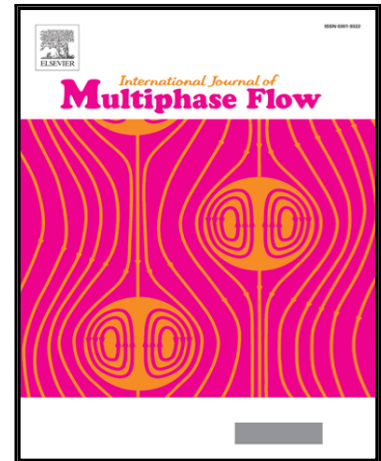


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A numerical approach for particle-vortex interactions based on volume-averaged equations

Toshiaki Fukada, Walter Fornari, Luca Brandt, Shintaro Takeuchi, Takeo Kajishima

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Highlights

- The formulations for the fluid-particle interaction model are derived based on the volume-averaging.
- The fluid force estimation includes the effect of the flow disturbance around the particle.
- The present model reproduces the interaction between the vortex and the particle of non-negligible size.

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