

# Traveling wave solutions for some three-species predator-prey systems

Jong-Shenq Guo

Department of Mathematics, Tamkang University  
E-mail: [jsguo@mail.tku.edu.tw](mailto:jsguo@mail.tku.edu.tw)

## Abstract

In this talk, we shall present some recent developments on the application of Schauder's fixed point theorem to the existence of traveling waves for some three-species predator-prey systems. The existence of traveling waves of predator-prey systems is closely related to the invasion phenomenon of some alien species to the habitat of aboriginal species. Two different three-species predator-prey models with different invaded and invading states shall be presented. In this talk, we shall focus on the methodology of deriving the convergence of stable tail of wave profiles.