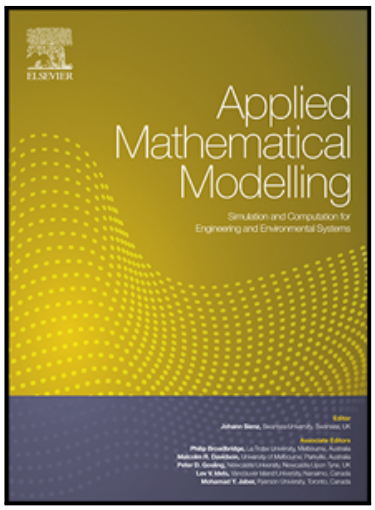

A decoupled finite particle method for modeling incompressible flows with free surfaces

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Highlights

- A decoupled finite particle method (DFPM) is developed, which avoids solving the corrective matrix equations.
- DFPM is an improved SPH method with much better accuracy than conventional SPH.
- Particle distribution and the selection of smoothing function/length have little influence on DFPM simulation results.
- DFPM is more stable and more efficient than other improved SPH methods with matrix inversion.
- DFPM is effective in modeling incompressible flows with free surfaces.

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