1ST ACTUARIAL DAY 2011

ACTUARIAL SCIENCE & RISK MEASURES WORKSHOP

Department of Statistics & Insurance Science
University of Piraeus

Invited Speakers:

Hans Gerber
(University of Lausanne)

Mark Goovaerts
(University of Leuven)

Richard Verrall
(Cass Business School, City University)

Mario Wüthrich
(University, ETH Zurich)

Place:

University of Piraeus,
80 Karaoli & Dimitriou Str.
Conference Room

Date:

Opening: 9:30

Friday 14 of January 2011

Organizers:

Department of Statistics and Insurance Science of the University of Piraeus & Insurance Training and Examinations Committee, Ministry of Economy.

Chairman: Georgios Pitselis
Email: pitselis@unipi.gr

Free Admission

No prior registration is needed.

U N I V E R S I T Y O F P I R A E U S
DEPARTMENT OF STATISTICS AND INSURANCE SCIENCE

Actuarial Science and Risk Measures Workshop
1st Actuarial Day 2011

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Date: Friday 14 of January 2011
Time: 9:30-14:00
Free Admission

Program (List of Abstracts)

The journey from premium calculation principles and risk measures to the probability of ruin and optimal dividends
Time: 9:30-10:30

Hans U. Gerber
University of Lausanne

Premium calculation principles and their desirable and undesirable properties are explained. Does this teach us a lesson about risk measures? In a natural way we are led to the dynamic notion of ruin. An alternative criterion is the optimization of the dividends of an insurance company.

Decision principles derived from risk measures
Time: 10:30-11:30

Mark Goovaerts
University of Leuven

In this paper, we argue that a distinction exists between risk measures and decision principles. Though both are functionals assigning a real number to a random variable, we think there is a hierarchy between the two concepts. Risk measures operate on the first "level", quantifying the risk in the situation under consideration, while decision principles operate on the second "level", often being derived from the risk measure. We illustrate this distinction with several canonical examples of economic situations encountered in insurance and finance. Special attention is paid to the role of axiomatic characterizations in determining risk measures and decision principles. Some new axiomatic characterizations of families of risk measures and decision principles are also presented.

What is wrong with the chain-ladder technique (?)".
Time: 12:00-13:00

Richard Verrall
Cass Business School, City University

The title is both a statement and a question. The talk will illustrate some of the things that are wrong, and use recent research to provide some improvements on the basic approach. Is there anything wrong with it? It is simple and it gives reasonable results in many cases. This talk will focus on the chain-ladder technique, but the basic message applies to many other basic reserving methods. A new reserving method will be illustrated, which is built on the underlying risk theory of the processes generating the claims. This method is as simple as the chain-ladder technique, but gives a lot more information and is much better for management to understand.

Reversible Jump Markov Chain Monte Carlo Method for Claims Reserving
Time: 13:00-14:00

Mario Wüthrich
University, ETH Zurich

We present an application of the reversible jump Markov chain Monte Carlo (RJMCMC) method to the important problem of setting claims reserves in general insurance business. These reserves are necessary because the premium is received early, but claims may take years to be reported and settled. The RJMCMC method described in this talk is a very powerful numerical tool that allows to simulate from very general stochastic models and also allows to do model selections. We will use the RJMCMC for analyzing the over-dispersed Poisson claims reserving model. We present a parameter reduction technique and we explain how the tail factor can be estimated in this model. This is joint work with Richard Verrall and Peter England.

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