1044-35-87   **Xiao-Biao Lin*** (`xblin@math.ncsu.edu`), North Carolina State University, Raleigh, NC
29695-8205. *Traveling Wave Solutions of a Model of Liquid/Vapor Phase Transition.*

We will discuss traveling wave solutions for dynamical flows involving liquid/vapor phase transition. The model is a coupled system of viscous conservation laws and a reaction-diffusion equation. Sufficient and necessary conditions for the existence of four types of traveling waves will be given: (1) Liquefaction waves; (2) Evaporation waves; (3) Collapsing waves; (4) Explosion waves. This is joint work with Haitao Fan, Georgetown University. (Received August 22, 2008)