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DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Seminar

Dr. David LANDRIAULT

Department of Statistics and Actuarial Science
University of Waterloo
Canada

will give a talk

entitled

ON SOME JOINT DISTRIBUTIONS IN THE CLASSICAL RISK MODEL

Abstract

In this talk, we consider the classical risk model in risk theory. An explicit expression for the joint (defective) distribution of the time to ruin, the surplus immediately prior to ruin, and the deficit at ruin is derived. The special case of mixed Erlang claim sizes is further examined. In the second part of the talk, a generalization of the well-known Gerber-Shiu function (Gerber and Shiu (1998)) is proposed by incorporating the maximum surplus level before ruin into the penalty function. For this wider class of penalty functions, we show that the generalized Gerber-Shiu function can be expressed in terms of the original Gerber-Shiu function (Gerber and Shiu (1998)) and the Laplace transform of a first passage time which is readily available. The joint density of the surplus prior to ruin, the deficit at ruin and the maximum surplus before ruin is obtained through analytic Laplace transform inversion of a specific generalized Gerber-Shiu function.

on

Wednesday, February 25, 2009

2:00 p.m. – 3:00 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