

Accepted Manuscript

Mathematical modeling and numerical simulation of two-phase flows using Fourier pseudospectral and front-tracking methods: the proposition of a new method

M.F.S. Villela, M.M. Villar, R. Serfaty, F.P. Mariano, A. Silveira-Neto

PII: S0307-904X(17)30433-X
DOI: [10.1016/j.apm.2017.06.041](https://doi.org/10.1016/j.apm.2017.06.041)
Reference: APM 11845

To appear in: *Applied Mathematical Modelling*

Received date: 23 May 2016
Revised date: 28 May 2017
Accepted date: 21 June 2017

Please cite this article as: M.F.S. Villela, M.M. Villar, R. Serfaty, F.P. Mariano, A. Silveira-Neto, Mathematical modeling and numerical simulation of two-phase flows using Fourier pseudospectral and front-tracking methods: the proposition of a new method, *Applied Mathematical Modelling* (2017), doi: [10.1016/j.apm.2017.06.041](https://doi.org/10.1016/j.apm.2017.06.041)

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

- Formulation and implementation of the Fourier pseudospectral method with:
- Coupling of the immersed boundary methods to solve non-periodic problems;
- Coupling of the Front-Tracking method for numerical simulation of two phase flow;
- Solution to problems involving rising bubble using this new method;
- Comparison of numerical results with those from other methods.

Download English Version:

<https://daneshyari.com/en/article/5470729>

Download Persian Version:

<https://daneshyari.com/article/5470729>

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