國立政治大學統計學系
學　術　演　講

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題　目：**A New Test for Conditional Independence with High-dimensional Dependent Data**

時　間：民國 114 年 6 月 9 日 (星期一) 下午 2：40

地　點：國立政治大學逸仙樓 050101 教室

摘　要：

This talk addresses the problem of testing conditional independence (CI) under high-dimensional weakly stationary time series. A new self-normalized test is developed based on block-smoothing, data splitting, and flexible machine learning techniques that satisfy suitable convergence rates. The key insight is that double projection of both the response and the covariates with the data splitting transforms the CI problem into an unconditional independence (UI) problem. Under mild moment and β-mixing conditions, and allowing both the dimension of the covariates and the sample size to diverge, the test statistic is pivotal, and has a standard asymptotic distribution under the null hypothesis. Numerical studies and real data analysis are conducted to compare with existing approaches and to demonstrate the validity and flexibility of our proposed approach.

歡迎參加

統　計　系　敬　邀