

For favour of posting

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Seminar

Dr. KIM Joseph Hyun Tae

Department of Applied Statistics
College of Business and Economics
Yonsei University
Seoul, Korea

will give a talk

entitled

**A PARAMETRIC ALTERNATIVE TO THE HILL
ESTIMATOR FOR HEAVY-TAILED DISTRIBUTIONS**

Abstract

Despite its wide use, the Hill estimator and its plot remain to be difficult to use in Extreme Value Theory (EVT) due to substantial sampling variations in extreme sample quantiles. In this talk, we propose a new plot we call the eigenvalue plot which can be seen as a generalization of the Hill plot. The theory behind the plot is based on a heavy-tailed parametric distribution class called the scaled Log phase-type (LogPH) distributions, a generalization of the ordinary LogPH distribution class which was previously used to model insurance claims data. We show that its tail property and moment condition are well aligned with EVT. Based on our findings, we construct the eigenvalue plot from fitting a shifted PH distribution to the excess log data with a minimal phase size. Through various numerical examples we illustrate and compare our method against the Hill plot.

on

Monday, February 15, 2016

(Refreshments will be served from 2:15 p.m. outside Room 301 Run Run Shaw Building)

2:30 p.m. – 3:30 p.m.

at

Room 301, Run Run Shaw Building

Visitors Please Note that the University has limited parking space. If you are driving please call the Department at 3917 2466 for parking arrangement.

All interested are welcome