Special Issue

Lattice Boltzmann Methods: Fundamentals and Applications, 2nd Edition

Message from the Guest Editors

Over the past two decades, the Lattice Boltzmann Method (LBM) has advanced rapidly and has been applied across a wide range of scientific and engineering domains. Owing to its kinetic foundation and algorithmic simplicity, LBM offers notable advantages, including excellent scalability on massively parallel architectures, robust handling of complex geometries, and effective modeling of multiphase flows. This Special Issue of *Fluids* is devoted to recent progress in LBM methodologies and applications. Topics of interest include, but are not limited to, parallel algorithms and high-performance implementations, graphics processing unit (GPU) acceleration, novel boundary-condition formulations, unstructured-mesh schemes, simulations of flows in complex geometries, and multiphase, multiphysics, and multiscale modeling.

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