

# 中央研究院統計科學研究所

## 學術演講

講題：Econometric Modeling for Network Formation and Interactions

演講人：Prof. Chih-Sheng Hsieh ( 謝志昇 教授 )

Department of Economics, National Taiwan University

時間：2024-10-07(Mon.) 10:30-12:00

地點：Auditorium, B1F, Institute of Statistical Science ; The tea reception will be held at 10:10.

備註：Online live streaming through Cisco Webex will be available.

### Abstract

In this seminar, I will review several of my previous studies on network formation and interactions. In econometric literature, the spatial autoregressive (SAR) model is frequently used as a foundational tool for analyzing the effects of network interactions. However, when network formation is endogenous, SAR models can produce biased estimates. To address this issue, I propose several modeling approaches that integrate the processes of network formation and interaction. These models are estimated using Bayesian MCMC algorithms. Both Monte Carlo simulations and empirical results demonstrate that these approaches effectively mitigate estimation biases arising from network endogeneity. I will also discuss current research challenges and open questions in this area.



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