



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

MATHEMATICS COLLOQUIUM

On principal eigenvalues for second
order elliptic operators

By

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Abstract

The study on the qualitative properties of principal eigenvalues for second order elliptic operators has a long history. In recent years there are growing interest in investigating the asymptotic behaviors of principal eigenvalues with small diffusion or large drift rates, in order to determine some global information of principal eigenvalues with respect to diffusion and drift rates. In this talk we will give some review of the history and discuss some recent works along this line. This talk is mainly based on joint works with Shuang Liu (Beijing Institute of Technology) and Maolin Zhou (Nankai University).

Bio: *Yuan Lou is currently Professor and Dean of School of Mathematical Sciences, Shanghai Jiao Tong University. Prof. Lou received his Ph.D in 1995 from University of Minnesota, followed by postdoc positions at MSRI and University of Chicago. From 1998 to 2021, he was a faculty member at Ohio State University, and he served as Associate Director of Mathematical Bioscience Institute from 2009-2013. His research interest is on reaction diffusion equations and applications to biology, in which he has published more than 150 research articles. He currently serves as Co Editor-in-Chief of DCDS-B series and is on the editorial boards of Journal of Mathematical Biology, Journal of Differential Equations, SIAM Journal of Applied Mathematics.*

Date : 2 May 2025 (Friday)

Time : 3:00p.m.-4:00p.m.

Venue : Lecture Theatre F (Lift 25/26)

All are Welcome!