

Xiaojing Wang

SCHOOL OF SCIENCE, BEIJING UNIVERSITY OF CIVIL ENGINEERING AND ARCHITECTURE

e-mail: wangxj857@sohu.com

Guohua Song

SCHOOL OF SCIENCE, BEIJING UNIVERSITY OF CIVIL ENGINEERING AND ARCHITECTURE

Junqing Li

KEY LABORATORY FOR SILVICULTURE AND CONSERVATION OF MINISTRY OF EDUCATION

Stability Analysis of a Kind of Three-Species Food System with Time Delay

A kind of three-dimensional model of food system including Giant Panda , bamboo and arbor with delay is considered. Absolute stability and Hopf bifurcation of the model are studied by using systematic analysis method. Sufficient conditions of absolute stability are obtained, it is shown that the delay is locally harmless. Furthermore, it is proved that the time delay may destabilize the positive equilibrium, and Hopf bifurcation occurs under certain conditions.