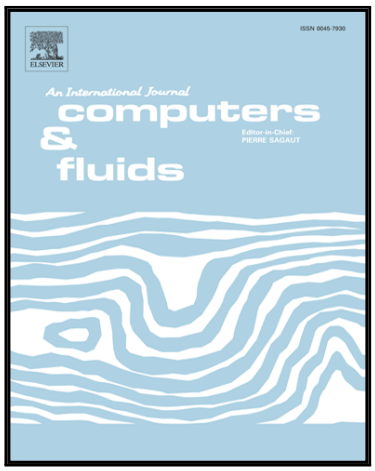

A Gas-kinetic BGK Scheme for the Finite Volume Lattice Boltzmann Method for Nearly Incompressible Flows

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Highlights

- A gas kinetic BGK scheme based finite volume lattice Boltzmann method is proposed;
- The proposed method achieves second order accuracy of time and space in one step;
- For the steady state, the present scheme becomes the exact central-difference scheme;
- The proposed scheme is a reliable and accurate tool for incompressible flows;
- The proposed scheme works on arbitrary meshes.