Abstract: In this talk, I will introduce the concept of bifurcation theory. In particular, I will talk about some of the classical bifurcations, such as saddle-node, Hopf, and Bogdanov-Takens bifurcations. Then I will talk about a predator-prey model with the Allee effect and how we can use bifurcation theory to analyze some complex dynamics in this system. Finally, I will give a brief summary of biological interpretation.

This is our last talk this semester.