

Graduate Seminar in Mathematics

Speaker

Mr. Xiao Yu

**Thursday, February 19, 2015
1:00-2:00pm, HH-3017**

**A Periodic Reaction-Advection-Diffusion Model for A
Stream Population**

Abstract:

This paper is devoted to the study of spatial dynamics of a periodic reaction-advection-diffusion model for a stream population. In the case of an unbounded domain, we establish the existence of the leftward and rightward spreading speeds and their coincidence with the minimal wave speeds for monotone periodic traveling waves, respectively. In the case of a bounded domain, we obtain a threshold result on the global stability of either zero or the positive periodic solution.