Compressible Gas-liquid Homogeneous Model for Numerical Analysis of Cavitating Flow,bubble Collapse and Liquid Droplet Impingement

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Abstract:

Numerical analysis is done by using compressible gas-liquid two-phase medium model for large-scale flow field, which is cavitating flow inside a cascade, and small-scale interface deformation, which is bubble collapse near a wall and liquid droplet impingement to a wall. By considering compressibility also in the liquid phase, the model can reproduce pressure propagation in the flow field.