# 8th Frankfurt MathFinance Conference Derivatives and risk management in theory and practice

## 17-18 March 2008

Join Germany's leading Quant Conference

Details and registration at http://conference.mathfinance.com.

#### List of speakers

**Prof Claudio Albanese** Dr Alexander Antonov **Dr Oliver Caps** Andrea Odetti&Sanjeev Shukla Dr Markus Himmerich Dr Jürgen Hakala Fiodar Kilin Prof Antje Mahayni Dr Jan Maruhn Prof Hans Mittelmann Prof Goran Peskir Dr Kay Pilz Prof Eckhard Platen Prof Rolf Poulsen Dr Dietmar Schölisch Dr Sven Ludwig&Håkan Norekrans Dr Jianwei Zhu

Independent Consultant Numerix **Dresdner Bank** Commerzbank d-fine Standard Chartered Quanteam AG University of Duisburg-Essen **UniCredit Markets & Investment Banking** Arizona State University University of Manchester Sal. Oppenheim Sydney University of Technology University of Copenhagen AXA Sungard LPA

# Topics

Long-Term Options in Foreign Exchange and Interest Rate Markets Effective approximation of FX/EQ options for the hybrid models: Heston and correlated Gaussian interest rates Using Compiler-Engineering Algorithms for Building Payoff Languages Foreign Exchange Derivatives: Market Conventions and Smile Dynamics The Continuous-Time Lattice Method --- Option Pricing through Matrix Diagonalization Accelerating the Calibration of Stochastic Volatility Models **Options Pricing - From Theory to Practice** Effectiveness of CPPI Strategies under Discrete-Time Trading Selected Applications of Optimization in Finance **Optimization Software for Financial Mathematics Options Pricing - From Theory to Practice** High Performance Computing Techniques in Finance The British Option **Option Pricing with No-Arbitrage Constraints** The Law of the Minimal Price Auto-Static for the People: Risk-Minimizing Hedges of Barrier Options Dynamic Hedging of Variable Annuities – TwinStar: The AXA Way High Performance Computing Techniques in Finance Generalized Swap Market Model and the Valuation of Interest Rate Derivatives

# Info line: info@workshop.mathfinance.com

The conference is sponsored by

Commerzbank AG, Financial Engineering Team d-fine GmbH Sal. Oppenheim jr. & Cie. KGaA, Trading & Derivatives SciComp Europe Lucht Probst Associates GmbH SunGard NumeriX Softward Ltd Quanteam AG

## **Preceding Workshop**

# **Professor Dr Eckhard Platen**

# A Benchmark Approach to Quantitative Finance

Saturday 15 March 2008, 9:00 a.m. - 6:00 p.m. Frankfurt, Germany

## **Course Overview**



This one day workshop introduces into the benchmark approach, which provides a general framework for financial market modeling. It allows for a unified treatment of derivative pricing, portfolio optimization and risk management. It extends beyond the classical asset pricing theories, with significant differences emerging for longer dated products and risk measures. A new Law of the Minimal Price emerges for derivative pricing. A Diversification Theorem allows forming a proxy for the numeraire portfolio. The richer modeling framework of the benchmark approach allows the derivation of tractable, realistic models for equity indices, exchange rates, equities and the interest rate term structure fully under the real world probability measure. It will be explained how the approach differs from the classical risk neutral approach. Examples on long term and extreme maturity derivatives demonstrate the important fact that a range of contracts can be less expensively priced and hedged in reality than suggested by classical theory.

### All delegates will be given a complimentary copy of the book.

- Starting financial modeling from the numeraire portfolio
- Deriving the Law of the Minimal Price
- Approximating the numeraire portfolio via diversification
- Consistent utility maximization and portfolio optimization
- Pricing nonreplicable claims consistently as an investment
- Pricing and hedging long term and extreme maturity contracts
- Equity index, FX, equity and term structure derivatives.

## Trainer



Eckhard Platen holds a Chair in Quantitative Finance at the University of Technology in Sydney. Prior to this appointment he was the Founding Head of the Centre for Financial Mathematics at the Institute of Advanced Studies at the Australian National University in Canberra. He has authored more than 130 articles in quantitative finance and applicable mathematics, and is the co-author of two successful books on Numerical Methods for Stochastic Differential Equations. Core ideas from his new book (Platen/Heath: <u>A Benchmark</u> <u>Approach to Quantitative Finance</u>, Springer Finance (2006), ISBN 3-540-26212-1) will be presented and expanded at the workshop.

### Audience

The course is designed for portfolio managers, risk managers, financial engineers, financial analysts, quantitative analysts, traders, and researchers.

### Cost

950 EUR plus VAT

The VAT in Germany is currently 19%.

# Booking

You can book online at

http://conference.mathfinance.com/2008/benchmark/registration.php

### Venue

Frankfurt School of Finance & Management, Room 16

More information and booking at http://conference.mathfinance.com/2008/benchmark/index.html