



Department of Mathematics  
The Chinese University of Hong Kong

數學系  
香港中文大學

Phone: (852) 3943 7988 • Fax: (852) 2603 5154 • Email: dept@math.cuhk.edu.hk  
Rm. 220, Lady Shaw Building, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong

# Analysis Seminar Talk

## Uniform distribution on the ring of $p$ -adic integers

*Professor Shi-Lei Fan*  
Central China Normal University

**Abstract:** Koksma's equidistribution theorem in 1935 states that for Lebesgue almost every  $x > 1$ , the fractional parts of the geometric progression  $(x^n)_{n \geq 1}$  are equidistributed modulo one. We prove that for almost every  $x \in \mathbb{Q}_p$ , the field of  $p$ -adic numbers, the integral part of  $(x^n)$  are equidistributed in the ring  $\mathbb{Z}_p$  of  $p$ -adic integers.

Date: 19 September 2024 (Thursday)

Time: 10:30 a.m. – 11:30 a.m.

Venue: Rm 219, Lady Shaw Building,  
The Chinese University of Hong Kong, Shatin

*All are Welcome!*