Transformation of variable techniques for a second order Volterra integro-differential equation arising in ruin theory when the risk process is perturbed by diffusion

Athena Makroglou
Department of Mathematics, Univ. of Portsmouth
Portsmouth PO1 3HE, UK
athena.makroglou@port.ac.uk

Abstract

The talk presents computational results obtained from the direct numerical solution of a 2nd order Volterra integro-differential equation used by Wang and Wu (2000) as a model of ruin theory when the risk process is perturbed by diffusion. The numerical methods are based on transformation of variables techniques. Comparisons are made with results obtained by use of collocation methods.

References