



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SPECIAL COLLOQUIUM

Stochastic PDE control: progresses and open problems

By

Prof. Xu ZHANG
Sichuan University

Abstract

In this talk, I will present some progresses and open problems on control theory for stochastic partial differential equations. I will explain the new phenomena and difficulties in the study of controllability and optimal control problems for these systems. In particular, I will show by some examples that both the formulation of corresponding stochastic control problems and the tools to solve them may differ considerably from their deterministic/finite-dimensional counterparts.

Bio: Prof. Xu Zhang is a distinguished professor at Sichuan University. He obtained his PhD in operations research and control theory in Fudan University in 1998, and joined Sichuan University the same year. He was promoted to full professor in 2001. Prof. Zhang has made significant contributions to the fields of control theory and infinite dimensional analysis. He has published in leading journals such as SIAM Rev., Comm. Pure App Math, Annu. Rev. Control, J Eur. Math Soc., Mem. Amer. Math. Soc. He was an invited speaker at the 2010 International Congress of Mathematicians. His honors include appointment as a distinguished professor by China's Ministry of Education (2012) and recognition as a National Model Teacher (2024). He received the National Natural Science Award (2013) and the SIAM SIGEST Paper Award (2018). His research has been supported by National Outstanding Youth Science Foundation, National Natural Science Foundation Key Program, New Cornerstone Science Foundation, etc. He has served as editorial board members, deputy editor, or editor in chief for more than 10 international academic journals including SIAM J. Control Optimization.

Date : 11 November 2025 (Tuesday)

Time : 4:00pm – 5:00pm

Venue : Room 4582 (near lift 27 & 28)

All Are Welcome!