

國立中央大學

統計研究所

學術演講

主講人：陳春樹教授（國立彰化師範大學統計資訊研究所）

講題：A Generalized Measure of Uncertainty in Geostatistical Model Selection

時間：106年10月17日（星期二）上午11：00 ~ 12：00

地點：中央大學鴻經館429室

茶會：上午10：30 ~ 11：00 地點：鴻經館510室

ABSTRACT

Model selection and model averaging are essential to regression analysis in environmental studies, but determining which of the two approaches is the more appropriate and under what circumstances remains an active research topic. In this paper, we focus on geostatistical regression models for spatially referenced environmental data. For a general information criterion, we develop a new perturbation-based criterion that measures the uncertainty of spatial model selection, as well as an empirical rule for choosing between model selection and model averaging. Statistical inference based on the proposed model selection instability measure is justified both in theory and via a simulation study. The predictive performance of model selection and model averaging can be quite different when the uncertainty in model selection is relatively large, but the performance becomes more comparable as this uncertainty decreases. For illustration, a precipitation data set in the state of Colorado is analyzed.

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