

Front-back-pulse solutions in the three-species competition-diffusion systems

Chueh-Hsin Chang

Department of Applied Mathematics, Tunghai University
E-mail: changjuexin@thu.edu.tw

Abstract

Coexistence about competing species is a central problem in biological problems. It has been found that the front-back-pulse (FBP) solutions can be used as building block to construct coexistence patterns in three-species environments numerically. In this talk we will survey some results of the FBP solutions in the three-species competition-diffusion systems. For example, exact solutions, existence, asymptotic stability and the weak interaction between FBP solutions (the distances between them are sufficiently large) under different assumptions of the parameters. This talk includes the joint work with Chiun-Chuan Chen, Shin-Ichiro Ei, Li-Chang Hung, Masayasu Mimura and Toshiyuki Ogawa.