# Applied Dynamical Systems Seminar

**Dr. Xiaoqiang Zhao, Memorial University**

**Monday, March 11, 2013**

**13:00-14:00**

**HH-3026**

## Traveling Waves for Monotone Semiflows with Weak Compactness

**Abstract:**

**In this talk, I will report our recent research on traveling waves for monotone semiflows of monostable type with weak compactness. To weaken the compactness condition imposed in previous works, we construct a compact set in the kinetic phase space and use an abstract variant of Helly's theorem. The developed theory is then applied to a partially degenerate cooperative reaction-diffusion system, a nonlocal dispersal equation with time delay, and a two species competition model with nonlocal dispersal. It turns out that for each of these three systems, the spreading speed is also the minimal wave speed for monostable traveling waves no matter whether the spreading speed is linearly determinate. This talk is based on a joint work with Dr. Jian Fang.**

**Coffee and cookies will be served.**