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

Colloquium

Professor Shripad Tuljapurkar

Stanford University

will present

"Dynamic Heterogeneity in Life Histories"

Friday, November 9, 2007
4:30- 5:30 pm, Ungar Bldg. rm 402

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

Abstract

Biologists view the life histories of vertebrates as types: long or short life, early or late reproduction. Mathematical theory accordingly views a life history as static, and life history evolution as taking place on a static, if complex, fitness surface. Recent work on longitudinal data on natural populations shows that life histories are dynamic -- individuals move between "states" of reproduction and mortality in a surprisingly stochastic way. There is a large amount of "dynamic" heterogeneity both along an individual life course and between individuals. I discuss models of this process, the analogy between plants and animals, and the consequences for population and evolutionary theory.