



**Stochastic and Adaptive Control/Interdisciplinary
Research Seminar and The Association for Women in
Mathematics University of Kansas Student Chapter**

Everyone is Invited!

Monday, April 22, 2013

4:00 PM

306 Snow Hall

**Wavefronts in a Model for Gasless Combustion
with Heat Loss**

**Anna Ghazaryan
Miami University, OH**

We consider a model of gasless combustion with heat loss, where the heat loss from the system to the environment is formulated according to Newton's law of cooling. The system of partial differential equations that describe evolution of the temperature and remaining fuel contains two small parameters, a diffusion coefficient for the fuel and a heat loss parameter. We use geometric singular perturbation theory to show existence of traveling waves in this system and then study their spectral and nonlinear stability. This is a joint work with S. Schechter and P. Simon.

Pizza will be served!