

國立陽明交通大學應用數學系

學術演講公告

主講人：Peter D. Miller 教授(密西根大學數學系)

講 題：Introduction to Semiclassical Asymptotic Analysis: Lecture 1

時 間：114 年 12 月 22 日(星期一) 下午 15:30 –16:30

地 點：(光復校區) 科學一館 213 室

Abstract

Semiclassical analysis involves the study of the solutions of singularly-perturbed partial differential equations with given initial data or boundary conditions. The singular perturbation enters via small multipliers on derivatives, and the aim is to describe how the given data taken independent of the small parameter evolves over space and time in the asymptotic limit that the parameter tends to zero. This lecture will introduce the topic, present illustrations from the theory of linear and integrable nonlinear equations, and then embark on a detailed analysis of the Cauchy problem for the defocusing nonlinear Schrödinger equation in the semiclassical limit. The latter problem is solved via an inverse-scattering transform and here we focus on the computation of scattering data in the semiclassical limit, which employs the WKB method.

敬請公告 歡迎參加

應用數學系 啟