THE UNIVERSITY  OF HONG KONG

Institute of Mathematical Research
Department of Mathematics

Analysis Seminar

Homogeneous dynamics and Khintchine's theorem for self-similar measures

Prof. Han Zhang

Soochow University

Abstract

Khintchine's theorem is a fundamental theorem in Diophantine approximation. Via Dani's correspondence between Diophantine approximation and homogeneous dynamics, Kleinbock-Margulis found a dynamical proof of the classical Khintchine theorem. The work of Kleinbock-Margulis has inspired a lot of progress in generalizing the classical Khintchine theorem to manifolds and fractals based on dynamical tools. In this talk, I will give a brief survey of these results. In particular, I will discuss our recent joint work with Timothée Bénard and Weikun He on Khintchine's theorem for self-similar measures, along with an effective equidistribution theorem for expanding translates of fractal orbits.

Date:	November 17, 2025 (Monday)
Time:	2:00 pm – 3:00 pm
Venue:	Room 210, Run Run Shaw Building, HKU

All are welcome