



TRINITY UNIVERSITY

DEPARTMENT OF MATHEMATICS

COLLOQUIUM SERIES

SPRING 2009

www.trinity.edu/math

Discrete and continuous structured models for an urban amphibian population

Azmy Ackleh

University of Louisiana

Abstract: As part of our UBM program, we have been monitoring an urban population of green tree frogs since 2004. Statistical population estimates have been derived from the capture-mark-recapture (CMR) field data. Discrete (difference equations) and continuous (partial differential equations) juvenile-adult models that describe the dynamics of this population are developed. The long-time behavior of these models is theoretically analyzed for special cases. Least-squares fits of the models to the population estimates obtained from the CMR data are presented.

MMS 130

2:10–3:00pm

March 17th, 2009