University of Miami
Institute for Theoretical and Mathematical Ecology
in cooperation with the
Department of Mathematics
College of Arts and Sciences

Colloquium

Professor Suzanne Lenhart

University of Tennessee

will present

"Rabies in Raccoons: Optimal Control for a Discrete Time Model on a Spatial Grid"

Friday, September 14, 2007
4:30- 5:30 pm, Ungar Bldg. rm 402

Refreshments served at 4:00 p.m. in CC 521

Abstract

An epidemic model for rabies in raccoons is formulated with discrete time and spatial features. The goal is to analyze the strategies for optimal distribution of vaccine baits to minimize the spread of the disease and the cost of implementing the control. Discrete optimal control techniques are used to derive the optimality system, which is then solved numerically to illustrate various scenarios.