

# 國立中央大學

## 統計研究所

### 學術演講

主 講 人：張志浩教授（高雄大學 統計學研究所）

講 題：Asymptotic Theory of Conditional Generalized Information Criterion for Linear Mixed-Effects Model Selection

時 間：105 年 05 月 03 日（星期二）上午 11：00 ~ 12：00

地 點：中央大學鴻經館 M605 室

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

### ABSTRACT

In our research, we propose a conditional generalized information criterion (CGIC) for linear mixed-effects model selection. The CGIC includes the conditional Akaike's information criterion (CAIC) proposed by Vaida and Blanchard as a special case. In practice, CAIC is considered to be an adequate criterion for prediction purpose of mixed-effects where the criterion is an unbiased estimator of the expectation of the squared error loss function of the best linear unbiased predictor established under the linear mixed-effects model. In this talk, we propose CGIC to select fixed-effects and random-effects models simultaneously which is convinced helpful for the prediction purpose if the random-effects model could be properly selected. In general we aim for two asymptotic properties: consistency and asymptotic loss/risk efficiency, which are kernel asymptotic properties for prediction purpose of linear mixed-effects data analysis. In this talk, we establish the asymptotic theory of CGIC for the linear mixed-effects model selection under some regularity conditions.

Keywords : Variable selection, linear mixed-effects model, Conditional GIC

◎敬請張貼

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