

# TEMPLE UNIVERSITY MATHEMATICS COLLOQUIUM

**Lev Truskinovsky**

Ecole Polytechnique, France

will speak on

## **About the Critical Nature of Plasticity**

ABSTRACT: Power law statistics of fluctuations has been detected during steady state plastic flow in metals and shape memory alloys. It has been interpreted as a sign of criticality and scale free behavior of the underlying microscopic systems. In this talk we present a simple mathematical model which is capable of generating power law signals with critical exponents matching observations. The main message is the existence of a discrete automaton behind the conventional continuum mechanical equations.

MONDAY, 29 NOVEMBER 2010

LECTURE AT 4:00 PM

COFFEE, TEA, AND REFRESHMENTS FROM 3:30-5 PM

ROOM 617, WACHMAN BUILDING

DEPARTMENT OF MATHEMATICS