



Announcement

On August 15th, 2012, George Tauchen and Viktor Todorov from Northwestern University will give talks at the institute of mathematics, Humboldt Universität zu Berlin.

Speaker: Viktor Todorov

Title: “Volatility Occupation Times”

Abstract: We consider the problem of nonparametric estimation of the occupation measure of the diffusion coefficient (stochastic volatility) of a discretely observed Ito semimartingale on a fixed interval when the mesh of the observation grid is decreasing. On a first step we recover the Laplace transform of the volatility occupation measure from the discrete observations of the process and then on a second step we invert the Laplace transform via a regularized kernel to recover the (stochastic) volatility occupation measure. We derive the order of magnitude of the estimation error locally uniformly in space and we use the result to estimate nonparametrically the quantiles associated with the volatility occupation measure.

Speaker: George Tauchen

Title: “Volatility Activity: Specification and Estimation”

Abstract: The paper examines volatility activity and its asymmetry and undertakes further specification analysis of volatility models based on it. We develop new nonparametric statistics using high frequency option-based VIX data to test for asymmetry in volatility jumps. We also develop methods to estimate and evaluate, using price data alone, a general encompassing model for volatility dynamics where volatility activity is unrestricted. The nonparametric application to VIX data, along with model estimation for S&P Index returns, suggests that volatility moves are best captured by infinite variation pure-jump martingale with symmetric jump compensator around zero. The latter provides a parsimonious generalization of the jump-diffusions commonly used for volatility modeling.

Time and Place: Rudower Chaussee 25, building 1, room 1.115
http://www.mathematik.hu-berlin.de/org/ahof_eng.html
Wednesday, 15.08.2011,
10.00 a. m. –12.30 p. m.