

SÉMINAIRE DE MATHÉMATIQUES ACTUARIELLES ET FINANCIÈRES

organisé par *Quantact*, le *Laboratoire de mathématiques actuarielles et financières* du CRM

PK-1140

201 avenue du Président-Kennedy, Montréal

Complexe des Sciences, UQAM

23 janvier 2015, 14:00-16:30

Hansjoerg Albrecher

Université de Lausanne, Lausanne, Suisse

Cost of capital and insurance premiums

The development of rules for the determination of premiums under solvency capital requirements is a classical topic in insurance. In recent years the cost-of-capital method for the determination of risk margins has been advocated. In this talk a framework will be developed which considers the viewpoint of regulators, investors and policyholders at the same time, leading to a quantitative approach towards interpreting and challenging some market practices in this context.

Benjamin Avanzi

Université de Montréal

Actuarial applications of Lévy copulas

Lévy copulas embody the dependence structure between Lévy processes, similarly to the way (distributional) copulas represent that of random variables. Lévy copulas have potential that only starts to be explored in the actuarial field. In this presentation, we will illustrate how Lévy copulas can be used in some actuarial problems. After recapping some of the theory related to Lévy copulas, we will discuss how they can be used in the most simple way to model dependence between Poisson processes. In order to build non-exchangeable dependence structures of dimension 3 or more, we will discuss how Archimedean Lévy copulas can be nested. Finally, we will consider how to fit a multivariate shot noise Cox process with Lévy copula dependence. All models will be illustrated with real data.

Site web: www.quantact.uqam.ca/seminaires

SEMINAR OF ACTUARIAL AND FINANCIAL MATHEMATICS

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