

MATHEMATICS DEPARTMENT
North Carolina State University

DIFFERENTIAL EQUATIONS SEMINAR

Wednesday, February 22, 2006
3:00 p.m. 330 Harrelson Hall

Peter Gordon

New Jersey Institute of Technology

**“Propagation of fronts
in porous media combustion”**

Gaseous detonation is a phenomenon with very complicated dynamics. The mathematical study of the qualitative behavior of solutions of the full problem is out of reach at the moment. Explosions in inert porous media provide a model that is realistic, rich, and suitable for a mathematical analysis. We will present some recent mathematical results concerning the long-time behavior of solutions of this model. In particular, initiation of detonation, formation of the detonation front, its stability and propagation limits will be discussed.

Graduate students are invited to attend.

For questions, comments, and offers to talk, contact Steve Schechter, schechter@math.ncsu.edu. Please visit the DE Seminar web page at www.math.ncsu.edu/seminars.html.