Techniques for Building Small Macroeconometric Models.

Adrian Pagan

**Lecture 1 Model Design**

1. Interpretative and summative models
2. Design of interpretative models- SVARs, New Keynesian (NK), Dynamic Stochastic General Equilibrium (DSGE) Models
3. SVAR Model Design– short-run and sign restrictions

**Lecture 2 Theory Based Interpretative Models**

1. NK Models – Gaps and Inter-temporal Optimization
2. DSGE Models – model design by inter-temporal optimization

**Lecture 3 Estimation Methods for Interpretative Models**

1. Method of moments - Instrumental Variables
2. Kalman filter based MLE
3. Indirect Estimation - Impulse Response Matching
4. Constrained MLE – Bayesian Mode Estimation

**Lecture 4 Estimating the Interpretative Models**

1. SVARs
2. NK Models – extracting model consistent gaps
3. DSGE Models

**Lecture 5 Model Design and Estimation Issues with Permanent Components**

1. SVECMS and Long-run Restrictions on SVARs
2. NK and DSGE Models

**Reading List**

*Lecture 1*


Fry and Pagan “Some Issues in Using Sign Restrictions for Identifying Structural VARs”, mimeo

Uhlig, H. (2005), "What are the Effects of Monetary Policy on Output: Results from an Agnostic Identification Scheme", Journal of Monetary Economics, 52, 381-419.

Lecture 2


Lecture 3


Dynare Version 3.06.04 available at http://www.cepremap.cnrs.fr/dynare/

Lecture 4


**Lecture 5**


