

THE CHINESE UNIVERSITY OF HONG KONG

Department of Statistics

will present a seminar entitled

**NEW MULTI-SAMPLE NONPARAMETRIC TESTS FOR
PANEL COUNT DATA**

by

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on

**Tuesday, 17 March 2009
2:00pm – 3:00pm**

in

**Lady Shaw Building G35
The Chinese University of Hong Kong**

Abstract:

In this talk, we discuss the problem of multi-sample nonparametric comparison of counting processes with panel count data, which arise naturally when recurrent events are considered. For the problem considered, we construct a class of nonparametric test statistics based on the accumulated weighted differences between the rates of increase of the estimated mean functions of the counting processes over observation times, wherein the nonparametric maximum likelihood approach (NPMLE) is used to estimate the mean functions instead of the nonparametric maximum pseudo-likelihood (NPMPLE). The asymptotic distributions of the proposed statistics are derived and their finite-sample properties are examined through Monte Carlo simulations. The simulation results show that the proposed methods work quite well and the tests based on NPMLE are more powerful and more robust than the existing tests based on NPMPLE. Two real data sets are analyzed and presented as illustrative examples.

All are Welcome