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DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Seminar

Mr. CHEUNG Chi Kin, Eric

Department of Statistics and Actuarial Science
University of Waterloo
Canada

will give a talk

entitled

GENERALIZATIONS OF GERBER-SHIU FUNCTIONS IN RISK MODELS INVOLVING DEPENDENCE

Abstract

The seminal paper by Gerber and Shiu (1998) gave a huge boost to risk theory by incorporating the time of ruin, the surplus prior to ruin and the deficit at ruin into a single quantity currently known as the Gerber-Shiu function. Motivated by the fact that the surplus prior to ruin and the deficit at ruin are both quantities defined at the time of ruin, we propose to generalize the Gerber-Shiu function by further incorporating other random variables defined before the time of ruin. These include the surplus level after the second last claim before ruin, the maximum and the minimum surplus levels before ruin. Such generalizations of the Gerber-Shiu function allow us to study some new quantities such as the last interclaim time before ruin and the ladder height causing ruin. Applications of the newly proposed Gerber-Shiu functions in obtaining stochastic orderings and joint densities of ruin-related quantities are demonstrated in various risk models involving dependence. This presentation is based on joint work with David Landriault, Gordon Willmot and Jae-Kyung Woo.

on

Wednesday, April 8, 2009

3:00 p.m. – 4:00 p.m.

at

Room 524, Meng Wah Complex
(behind the Chong Yuet Ming Amenities Centre)

Visitors Please Note that the University has limited parking space. If you are driving please call the Department at 2859 2466 for parking arrangement.

All interested are welcome