



## SCMS Seminar

### *Subtle Interplay of Deterministic and Stochastic Aspects Affect Core Genetic Regulation of Phenotypes*

**Prof. Marc Turcotte, The University of Texas at Arlington**

**Time:** 6:00-9:00 pm, Thursday, September 26<sup>th</sup>

**Venue:** Room 2201, East Guanhua Tower, Handan Campus

**Abstract:** Evolution has endowed living systems with the ability to present different phenotypes despite the same genotype. Mathematical principles of nonlinear dynamics and of stochasticity underlie the behavior of biochemical systems. In this talk, I will discuss examples of computational and analytical work on gene regulatory core circuitry and ancillary cell signaling, that demonstrate how theory forms the basis of Systems Biology. Thus Applied Mathematics is already profoundly impacting our understanding of living systems. With an ever growing foundation of mathematical theory, questions in Biology are shifting from the traditional “How” to the deeper “Why”.