統計科學研究所
INSTITUTE OF STATISTICAL SCIENCE

博 士 後 演 講

講　　題：Functional spherical autocorrelation: robust
　　　　　autocorrelation estimation of a functional time series

演講人：Mr. Chi-Kuang Yeh（ 葉啓光 博士候選人 ）
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時　　間：2023年3月8日(星期三)，14:00-15:00

地　　點：中央研究院統計科學研究所 B1F 演講廳

Abstract

RMeasuring the serial dependence across time is critical in model identification and diagnosis in time series (TS) analysis. In classic TS analysis, the autocorrelation function is perhaps the most widely used method to examine the temporal relationship of the scalar or vector-valued observations. In functional TS (FTS), which refers to TS of functional data, their dependence is best summarised by an autocovariance operator. Evaluating the size and information contained in such an object can be difficult. Existing methods are relatively constrained and unable to capture certain characteristics contained in the FTS objects, such as the "direction" of dependence. We develop a new method to address this problem by projecting lagged pairs unit sphere and computing the angle between them, which we refer to as spherical autocorrelation. We establish the asymptotic properties of the empirical spherical autocorrelation, and we study its use in an application to European electricity data.

This is a joint work with Gregory Rice and Joel A. Dubin.

※ 茶 會；下午3：00開始
※ 英文演講，實體與線上視訊同步進行