ST. FRANCIS XAVIER UNIVERSITY

Department of Mathematics, Statistics and Computer Science

Presents

Multiple Confidence Intervals for Selected Parameters Adjusted for the False Coverage-Statement Rate in Monotone Dose-Response Microarray Experiments

by

Dr. Jianan Peng
Department of Mathematics and Statistics
Acadia University

Friday, August 15th @ 11:00am
Annex 23a

Modern statistical problems often involve a large number of parameters that characterize a large number of populations. Benjamini and Yekutieli (2005) argued that confidence intervals are constructed only for a subset of selected parameters after viewing the data. They introduced a general procedure to control the false coverage-statement rate (FCR) in constructing confidence intervals and highlighted that the use of the FCR-adjusted confidence intervals is needed as an analogue to the control of FDR in addressing for multiple testing problem in the microarray setting. Dose-response analysis in dose-response microarray experiments is provided only for genes that are found to have monotone dose-response relationship, which is a selection-adjusted problem. Lin et al. (2012) considered multiple confidence intervals for selected ratio parameters adjusted for FCR. In this talk, we consider multiple confidence intervals for mean differences under monotonicity for the subset of selected genes adjusted for the FCR.