

For favour of posting

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Seminar

Professor Thomas MATHEW

Department of Mathematics and Statistics
University of Maryland
Maryland, U.S.A.

will give a talk

entitled

REFERENCE INTERVALS AND REFERENCE REGIONS WITH APPLICATIONS IN LABORATORY MEDICINE

Abstract

In the field of laboratory medicine, reference intervals and reference regions represent a range of values that a physician can use in order to interpret the test results of a patient. For a given test, the reference interval (or region) is obtained based on test results from healthy individuals. A test result outside the reference region may be indicative of a disease. In the case of univariate test results from a healthy population, a 95% reference interval is simply the interval from the 2.5th to the 97.5th percentiles of the distribution of the test results.

Since these percentiles are unknown, a natural approach is to obtain an interval, based on a random sample, that will contain the range from the 2.5th to the 97.5th percentiles of the underlying distribution. Such an interval is referred to as a statistical reference interval, or a central tolerance interval. A statistical reference region (or a central tolerance region) can be similarly defined for a multivariate population. In the talk, the construction of central tolerance intervals and regions will be described for univariate and multivariate normal populations, and also for linear regression models. Some examples from laboratory medicine will be used to illustrate the applicability of the results.

on

Thursday, December 22, 2011

11:30 a.m. – 12:30 p.m.

at

**Room 524, Meng Wah Complex
(behind the Chong Yuet Ming Amenities Centre)**

Visitors Please Note that the University has limited parking space. If you are driving please call the Department at 2859 2466 for parking arrangement.

All interested are welcome