Applied Dynamical Systems Seminar

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2:00p.m., HH-3017

*Stability and speed selection of traveling
waves to a two-species competition model*

Abstract:

In this work, we study the stability and the speed selection mechanism for the traveling wave solution to a two-species Lotka-Volterra competition model. After transforming the system of the partial dierential equations into a cooperative system, local and global stability of the traveling wavefront are investigated. We use the standard linearization to study the local stability in a weighted functional space. For the global stability, comparison principle together with the squeezing technique are applied to derive the results. Speed selection (linear vs. nonlinear) problem is introduced and some open problems are discussed.

This talk is based on a joint work with Prof. Chunhua Ou.