國 立 中 央 大 學

統 計 研 究 所

學 術 演 講

主 講 人：陳瑞彬 教授（國立成功大學統計學系）

講　　　題：**Indicator-based Bayesian Variable Selection for Gaussian Process Models in Computer Experiments**

時　　　間：**112年09月26日（星期二）上午11：00 ～ 12：00**

地　　　點：中央大學鴻經館M429室

茶　　　會：<u>上午 10：30 ～ 11：00</u>　　　地　點：鴻經館 510 室

ABSTRACT

Gaussian process (GP) models are commonly used in the analysis of computer experiments. Variable selection in GP models is of significant scientific interest but existing solutions remain unsatisfactory. For each variable in a GP model, there are two potential effects with different implications: one is on the mean function, and the other is on the covariance function. However, most of the existing research on variable selection for GP models has focused only on one of the effects. To tackle this problem, we propose an indicator-based Bayesian variable selection procedure to take into account the effects from both the mean and covariance functions. A variable is defined to be inactive if both effects are not significant, and an indicator is used to represent the variable being active or not. For active variables, the proposed method adopts different prior assumptions to capture the two effects. The performance of the proposed method is evaluated by both simulations and real applications in computer experiments.

◎敬請張貼　　　　　　　　　　歡迎參加◎