

Applied Dynamical Systems Seminar

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**Monday, November 5, 2012
12:00p.m., HH-3017**

Spatial Dynamics of A Reaction-Diffusion Model with Distributed Delay

Abstract:

In this talk, I will report our recent research on spreading speeds and traveling waves for a class of reaction-diffusion equations with distributed delay. Such an equation describes growth and diffusion in a population where the individuals enter a quiescent phase exponentially and stay quiescent for some arbitrary time that is given by a probability density function. The existence of spreading speed and its coincidence with the minimum wave speed of monostable traveling waves are established via the finite-delay approximation approach. We also obtain the existence of bistable traveling waves in the case where the associated reaction system admits a bistable structure. Moreover, the global stability and uniqueness of the bistable waves are established when the density function has zero tail. This talk is based on a joint work with Dr. Xiaoqiang Zhao.

Coffee and cookies will be served.

Seminar website: <http://www.math.mun.ca/~xiangshengw/seminars.html>