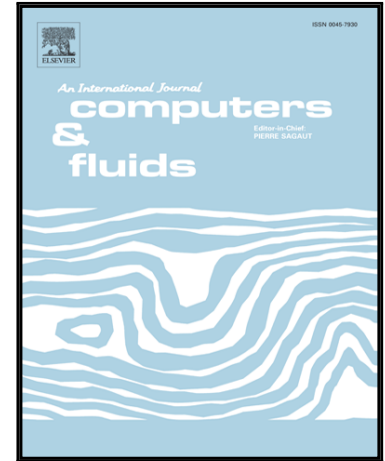


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A Coupled Lattice Boltzmann Method and Discrete Element Method for Discrete Particle Simulations of Particulate Flows

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Highlights

- A new LBM-DEM coupling algorithm for discrete particle simulations is presented.
- Techniques for a stable coupling via interaction forces are discussed.
- Settling velocities of dilute and dense systems are predicted accurately.
- Lubrication forces are required for correct particle-wall interactions.
- Simulations of mono- and bidisperse fluidized beds highlight capability of approach.

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