

COLLOQUIUM
UNIVERSITY OF PITTSBURGH
TUESDAY, JANUARY 9, 2007
704 THACKERAY HALL
3:00 P.M.

SPEAKER: PROFESSOR CLEOPATRA CHRISTOFOROU*

**DEPARTMENT OF MATHEMATICS
NORTHWESTERN UNIVERSITY**

TITLE: HYPERBOLIC SYSTEMS WITH DISSIPATION

ABSTRACT: I will begin with an introduction to the theory of hyperbolic conservation laws emphasizing the major challenges, construction methods and most recent developments. The second part of the talk will be devoted to global entropy weak solutions of systems of conservation laws with dissipation constructed via the vanishing viscosity method. I will present results of existence, uniqueness and stability for systems with (i) dissipative source and (ii) fading memory. Last, I will show that the vanishing viscosity method is an effective tool to establish the relaxation limit.

**Refreshments served at 2:30 p.m.
in the Math Dept. COMMON ROOM, Thackeray 705**

*The speaker is a candidate for a position in the Department.