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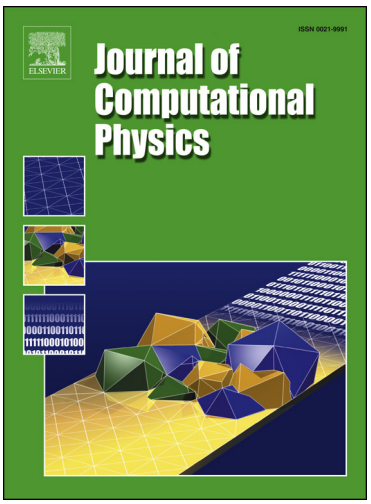

Towards unification of the Vorticity Confinement and Shock Capturing (TVD and ENO/WENO) methods

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Highlights

- A novel unified numerical approach for compressible flow computations is developed.
- New schemes acquire both Vorticity Confinement and Shock-Capturing capabilities.
- Properties of the new methods are verified by a set of numerical experiments.
- New schemes maintain the order of accuracy of their standard TVD and WENO ancestors.
- The main benefit of the new approach is improved resolution of vortices.
- The new approach is less prone to some numerical artifacts than standard methods.

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