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THE CHINESE UNIVERSITY OF HONG KONG

SEMINAR

DEPARTMENT OF STATISTICS
THE CHINESE UNIVERSITY OF HONG KONG

Bayesian Spatial Homogeneity Learning for Functional Data

INVITED SPEAKER

Prof. Guanyu Hu,
Assistant Professor,
University of Missouri - Columbia

TIME

March 9, 2023 (Thur) · 2:30 pm - 3:30 pm

VENUE

LT4 · Lady Shaw Building · CUHK

ABSTRACT

In this talk, I will introduce two novel nonparametric Bayesian methods for learning spatial homogeneity pattern of functional data. Our methods have the advantage of effectively capturing both locally spatially contiguous clusters and globally discontinuous clusters. Posterior inferences are performed with an efficient Markov chain Monte Carlo (MCMC) algorithm. Simulation studies show that the inferences are accurate and the methods are superior compared to a wide range of competing methods. Two applications including state-level COVID-19 daily growth rates and income distributions across the US will be presented to reveal interesting findings based on proposed methods.