

Abstract Submitted
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A Computational Study of Richtmyer-Meshkov Instability with Surface Tension.¹ MARIANNE FRANCOIS, JAN VELECHOVSKY, ZACH JIBBEN, THOMAS MASSER, Los Alamos National Laboratory, LANL COLLABORATION — We have added the capability to model surface tension in our adaptive mesh refinement compressible flow solver, xRage. Our surface tension capability employs the continuum surface force to model surface tension and the height function method to compute curvatures. We have verified our model implementation for the static and oscillating droplets test cases and the linear regime of the Rayleigh-Taylor instability. With this newly added capability, we have performed a numerical study of the effects of surface tension on single-mode and multi-mode Richtmyer-Meshkov instability.

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