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Einladung
zum
Oberseminar Stochastik

Am Donnerstag, 18. Oktober 2018, um **17:45 Uhr** im Seminarraum 2 des Mathematischen Instituts, Weyertal 86-90, 50931 Köln. Es spricht:

Matteo Brachetta

(Universität Pescara)

zum Thema

Optimal Proportional Reinsurance and Investment
for Stochastic Factor Models

Abstract: We investigate the optimal proportional reinsurance-investment strategy of an insurance company that maximizes the expected exponential utility of its terminal wealth on a finite time horizon. The goal is to extend the classical Cramer-Lundberg model by a real-valued stochastic factor which affects the intensity of the claims arrival process, described by a Cox process, as well as the insurance and reinsurance premia. Using the classical stochastic control approach based on the Hamilton-Jacobi-Bellman equation we characterize the optimal strategy and provide a verification result for the value function via classical solutions of two backward partial differential equations. Existence and uniqueness of these solutions are discussed. We illustrate the results for various premium calculation principles. A new premium calculation rule is proposed in order to get strategies that are more realistic and fit better our stochastic factor model. Finally, a partial information problem is discussed.

Alle Interessenten sind herzlich eingeladen.

Die Dozenten der Stochastik