國立交通大學應用數學系
學術演講公告

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講　　題：Series representation of Evans function and applications
　　　　　　on stability analysis for traveling waves of
　　　　　　Lotka-Volterra competition system

時　　間：109 年 12 月 1 日(星期二) 下午 14:00 –15:00

地　　點：(光復校區) 科學一館 223 室

茶　　會：當天下午 13:30 (科學一館 205 室)

Abstract

　　Under suitable change of variables, we transform the linearized eigenvalue problem around a traveling wave into a ODE with two finite regular singular point. The fundamental solution satisfying the one-sided boundary condition to the linearized eigenvalue problems is then derived.　Accordingly, the Evans function, whose zeros corresponds to the point spectrum of the traveling wave, is represented as an infinite series.　Based on the series representations, the number of point spectrum lying on the right half of the complex plane, can be numerically identified by counting the winding numbers of the image of a suitable contour mapped by the Evans function. Several types of traveling waves in Lotka-Volterra competition system are taken as examples for illustration.

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