



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PURE MATHEMATICS

Random walk and homogenization in a balanced random environment

by

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Abstract

In this talk, we consider the model of random walks in a balanced random environment (RWBRE), a Markov chain that has zero effective speed, and its relation to the stochastic homogenization of non-divergence form difference equations, which concerns the convergence of the random difference equation to a deterministic differential equation. We will survey some recent results on the diffusive behavior of the RWBRE and quantitative homogenization estimates obtained by the speaker and coauthors N. Berger (TU-Munich), M. Cohen (Jerusalem), J-D Deuschel (TU-Berlin), J. Peterson (Purdue), and H.V. Tran (Madison).

Date : 30 June 2022 (Thursday)

Time : 2:00pm – 3:00pm

Zoom Meeting : <https://hkust.zoom.us/j/96064122640>

(Passcode: 565375)

All are Welcome!