

# 國立中央大學

## 統計研究所

### 學術演講

主 講 人：吳韋瑩 副教授（國立東華大學應用數學系）

講 題：**Parameter Estimation and Selection for Nonlinear regression with temporally correlated error**

時 間：110 年 12 月 07 日（星期二）上午 11：00 ~ 12：00

地 點：中央大學鴻經館 M-116 室

茶 會：上午 10：30 ~ 11：00 地 點：鴻經館 M510 室

### ABSTRACT

The linear relation between the covariates and the response may not be held in many real problems. In such cases, the known nonlinear functions may be employed on our data interpretation. Compared with the linear regression, there is a little research on the parameter estimation and selection for the nonlinear regression.

In this talk, when a known but the complicated nonlinear function is assumed, we develop a modified penalized least squares estimator to simultaneously estimate and select parameters. The proposed method can be also applied to a model with non-zero mean time dependent additive errors. Asymptotic properties of the proposed estimator are investigated. A simulation study demonstrates that the proposed estimation performs well in both parameter estimation and selection.

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