Applications of Lattice Boltzmann Method (LBM) in Thermal Engineering

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Deadline for manuscript submissions:
closed (31 December 2023)

Message from the Guest Editors

This Special Issue aims at publishing the current state-of-the-art in the field of LBM, its application to solve thermal engineering problems, and future research directions. Both submissions with an academic background as well as more application-oriented contributions are welcome. The addressed fields of research include but are not limited to:

- Modeling aspects: advanced collision operators, grid-refinement strategies, improved boundary conditions, performance aspects, turbulence modeling, multiphase flows, porous media;
- Modeling of conjugated heat transfer problems (conduction, convection, radiation);
- Modeling of complex heat transfer fluid like nanofluids or phase-change materials;
- Innovative applications of practical relevance in thermal engineering.

Keywords includes: Lattice Boltzmann Method (LBM); Computational fluid dynamics; High performance computing; Multiscale approach from nano to meso scale; Thermal engineering; Renewable energy; Thermal management; Heat and mass transfer; Entropy and exergy analysis; MHD and EHD flows

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Special Issue

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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