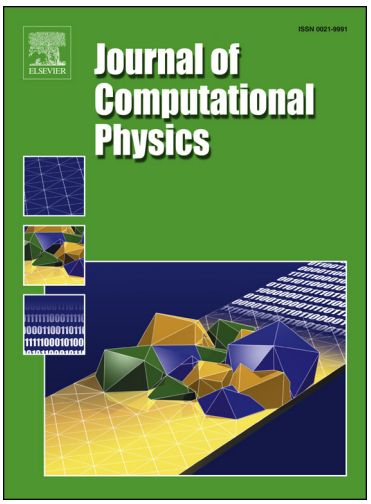
Accepted Manuscript



An improved direct-forcing immersed boundary method with inward retraction of Lagrangian points for simulation of particle-laden flows

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PII: S0021-9991(18)30639-9
DOI: https://doi.org/10.1016/j.jcp.2018.09.037
Reference: YJCPH 8284

To appear in: *Journal of Computational Physics*

Received date: 22 May 2018
Accepted date: 18 September 2018

Please cite this article in press as: K. Luo et al., An improved direct-forcing immersed boundary method with inward retraction of Lagrangian points for simulation of particle-laden flows, *J. Comput. Phys.* (2018), https://doi.org/10.1016/j.jcp.2018.09.037

Highlights

- Optimal retraction distance of Lagrangian points is proposed for direct-forcing immersed boundary method.
- The effective hydrodynamic diameter is dynamically corrected.
- Higher accuracy is achieved for both drag force and flow field.
- The improved method is less sensitive to gird resolution.