Announcement SoSe 2017
Lecture in Mathematical Finance

Continuous Time Finance (FIM)

Prof. Dr. Rudi Zagst

Area: / Modulnr.: FIM – Core course / MA9973

Course Structure: Lecture: 2h Exercises: 1h Programming Exercises: Voluntary

Content: Stochastic processes, Itô calculus, financial markets in continuous time, no-arbitrage and completeness, pricing and hedging of contingent claims, Black-Scholes model and generalizations, pricing of exotic options, stochastic volatility and jump models, numerical methods; voluntarily: implementation of financial models (Monte Carlo simulation, Fourier pricing, etc.)

Audience: MSc Finance & Information Management

Prerequisite: MA9972 - Discrete Time Finance
MA4405 - Stochastic Analysis/Quantitative Methods in Finance (recommended)

Literature:
Albrecher, Binder & Mayer (2009): Einführung in die Finanzmathematik, Birkhäuser
S.E. Shreve (2004): Stochastic Calculus for Finance II: Continuous-Time Models, Springer Finance
J.C Hull (2012): Options, Futures and other Derivative, 9th ed., Pearson
R. Zagst (2002): Interest Rate Management, Springer Finance
N.H. Bingham und R. Kiesel (2004): Risk-Neutral Valuation: Pricing and Hedging Financial Derivatives, Springer Finance
M. Musiela und M. Rutkowski (2005): Martingale Methods in Financial Modelling Vol. 36, Springer

Certificate: Written or oral examination, 4 CP

Time: T.B.A.

Location: University of Augsburg