

Abstract Submitted  
for the DFD07 Meeting of  
The American Physical Society

**A numeric investigation of co-flowing liquid streams using the Lattice Boltzmann Method** ANDY SOMOGYI, Metropolitan State College of Denver, RANDALL TAGG, University of Colorado at Denver and Health Sciences Center — We present a numerical investigation of co-flowing immiscible liquid streams using the Lattice Boltzmann Method (LBM) for multi component, dissimilar viscosity, immiscible fluid flow. When a liquid is injected into another immiscible liquid, the flow will eventually transition from jetting to dripping due to interfacial tension. Our implementation of LBM models the interfacial tension through a variety of techniques. Parallelization is also straightforward for both single and multi component models as only near local interaction is required. We compare the results of our numerical investigation using LBM to several recent physical experiments.

Randall Tagg  
University of Colorado at Denver and Health Sciences Center

Date submitted: 03 Aug 2007

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