FRIEDRICH-SCHILLER-
UNIVERSITÄT
JENA Fakultät für Mathematik und Informatik

Institut für Mathematik

Seminar zur Stochastik

Donnerstag, 9. Februar 2023
16:00 Uhr
SR 124 Carl-Zeiss-Str. 3

„Suboptimal Dividend Controls in a Brownian Risk Model with Exponential Utility“

Frau Professor Julia Eisenberg (Technische Universität Wien)

Abstract: We consider an insurance company modelling its surplus process by a Brownian motion with drift. Our target is to maximise the expected exponential utility of discounted dividend payments, given that the dividend rates are bounded by an exogenously given constant. Numerical and theoretical considerations lead us to the conclusion that the optimal strategy must be of a non-constant barrier type. For this reason, the classical methods for finding the optimal strategy cannot be applied here. We investigate the two most obvious suboptimal strategies: constant and constant-barrier-type.

“Measure the Suboptimality – Using Expected Occupation Bounds”

Herr Professor Paul Eisenberg (*Wirtschaftsuniversität Wien*)

Abstract: In stochastic control problems it is desirable to identify the optimal control. If the optimal control cannot be found, one does usually rely on numerical methods or an ad-hoc implementation. In both cases one should ask how good is the numerically found or ad-hoc chosen strategy compared to the best strategy. One way to quantify the non-optimality for a feedback control is to look at the difference of the value function to the performance function of the given feedback-control. We introduce a method to get an upper bound for this difference without knowledge of the optimal control.

Alle Interessierte sind herzlich eingeladen!

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