THE CHINESE UNIVERSITY OF HONG KONG

Department of Statistics

will present a seminar entitled

The Dantzig selector in Cox's proportional hazards model

by

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on

Tuesday, 2 December 2008
2:00pm – 3:00pm

in

Lady Shaw Building C4
The Chinese University of Hong Kong

Abstract:

The Dantzig selector is a recent approach to variable selection in sparse linear models where the number of covariates possibly exceeds the number of observations. The main idea is to choose the set of variables with the smallest L_1 norm, but subject to the likelihood being, in a certain sense, near its maximum at that point of the parameter space. The Dantzig selector is rapidly computable via linear programming, acts as a variable selector (i.e. sets some of the variables exactly to zero) due to the use of the L_1 norm, and enjoys the oracle property, i.e. estimates the parameter vector almost as accurately as if the true model were known.

In this work, we formulate an extension of the Dantzig selector to Cox's proportional hazards model for right-censored survival data. We propose a fast algorithm for computing the estimator, show its theoretical consistency, and demonstrate its practical performance.

All are Welcome