

## Accepted Manuscript

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

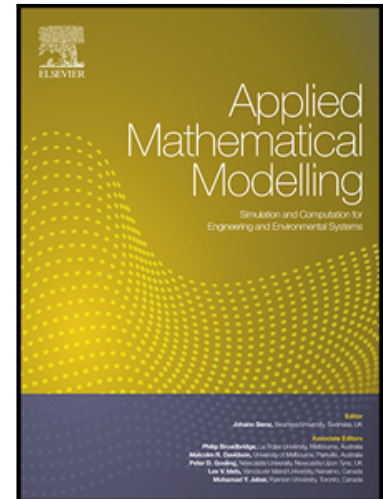
Z.L. Zhang , M. B . Liu

PII: S0307-904X(18)30167-7  
DOI: [10.1016/j.apm.2018.03.043](https://doi.org/10.1016/j.apm.2018.03.043)  
Reference: APM 12234

To appear in: *Applied Mathematical Modelling*

Received date: 27 October 2017  
Revised date: 22 March 2018  
Accepted date: 29 March 2018

Please cite this article as: Z.L. Zhang , M. B . Liu , A decoupled finite particle method for modeling incompressible flows with free surfaces, *Applied Mathematical Modelling* (2018), doi: [10.1016/j.apm.2018.03.043](https://doi.org/10.1016/j.apm.2018.03.043)



This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## 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.

Download English Version:

<https://daneshyari.com/en/article/8051516>

Download Persian Version:

<https://daneshyari.com/article/8051516>

[Daneshyari.com](https://daneshyari.com)