Pricing and Hedging of Variable Annuities in Affine Models

Thorsten Schmidt[1],

[1] University of Freiburg, Department of Mathematical Stochastics, GERMANY

In this talk we consider affine models and provide a way how to price efficiently variable annuities in a way which is free of financial and insurance arbitrage. The model can allow dependencies between stock, mortality and surrender, in particular taking effects like in the recent corona crisis into account when mortality increased and at the same time stock prices decreased. Finally, we show how to numerically access hedging in this approach by relying on deep neural networks.