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Growth-rate of Richtmyer-Meshkov instability for small and large amplitude initial perturbation<sup>1</sup> NORA C. SWISHER, ARUN PAN-DIAN, ZACHARY DELL, Carnegie Mellon University, ROBERT STELLINGW-ERF, Stellingwerf Consulting, SNEZHANA I. ABARZHI, Carnegie Mellon University — We study the effect of the amplitude of the initial perturbation on Richtmyer-Meshkov instability (RMI) by means of Smooth Particle Hydrodynamics simulations and by the rigorous theory and the newly developed empirical model. A broad parameter regime is analyzed. Initially, the interface has a single-mode sinusoidal perturbation with the amplitude varying from 0

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