1086-35-2571 **Danny Arrigo*** (darrigo@uca.edu), Department of Mathematics, 201 Donaghey Ave., Conway, AR, and **Brandon Ashley** and **Thomas Deatherage**. *Hopf-Cole Type Transformations for a Viscous Burgers Equation.*

It is well known that solutions of the linear heat equation can used to generate solutions of Burgers equation through the Hopf-Cole transformation. Recently it has been shown that a Hopf-Cole type transformation exists such that solutions of the fast diffusion equation can be used to generate solutions of a viscous Burgers equation. In this talk we show that this result generalizes. We present results showing that there exists large classes of Hopf-Cole type transformations where solution of nonlinear diffusion equations gives rise to solutions of viscous Burgers equations. (Received September 25, 2012)