



統計科學研究所

INSTITUTE OF
STATISTICAL SCIENCE



SEMINAR



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Seminar

Title : Spectral tail parameter estimation under fix domain asymptotics

Speaker : Prof. Chae Young Lim

(Seoul National University, South Korea)

Time : 10:30 ~ 12:00, Monday, June 26, 2023

Place : Auditorium, B1F, Institute of Statistical Science

Abstract

Estimation under fixed domain asymptotics for dependence of spatial processes has been actively studied, but so far most theoretical results have been investigated under specific parametric model assumptions on spatial dependence. A spectral density is one way to characterize spatial dependence for weakly stationary spatial processes. In this work, we propose a methodology to estimate parameters that characterize tail behaviors of spectral densities simultaneously under fixed domain asymptotics. The spectral tail parameters are given by assuming only a tail structure of the spectral densities so that we include a broader class of spatial dependence models. Theoretical properties of the proposed estimator such as consistency and asymptotic normality are introduced. Simulation experiments support our theoretical findings and two data examples show how the proposed estimation method can be used.

※ Online live streaming through Cisco Webex will be available.

※ The tea reception will be held at 10:10.