Prof. Dr. D. Becherer
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Institute of Mathematics
Stochastics

In summer term 2013 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 smile modeling; models for interest rate derivatives, including modern "Libor" market models

*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::

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

First lectures: **April 11, 2013**

Exercises: (room changed from April 30, 2013)

Tuesday, 11 – 13, RUD 25, room 1.114

Office hours: tba

Prof. Dirk Becherer