

# 中国科学院

## 随机复杂结构与数据科学重点实验室

# 学术报告

**题目:** A probability approximation framework and its applications

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**时间:** 2023年7月18日(周二) 10:00-11:00

**地点:** 数学院 N620

**摘要:** We view the classical Lindeberg principle in a homogeneous Markov process setting and propose a probability approximation framework. As applications, we study the error bounds of the following two approximations: multivariate normal approximation, approximating a family of online stochastic gradient descents (SGDs) by a stochastic differential equation (SDE) driven by multiplicative Brownian motion, and Euler-Maruyama (EM) discretization for SDEs driven by  $\alpha$ -stable process.