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Eulerian-Lagrangian method for simulation of cloud cavitation

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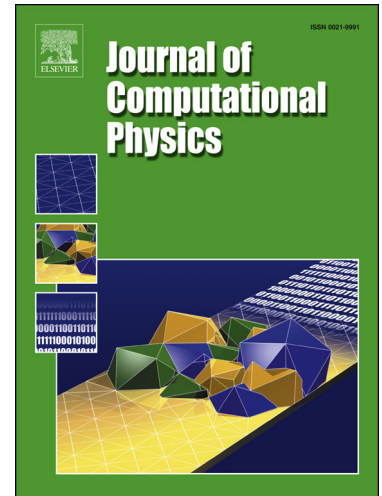
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Highlights

- The mixture-averaged equations are discretized on an Eulerian grid and the individual bubbles are tracked as Lagrangian particles.
- The method is capable of resolving fine structures of the strong, bubble-scattered pressure waves.
- Dimensional reduction of the model was achieved for bubble clouds possessing translational and rotational homogeneities.
- The method is used to simulate a challenging test case of cloud cavitation excited in a strong ultrasound.

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