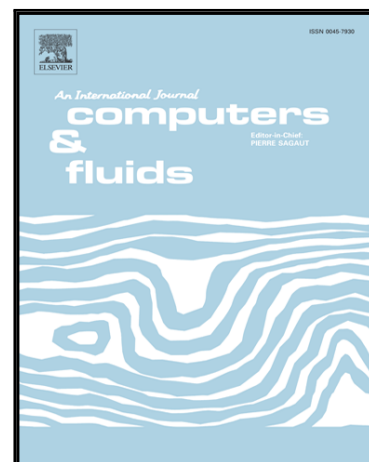


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A wavelet based numerical simulation technique for two-phase flows using the phase field method

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Highlights

- A wavelet based phase-field modelling technique for multiphase flow is presented.
- The Jacobian free Newton-Krylov method is employed to achieve a near optimal computational performance.
- The accuracy of the Allen-Cahn phase field simulation is validated against experimental data.
- Instability of a rising gas bubble is observed at moderately high Peclet number.

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