THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED MATHEMATICS
應 用 數 學 系

Seminar

Prof. Charles-Edouard Bréhier

University of Pau and the Adour Region, France

Topic:
Convergence results and efficient numerical schemes for systems of SPDEs with multiple time scales

Date| Time:
18 October 2024 (Friday) | 03:00pm – 04:00pm (HK Time)

Mode of Delivery:
Online via Zoom

Meeting ID|Password:
862 3991 5699|1018

Zoom Link:
https://polyu.hk/yVGKL

Abstract:
I will describe some results on systems of stochastic partial differential equations with slow and fast dynamics, mainly in the averaging principle regime. I will explain how strong and weak rates of convergence with respect to the time scale separation parameter can be obtained. I will also describe how to construct and analyze asymptotic preserving schemes and heterogeneous multiscale numerical methods for the approximation of the slow component in this regime.

ALL ARE WELCOME