The Hong Kong Polytechnic University
Department of Applied Mathematics

Colloquium

On

Extending the Empirical likelihood by Domain Expansion

by

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Abstract

The method of empirical likelihood is a nonparametric method of inference with many applications in statistics. It combines modern computing power with the classical asymptotic approach to yield a powerful and versatile inference tool. Empirical likelihood ratio confidence regions are known to suffer from an under-coverage problem in that the observed coverage probabilities tend to be lower than the nominal levels.

In the first half of this talk, I will review the basic idea of the empirical likelihood and discuss the under-coverage problem. I will also review two high-order methods, the Bartlett correction and the adjusted empirical likelihood, for dealing with the under-coverage. In the second half, I will talk about my work on extending the empirical likelihood through a geometric approach which yields an attractive solution to the under-coverage problem. I show that this approach can also achieve the high-order accuracy and conclude with a geometric and numerical comparison with the two existing methods.

Date : 21 Aug, 2014 (Thursday)
Time : 11:00a.m.-12:00noon
Venue : TU717, The Hong Kong Polytechnic University

* * *   ALL ARE WELCOME   * * *