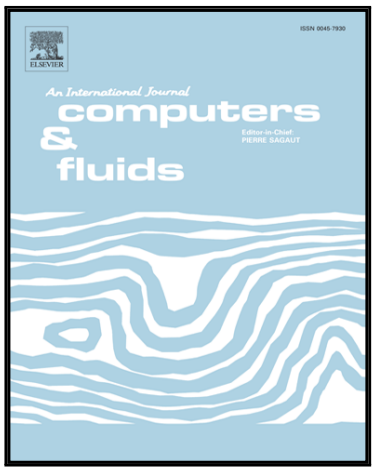

Combined Lattice-Boltzmann and Rigid-Body Method for Simulations of Shear-Thickening Dense Suspensions of Hard Particles

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PII: S0045-7930(18)30160-9
DOI: 10.1016/j.compfluid.2018.03.056
Reference: CAF 3817

To appear in: *Computers and Fluids*

Received date: 31 October 2017
Revised date: 13 March 2018
Accepted date: 16 March 2018

Please cite this article as: Eric Lorenz, Vishnu Sivadasan, Daniel Bonn, Alfons G. Hoekstra, Combined Lattice-Boltzmann and Rigid-Body Method for Simulations of Shear-Thickening Dense Suspensions of Hard Particles, *Computers and Fluids* (2018), doi: 10.1016/j.compfluid.2018.03.056

Highlights

- coupled fully-resolved LBM & rigid-body model for flowing dense suspensions proposed
- Multiple Lees Edwards layers to overcome Ma limit of LBM in boundless shear flows
- Adaptive particle timestep refinement improves numerical stability near-jamming
- shear thickening in polydisperse spherical particle suspensions observed
- Shear thickening is more pronounced in suspensions of non-spherical particles