1108-35-442   **Peng Feng*** (`pfeng@fgcu.edu`), 11501 FGCU Blvd. S., Fort Myers, FL 33965. *Dynamics and pattern formation in a modified Leslie-Gower model with Allee effect and Bazykin functional response.*

In this talk, we study the dynamics of a modified Leslie Gower model with Allee effect. We give detailed study on the stability of equilibria. Nonexistence of nonconstant positive steady state solutions are shown to identify the rage of parameters of spatial pattern formation. We also give the conditions of Turing instability and perform a series of numerical simulations and find that the model exhibits complex patterns. (Received January 19, 2015)