國 立 中 央 大 學

統 計 研 究 所

學 術 演 講

主 講 人：黃郁芬 教授（國立中正大學　數學系暨統計科學研究所）

講　　題：**Sensitivity Analysis of Non-Gaussianity by Projection Pursuit**

時　　間：**106 年 02 月 21 日（星期二）上午 11：00 ～ 12：00**

地　　點：中央大學鴻經館 **M429**室

茶　　會：**上午 10：30 ～ 11：00**　　地　點：鴻經館 **510** 室

ABSTRACT

From the information-theoretic point of view, the Gaussian distribution is the least structured. Therefore, the most non-Gaussian direction in which to explore the clustering structure of data is considered to be the most interesting projection direction when applying projection pursuit. Non-Gaussianity is often measured by kurtosis. However, kurtosis is well-known to be sensitive to influential points/outliers and so the projection direction can be unduly affected by abnormal points. In this paper, we focus on developing influence functions of projection directions in order to detect abnormal observations, especially on high-dimensional data. For multivariate data, a new technique is proposed for defining and developing influence functions of projection directions. In addition, a new influence function is suggested. Two simulated data examples and one concrete data example are provided for illustration.

Keywords: Influence function; kurtosis; non-Gaussianity; projection pursuit

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