

# Accepted Manuscript

Coupled THINC and level set method: A conservative interface capturing scheme with high-order surface representations

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PII: S0021-9991(18)30453-4  
DOI: <https://doi.org/10.1016/j.jcp.2018.06.074>  
Reference: YJCPH 8123

To appear in: *Journal of Computational Physics*

Received date: 7 March 2018  
Revised date: 15 May 2018  
Accepted date: 29 June 2018

Please cite this article in press as: L. Qian et al., Coupled THINC and level set method: A conservative interface capturing scheme with high-order surface representations, *J. Comput. Phys.* (2018), <https://doi.org/10.1016/j.jcp.2018.06.074>

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## Highlights

- Volume of fluid method with high-order representation for moving interface.
- Rigorous conservation of mass/volume of the transported VOF field.
- Sub-grid resolution for fine interfacial structures that are smaller than mesh size.
- Easy-to-code and straightforward algorithm for 3D unstructured-grid.
- Verified superior solution quality in comparison with classical VOF methods.

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