

Prof. Dr. D. Becherer
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Institute of Mathematics
Stochastics



In summer term 2015 I shall give the following lecture

Financial Mathematics II

(Stochastische Finanzmathematik II)

The course will be taught in English.

Content:

Stochastic finance in time-continuous; Itô processes, diffusion models and martingale methods; application to the valuation and hedging of the risk from derivative financial instruments implied volatility, interest rate models including market models, further topics if time permits, eg. optimal stochastic control.

Prerequisites:

Basic lectures (Analysis 1+2; Measure Theory (as part of Analysis 3), Linear Algebra 1+2), Stochastics II (Stochastic Processes I), Stochastic Analysis (Stochastic Processes II; could be attended in parallel!) Recommended, no prerequisite is Financial Mathematics I.

References:

Lamperton, D.; Lapeyre, B.: Stochastic Calculus Applied to Finance, Chapman Hall, 2008
Brigo, D.; Mercurio, F.: Interest Rate Models Theory and Practice, Springer, 2007
Hull, J. C.: Options, Futures, and Other Derivatives, Pearson Prentice Hall, 2006
Björk, T.: Arbitrage Theory in Continuous Time, Oxford Univ. Press, 2004
Shreve, S.: Stochastic Calculus for Finance II, Springer, 2000

Lectures:

Tuesday, 09 – 11, RUD 26, room 1'304
Thursday, 11 – 13, RUD 26, room 0'310

First lectures: **April 14, 2015**

Exercises:

Tuesday, 11 – 13, RUD 25, room 1.114

Office hours: tba
Prof. Dirk Becherer