

THE CHINESE UNIVERSITY OF HONG KONG

Department of Statistics

will present a seminar entitled

Empirical Bayes and FDR

by

Professor Cun-Hui Zhang
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on

Thursday, 24 August 2006
2:30pm – 3:30pm

in

Lady Shaw Building C2
The Chinese University of Hong Kong

Abstract:

False discovery rate has been widely used in large scale multiple testing problems as it seems to attain a balanced compromise between the more liberal per comparison error rate and the more conservative family wise error rate. We formulate a Bayes optimization problem as the maximization of the total amount of statistical discovery subject to a preassigned level of false discovery rate conditionally on certain test statistics, and propose an empirical Bayes approach based on the solution to it. We then develop empirical Bayes methods for controlling the FDR with dependent data based on our approaches. The asymptotic optimality of the Benjamini-Hochberg (1995) procedure is obtained in the empirical Bayes sense. A time series model is considered. Simulation results are presented.

All are Welcome