



Florida Gulf Coast University

Department of Mathematics

MATHEMATICS SEMINAR

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Application of Dynamic System on Some Ecological and Epidemiological Models

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In studying some biological problems, the descriptive features of biological systems are delivered by the differential equations which can be studied quantitatively by both analytical and computational methods. The obtained results can be interpreted back to the biological level, then explain some phenomena and also provide some strategies.

In this thesis, both of the ecological and epidemiological problems have been studied. I will introduce some applications of differential equations and dynamic system in some ecological and epidemiological models. First, we will study the nonlinear dynamics of some ecological models to understand how seasonal harvesting affects ecological system. Second part will investigate the geographical spread of Rabies virus through a multi-patch model which describes the transmission dynamics of rabies between dogs and humans.

LIGHT REFRESHMENTS WILL BE PROVIDED



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