



統計科學研究所
INSTITUTE OF
STATISTICAL SCIENCE



統計所學術演講



中研院統計所

升等演講

講題：A non-smoothing framework for inference on functional means

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時間：2023年3月20日(星期一)，10:30-12:00

地點：統計所B1演講廳

Abstract

This talk introduces a nonparametric inference framework that is applicable to occupation time curves derived from wearable device data. Motivated by the right-continuity of these curves, we develop a non-smoothing approach that involves weaker conditions than existing conditions imposed when using smoothing to estimate functional means under a fixed dense design. Notably, our procedure allows discontinuities in the functional covariances while accommodating discretization of the observed trajectories. Under this non-smoothing framework, we devise an empirical likelihood method to construct confidence bands for the functional means. Our method utilizes the known optimality of empirical likelihood. It also respects range and monotonicity constraints on occupation time curves. A simulation study shows that the proposed procedures outperform competing functional data procedures. We illustrate the proposed methods using wearable device data from an N H A N E S s t u d y .

※ 實體與線上視訊同步進行。

※ 茶會：上午10：10開始。