



CFD 2022--Recent Advances in Lattice Boltzmann Methods

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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.





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Message from the Editor-in-Chief

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