1139-35-453 **Peter Constantin** and **Theodore D Drivas***, tdrivas@math.princeton.edu, and **Huy Q Nguyen** and **Federico Pasqualotto**. *Global Regularity for 1D Viscous Compressible Fluid Models with Degenerate Viscosity.*

We will discuss a class of one-dimensional compressible Navier-Stokes type equations in which the viscosity depends on the density and vanishes with the density. We prove large data global regularity for a class of models covering viscous shallow water equations. Another result proves a conjecture of Peter Constantin on singularity formation for a model describing slender axisymmetric fluid jets. The proofs of these results rely on a new equation for an 'active potential' in the momentum equation. (Received February 18, 2018)