# Article information:

Sci-Hub | A Coupled Level Set and Volume-of-Fluid Method for Computing 3D and Axisymmetric Incompressible Two-Phase Flows. Journal of Computational Physics, 162(2), 301–337 | 10.1006/jcph.2000.6537
<https://sci-hub.ru/10.1006/jcph.2000.6537>

# Article summary:

1. This article presents a coupled level set and volume-of-fluid method for computing 3D and axisymmetric incompressible two-phase flows.

2. The method is based on the level set formulation of the interface capturing problem, which allows for accurate tracking of the interface between two fluids.

3. The proposed method is validated through numerical experiments, demonstrating its accuracy and robustness in simulating complex two-phase flows.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article by Sussman and Puckett (2000) presents a coupled level set and volume-of-fluid method for computing 3D and axisymmetric incompressible two-phase flows. The authors provide a detailed description of the proposed method, as well as numerical experiments to validate its accuracy and robustness in simulating complex two-phase flows.

The article appears to be reliable and trustworthy overall, with no obvious biases or unsupported claims present. All claims are supported by evidence from numerical experiments, which demonstrate the accuracy of the proposed method in simulating complex two-phase flows. Furthermore, all potential risks associated with using this method are noted in the article, ensuring that readers are aware of any potential issues that may arise when using this approach.

In terms of missing points of consideration or counterarguments, there does not appear to be any major omissions from the article. All relevant information is presented clearly and concisely, allowing readers to make an informed decision about whether or not to use this approach for their own simulations. Additionally, both sides of any argument are presented equally throughout the article, ensuring that readers have access to all relevant information before making a decision about whether or not to use this approach for their own simulations.

# Topics for further research:

* Two-phase flow simulation
* Level set method
* Volume-of-fluid method
* Incompressible flow
* Numerical experiments
* Accuracy and robustness of two-phase flow simulations

# Report location:

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