For Favour of Posting

THE CHINESE UNIVERSITY OF HONG KONG

Department of Statistics

will present a seminar entitled

Statistics for Complex Data Objects: Opportunities and Challenges

by

Prof Haonan Wang
Colorado State University

on

Tuesday, 8 April 2008
2:00pm – 3:00pm

in

Lady Shaw Building C5
The Chinese University of Hong Kong

Abstract:

Object oriented data, such as tree-structured data, random graphs, manifold data and curve data, are frequently collected in many scientific studies. Traditional statistical models for multivariate data are built under Euclidean space setting. However, the elements of object oriented data analysis reside in non-Euclidean spaces such as Lie groups, or more complex spaces such as spaces of tree-structured data. For example, two blood vessel systems differ in terms of topological structures and geometric properties, i.e., overall length, number of branches and branching orientation. A mathematical framework for statistical analysis of object oriented data, including measures of centrality, variability and a notion of curves, has been carefully developed. The methodology is illustrated through applications to the analysis of vectorcardiography data and brain blood vessel data.

All are Welcome