

Tutorial by Michael Pitt

16 December 2022, 15:00-19:30

Latent variable dynamic models

The tutorial will be organized into three sessions.

- (1) State space models and the Kalman filter
- (2) Classical and Bayesian approaches to estimation for non-Gaussian state space models
- (3) Sequential Monte Carlo, in particular particle filtering, for dynamic estimation

The textbook which related to (1) and (2) Time Series Analysis and Its Applications With R Examples (Shumway & Stoffer). The stochastic volatility model for financial returns will be the driving examples. R libraries for much of the code may be found at <https://www.stat.pitt.edu/stoffer/tsa4/>

There will be a coffee break between 17:00-17:30 and a 10 minutes pause at 18:15.