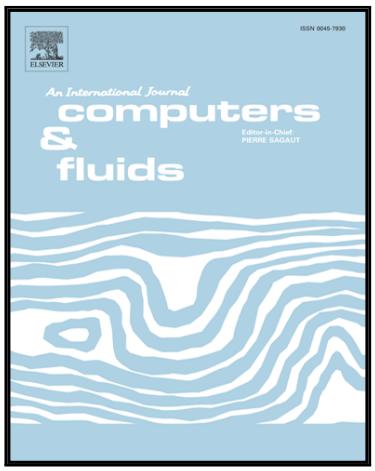

Improving the stability of multiple-relaxation lattice Boltzmann methods with central moments

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Highlights

- Von Neumann stability analysis is performed for BGK and MRT (raw and central moments)
- An optimization of free parameters for the MRT-CM is presented
- The optimization increases dissipation only for high under-resolved wavenumbers
- The new optimized MRT-CM shows improved stability whilst maintaining accuracy