# Einladung

zum Vortrag im Rahmen des **SFB Colloquiums** (Standort Linz), mit dem Titel

# Expert opinions and dynamic portfolio optimization under partial information

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**Abstract:**
We consider a continuous-time financial market with partial information on the drift and solve and compare utility maximization problems which include expert opinions on the unobservable drift. Stock returns are driven by a Brownian motion and the drift depends on a factor process which is either an Ornstein Uhlenbeck process or a continuous-time Markov chain. Thus the drift is hidden and has to be estimated from observable quantities. If the investor only observes stock prices then the best estimates are the Kalman and Wonham filters, respectively.
However, to improve the estimate, an investor may also rely on expert opinions providing a noisy estimate of the current state of the drift. This reduces the variance of the filter and thus improves expected utility. That procedure can be seen as a continuous-time version of the classical Black-Litterman approach. The expert opinions are modeled by a marked point process with jump-size distribution depending on the current state of the hidden factor process. We also look at models where the expert opinions arrive at fixed and known information dates as well as continuous-time experts.
For the associated portfolio problem with logarithmic utility we give explicit solutions. In case of power utility we apply dynamic programming techniques and solve the corresponding dynamic programming equation numerically. Diffusion approximations for discrete-time experts allow to simplify the problem and to derive more explicit solutions. We illustrate our findings by numerical results.

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