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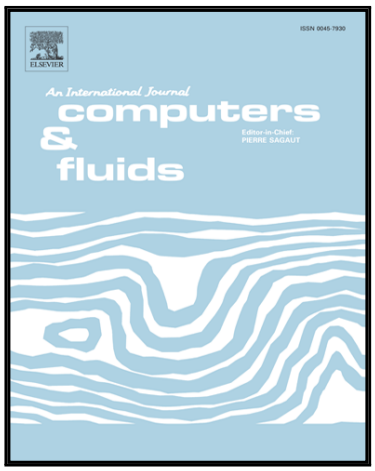

A super-parallel mixed explicit discontinuous Galerkin method for the second-order Boltzmann-based constitutive models of rarefied and microscale gases

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Highlights

- A super-parallel DG solver for the second-order constitutive models of rarefied and microscale gases is developed.
- Parallel implementation of a mixed DG method is achieved for triangular meshes.
- Computational cost of the serial and parallel solvers is investigated for various rarefied and microscale conditions.
- Super-parallel performance of the second-order algebraic NCCR model is reported for the first time.

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