Structural estimation of econometric models
Fall 2014
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Outline

The course provides tools needed to estimate structural models. It is organized in five blocks, four taught by myself, one by Nora Traum (University of North Carolina). It assumes that participants have successfully completed the econometric and the macroeconomic first year sequence, that they have understood and implemented dynamics programming methods, and that they know how to program with MATLAB and, for the last block, FORTRAN.

The grade of the course will be based on 3-4 homeworks, and on a final project. Homework are supposed to be done in groups - max 3 people, grade will be shared by the group.

The main reference for the course is: Canova, Fabio (2007), Methods for Applied Macroeconomic Research, Princeton University Press (C-2007). You can also take a look at: De Jong, D. and Dave, C. (2011) Structural Macroeconometrics, Princeton University Press, second edition.

Notes and sample programs will be posted at the course web page.

Program

Block 1 (3 lectures, 8-9-10 September): Preliminaries: Perturbation methods to solve non-linear models; calibration and model evaluation (C-2007, ch 2, and 7)
Block 2: GMM and SMM, Indirect Inference (3 lectures, second week of october) (C-2007, ch.5).
Block 3: ML estimation. (3 lectures, 2nd week of november)(C-2007, Ch.6).
Block 4: Bayesian estimation and topics (3 lectures, end of november)(C-2007, Ch.9-11).
Block 5: (NT) Particle filters for estimation of non-linear models (3-4 lectures, end of november-beginning of december).