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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

A VARIANT OF THE GERBER-SHIU FUNCTION IN THE DUAL RISK MODEL AND ITS APPLICATIONS

Abstract

In this talk, we consider a stochastic model in which a business enterprise is subject to constant rate of expenses over time and gains which are random in both time and amount. Such a model is known as the 'dual risk model' the risk theory literature. Under this model, we are interested in various quantities related to the survival of the business after default, which include (i) the fair price of a perpetual insurance which pays the expenses whenever the available capital reaches zero; and (ii) the Laplace transforms of the time of recovery and the first duration of negative capital. To this end, a variant of the Gerber-Shiu function (Gerber and Shiu (1998)) commonly used in insurance analysis is proposed. The general structure of the function is studied via the use of defective renewal equations without any specific distributional assumptions, and its applications in the evaluation of the above-mentioned quantities are illustrated. A numerical example will also be given.

on

Wednesday, May 26, 2010

2:15 p.m. – 3:15 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