

國立政治大學統計學系 學術演講

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題目：Bayesian Robustness under Prior & Likelihood Distortion

時間：民國 114 年 4 月 14 日 (星期一) 下午 1:30

地點：國立政治大學逸仙樓 050101 教室

摘要：

Robust Bayesian analysis has been mainly devoted to detecting and measuring robustness to the prior distribution. Indeed, many contributions in the literature aim to define suitable classes of priors which allow the computation of variations of quantities of interest while the prior changes within those classes. The literature has devoted much less attention to the robustness of Bayesian methods to the likelihood function due to mathematical and computational complexity, and because it is often arguably considered a more objective choice compared to the prior. In this contribution, a new approach to Bayesian local robustness to the likelihood function is proposed and extended to robustness to the prior and to both. This approach is based on the notion of distortion function introduced in the literature on risk theory, and then successfully adopted to build suitable classes of priors for Bayesian global robustness to the prior. The novel robustness measure is a local sensitivity measure that turns out to be very tractable and easy to compute for certain classes of distortion functions. Asymptotic properties are derived and numerical experiments illustrate the theory and its applicability for modelling purposes.

歡迎參加

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