## THE UNIVERSITY



### OF HONG KONG

## Institute of Mathematical Research Department of Mathematics

## COMPUTATIONAL MATHEMATICS SEMINAR

# Stochastic Modeling and Statistical Inference for Advancing Biomedical Insights

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#### Abstract

With the advancements in single-molecule and single-cell measurements, stochastic modeling and statistical inference have become increasingly valuable in single-cell biology and biomedical studies. In this presentation, I will discuss two research projects from my group. First, we utilized stochastic modeling of single-cell HIV dynamics to elucidate the mechanism of noise-enhanced drug synergy. Second, we proposed a novel and precise statistical inference method for noninvasive preimplantation genetic testing of monogenetic diseases.

Date: October 4, 2024 (Friday)

Time: 2:30 – 3:30pm

Venue: Rm 210, Run Run Shaw Bldg., HKU