



Hong Kong Probability Seminar

<https://sites.google.com/site/hkprobability/>

Date: January 11, 2019 (Friday)
Venue: Room 301, Run Run Shaw Building, HKU

- 2:00 – 3:30pm : Ka Chun Cheung (HKU)

On asymptotic additivity of tail risk measures

Abstract: As perceived from daily experience together with numerous empirical studies, upper tail comonotonicity adequately describes the extremal dependence structure of multivariate risks especially over the course of financial turmoils or industrial accidents and outbreaks. Under this dependence structure, we establish the universal asymptotic additivity, as the probability level approaching to 1, for both Value-at-Risk and Conditional Tail Expectation for a portfolio of risks, in which each marginal risk could be any one having a finite endpoint or belonging to one of the three maximum domains of attraction. This covers most distributions commonly encountered in practice. Our results do not require the tail equivalence assumption as needed in the existing literature, and resolve a lasting problem in quantitative risk management. If time permits, results on asymptotic sub/super-additivity of tail risk measures under general Archimedean copula with regular varying generator will also be discussed.

This talk is based on a joint work with Hok Kan Ling, Qihe Tang, Phillip Yam and Fei Lung Yuen.

- 3:30 – 4:00pm: Coffee break
- 4:00 – 5:30pm, Zuoquan Xu (Poly U)

On probability distortion and applications in behavioral finance

Abstract: In this talk, I will first introduce probability distortion/weighting function and its roles in behavioral finance theories. Then I will describe recent development of the so-called quantile optimization method, a main tool to deal with optimization problems involving probability weighting from financial economics. In particular, portfolio selection, optimal stopping, and insurance models will be solved by this method.

All are welcome

The event is supported by the Department of Statistics and Actuarial Science, HKU.