexed within Scopus, ESCI (Web of Science), CAPlus / SciFinder, Inspec, dblp, and other databases.

### Journal Rank:

JCR - Q2 (Mathematics, Interdisciplinary Applications) / CiteScore - Q1 (Applied Mathematics)

### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.8 days after submission; acceptance to publication is undertaken in 5.6 days (median values for papers published in this journal in the second half of 2025).

MDPI