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Algebraic Coupled Level Set-Volume of Fluid Method for Surface Tension Dominant Two-Phase Flows

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Highlights

- Volume of fluid method is used for one-way coupling with the Level Set function to improve the accuracy in the simulation of interfacial capillary flows such as the Rayleigh-Taylor instability and droplet impact on a liquid pool.
- Computational efficiency is enhanced through the use of the advected Level Set field, serving as an initial condition for the reinitialization procedure.
- Level set advection reduces spurious currents and predicts capillary pressure accurately.

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