

MATHEMATICS DEPARTMENT
North Carolina State University

DIFFERENTIAL EQUATIONS SEMINAR

Monday, November 21, 2005
3:00 p.m. 330 Harrelson Hall

Dan Marchesin

Instituto Nacional de Matemática Pura e Aplicada
(Rio de Janeiro)

**“Can you violate Lax’s Theorem for
conservation laws?”**

The classical theorem of Lax constructs local fundamental solutions for systems of conservation laws with local data. We study solutions for data near a point associated to a codimension-three bifurcation in the plane, studied by Dumortier, Roussarie, Sotomayor.

We show that there is no local solution for these data, rather a high amplitude solution consisting of two large shocks.

**Graduate students are invited to attend.
Please note unusual day.**

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