DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Seminar

Dr. Guojun GAN

Department of Mathematics
University of Connecticut
U.S.A.

will give a talk

entitled

EFFICIENT GREEK CALCULATION OF VARIABLE ANNUITY PORTFOLIOS FOR DYNAMIC HEDGING: A TWO-LEVEL METAMODELING APPROACH

Abstract

The financial risk associated with the guarantees embedded in variable annuities cannot be addressed adequately by traditional actuarial techniques. Dynamical hedging is a popular approach to mitigate the financial risk arising from variable annuities. However, a major challenge of dynamical hedging is to calculate the dollar Deltas of a portfolio of variable annuities within a short time interval so that rebalancing can be done timely. In this talk, I will present a two-level metamodeling approach to efficiently estimating the partial dollar Deltas of a portfolio of variable annuities under a multi-asset framework. The first level metamodel is used to estimate the dollar Deltas at some well-chosen market levels and the second level metamodel is used to estimate the dollar Deltas at the current market level based on the pre-calculated dollar Deltas. This work was done jointly with Sheldon Lin of the University of Toronto.

on

Thursday, March 19, 2015

(Refreshments will be served from 4:15 p.m. <u>outside Room 301 Run Run Shaw Building</u>)

4:30 p.m. – 5:30 p.m.

at

Room 301, Run Run Shaw Building

<u>Visitors Please Note</u> that the University has limited parking space. If you are driving please call the Department at 3917 2466 for parking arrangement.

All interested are welcome