

CALIFORNIA STATE UNIVERSITY, LONG BEACH

THE MATHEMATICS COLLOQUIUM

presents

**Robert Desharnais**

California State University, Los Angeles

speaking on

**Chaos in a Bottle**

**Friday, November 17, 2006**

**12:00PM-1:00PM**

**FO3-200A**

**Abstract:** Research in ecology is increasingly interdisciplinary. This presentation will describe a 15 year collaboration among several mathematicians, biologists, statisticians which is focused on understanding how nonlinearity manifests itself in the dynamics of ecological populations. The research program takes population ecology into laboratory by using insect populations to test theoretical predictions concerning bifurcations, chaos, sensitivity to initial conditions, and how stochasticity interacts with nonlinearity to alter the outcome of deterministic predictions.