國家理論科學研究中心學術演講

2014 NCTS Industrial Statistics Research Group Seminar

Speaker: Prof. Samuel Kou

(Department of Statistics, Harvard University)

Time: 14:00-15:00, Fri., Jan. 17, 2014

Topic: Optimal Shrinkage Estimation in Heteroscedastic Hierarchical Models

Abstract:

Hierarchical models are powerful statistical tools widely used in scientific and engineering applications. The homoscedastic (equal variance) case has been extensively studied, and it is well known that shrinkage estimates, the James-Stein estimate in particular, offer nice theoretical (e.g., risk) properties. The heteroscedastic (the unequal variance) case, on the other hand, has received less attention, even though it frequently appears in real applications. It is not clear of how to construct "optimal" shrinkage estimate. In this talk, we study this problem. We introduce a class of shrinkage estimates, inspired by Stein's unbiased risk estimate. We will show that this class is asymptotically optimal in the heteroscedastic case. We apply the estimates to real examples and observe excellent numerical results.

This talk is based on joint work with Lawrence Brown and Xianchao Xie.

Place:

Lecture Room A of National Center for Theoretical Sciences
4th Floor, The 3rd General Building, National Tsing Hua University

＊ 歡迎參加，敬請張貼 ＊

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