For favour of posting

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Departmental Seminar

Dr. Kaiyong WANG

School of Mathematics and Physics
Suzhou University of Science and Technology
China

will give a talk
entitled

THE UNIFORM ASYMPTOTICS FOR THE TAIL OF POISSON SHOT NOISE PROCESS WITH DEPENDENT AND HEAVY-TAILED SHOCKS

Abstract

This talk considers a shot noise process $\sum_{k=1}^{\infty} X_k h(t,\tau_k)1_{\{\tau_k \le t\}}, t \ge 0$, denoted by $S(t)$, and mainly investigates the asymptotics of the tail of $S(t), t \ge 0$ for dependent shocks $\{X_k, k \ge 1\}$ with heavy-tailed distributions. When the shocks $\{X_k, k \ge 1\}$ are bivariate upper tail asymptotic independent with distributions belonging to the heavy-tailed distribution class $L \cap D$, and the shot noise function $h(\cdot,\cdot)$ has positive lower and upper bounds, the uniform asymptotics of the tail of $S(t), t \ge 0$ have been obtained. Furthermore, when the shocks $\{X_k, k \ge 1\}$ have continuous distributions belonging to the heavy-tailed distribution class C, the positive lower-bound condition on the shot noise function $h(\cdot,\cdot)$ has been removed. For the case that the shot noise function $h(\cdot,\cdot)$ is not bounded from the above, the uniform asymptotics of the tail of $S(t), t \ge 0$ have also presented for the shocks $\{X_k, k \ge 1\}$ having a pairwise negatively quadrant dependence structure.

on

Thursday, August 29, 2019

(Refreshments will be served from 10:45 a.m. outside Room 301 Run Run Shaw Building)

11:00 a.m. – 12:00 noon

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