國 立 中 央 大 學

統 計 研 究 所

學 術 演 講

主 講 人：**Kazuyoshi Yata（矢田和善）教授**
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講　　題：**Threshold-based sparse PCA based on the noise-reduction methodology**

時　　間：112年10月26日（星期四）<u>上午10：00 ～ 11：00</u>

地　　點：教研大樓1F羅家倫講堂

茶　　會：<u>上午 09：30 ～ 10：00</u>　　　地　點：鴻經館 510 室

ABSTRACT

In this talk, we consider threshold-based sparse principal component analysis (TSPCA) methods in high-dimensional settings. We first illustrate that TSPCA gives a preferable performance in high-dimensional data. However, the estimator depends largely on the threshold value. By using a new PCA method called the noise-reduction (NR) methodology, we propose a new sparse estimator of the PC directions and show that it holds the consistency property without any threshold values. We investigate the performance of the new sparse estimator in simulations. We also propose estimation of shrinkage PC directions and its application for clustering. Finally, we investigate the performance of PCA by the shrinkage PC directions in actual data analyses.

◎敬請張貼　　　　　　　　　　　　　　　歡迎參加◎