



*Institute of Mathematical Research
Department of Mathematics*

Number Theory Seminar

Khintchine's theorem on manifolds

Dr. Lei Yang

Sichuan University, China

Abstract

In this talk, we will prove the convergence part of Khintchine's theorem on non-degenerate manifolds. This confirms a conjecture of Kleinbock and Margulis in 1998. Our approach uses geometric and dynamical ideas together with a new technique of 'major and minor arcs'. In particular, we establish sharp upper bounds for the number of rational points of bounded height lying near 'major arcs' and give explicit exponentially small bounds for the measure of 'minor arcs'. This is joint work with Victor Beresnevich.

Date: February 14, 2022 (Monday)

Time: 2:00 - 3:00pm (Hong Kong Time)

Venue: ZOOM: <https://hku.zoom.us/j/>

Meeting ID: 232 576 6007

All are welcome