

**APPLIED MATHEMATICS SEMINAR**  
Department of Mathematics  
University of West Georgia  
**11:00 AM, WEDNESDAY, OCTOBER 10, 2007, BOYD 330**

Speaker: Dr. Vu Kim Tuan, UWG

Title: **Inverse Heat Equation**

**Abstract**

We prove that we can uniquely recover the coefficient of a one dimensional heat equation from a finite set of measurements and provide a constructive procedure for its recovery. The algorithm is based on the well known Gelfand-Levitan-Gasymov inverse spectral theory of Sturm-Liouville operators. By using a hot spot, as a first initial condition, we determine nearly all except maybe a finite number of spectral data. A counting procedure helps detect the number of missing data which is then unraveled by a finite number of measurements.

This is a joint work with Dr. A. Boumenir.

All are welcome.