

## Vorträge

Montag, 16. August 2010, ab 11:00 Uhr bis Freitag, 20. August 2010 ab 11:00 Uhr (Week 3), ESI Boltzmann Lecture Hall, Boltzmannngasse 9, 1090 Wien

ESI

**AdS Holography and the Quark-Gluon Plasma**

organized by S. Husa, K. Landsteiner, A. Rebhan

Link: <http://www.esi.ac.at/activities/lectures.html>

Dienstag, 17. August 2010, von 16:00 Uhr – 17:00 Uhr, Seminarraum D 103, UZA 4

Finanzmathematik

Vortrag

**Richard Vierthauer (Christian-Albrechts-Universität zu Kiel):**

**"Exponential Utility Maximization and the Minimal Entropy Martingale Measure in Affine Stochastic Volatility Models"**

**Abstract:**

We show that the minimal entropy martingale measure (MEMM) exists if the dynamics of multivariate assets belongs to a class of affine stochastic volatility models characterized by their affine structure and an additional structure condition. In this framework we solve the corresponding exponential utility maximization problem. As an application this leads to explicit formulas in some stochastic volatility models allowing for multivariate volatilities. Since the knowledge of the MEMM is a key ingredient for asymptotic exponential utility-based pricing and hedging, we use our results in order to compute first-order approximations of utility-indifference prices and utility-based hedging strategies in affine stochastic volatility models. We illustrate our results with a numerical example in the superposition model of Barndorff-Nielsen & Shephard.