THE CHINESE UNIVERSITY OF HONG KONG

Department of Statistics

will present a seminar entitled

ASYMPTOTIC PROPERTIES OF MAXIMUM LIKELIHOOD ESTIMATORS IN MODELS WITH MULTIPLE CHANGE POINTS

by

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on

Tuesday, 11 March 2008
2:00pm – 3:00pm

in

Lady Shaw Building C5
The Chinese University of Hong Kong

Abstract:

Models with multiple change points are used in many fields; however, the theoretical properties of such models have received relatively little attention. The goal of this paper is to establish the asymptotic properties of maximum likelihood estimators of the parameters of a multiple-change-point model for a general class of models in which the form of the distribution can change from segment to segment and in which, possibly, there are parameters that are common to all segments. Consistency of the maximum likelihood estimators of change points is established and the rate of convergence is determined; the asymptotic distribution of the maximum likelihood estimators of the parameters of the within-segment distributions is also derived. Since the approach used in single change-point models is not easily extended to multiple change-point models, these results require the development of new tools for analyzing the likelihood function in a multiple change-point model.

All are Welcome