



Agenda

Identification analysis and global sensitivity analysis for Macroeconomic Models.

20 - 22 November 2019

Organised by
European Commission Joint Research Centre

The course will provide an introduction to methods of identification and global sensitivity analysis, their DYNARE implementation (identification toolbox and global sensitivity analysis toolbox) and their application to Dynamic Stochastic General Equilibrium (DSGE) macroeconomic models. The course will also give an overview of techniques of improving efficiency and speed performance of estimations in DYNARE.

Workshop Animators

- Stéphane Adjemian (Univ. Maine)
- Ludovic Calés (JRC)
- Roberta Cardani (JRC)
- Olga Croitorov (JRC)
- Fabio Di Dio (JRC)
- Lorenzo Frattarolo (JRC)
- Massimo Giovannini (JRC)
- Stefan Hohberger (JRC)
- Michel Juillard (Banque de France)
- Willi Mutschler (Univ. Münster)
- Johannes Pfeifer (Univ. Köln)
- Marco Ratto (JRC)

Wednesday 20 November

9.00 – 10.00	DYNARE introduction. Stéphane Adjemian
10.00 – 11.00	Estimating models with DYNARE. Part 1 Johannes Pfeifer
11.00 – 11.30	Coffee break
11.30 – 12.30	Global Sensitivity analysis introduction. Monte Carlo filtering (part 1) Massimo Giovannini, Stefan Hohberger
12.30 – 14.00	Lunch
14.00 – 14.45	Monte Carlo filtering (part 2) Massimo Giovannini, Stefan Hohberger
14.45 – 15.30	<i>Hands-on session</i>

15.30 – 16:00	Coffee break
16.00 – 17.00	<i>Hands-on session</i>
17.30 – 19.30	One Minute Madness, Poster session and Aperitive Closure day 1

Thursday 21 November

9.00 – 10.30	Kalman Filtering in DYNARE Michel Juillard
10.30 – 11.00	Coffee break
11.00 – 12:30	Identification analysis and high order approximation of DSGE models. Applications. Willi Mutschler
12.30 – 14.00	Lunch
14.00 – 17.00	<i>Hands-on session and exercises [Coffee at 3 pm]</i>
19.30-21.30	Dinner

Friday 22 November

9.00 – 9.45	Parallel DYNARE Marco Ratto
9.45 – 10.45	Estimating models with DYNARE. Part 2 Johannes Pfeifer
10.45 – 11:15	Coffee break
11.15 – 11.30	<i>Setting up the parallel toolbox</i>
11.30 – 12.30	Slice Sampling Marco Ratto
12.30 – 14.00	Lunch
14.00 – 15.00	<i>Hands-on session and exercises</i>
15.00 – 15:30	Coffee break
15.30 – 17.00	<i>Hands-on session and exercises</i>
17.00	Closure day 3

References

- Adjemian, Stéphane, Houtan Bastani, Frédéric Karamé, Michel Juillard, Ferhat Mihoubi, George Perendia, Johannes Pfeifer, Marco Ratto, and Sébastien Villemot. 2014. Dynare: Reference Manual, Version 4." Dynare Working Papers 1, CEPREMAP. URL <http://www.dynare.org/documentation-and-support/manual/pdf-version/view>.
- Iskrev, Nikolay. 2010. Local identification in DSGE models." Journal of Monetary Economics 57 (2):189-202. <http://ideas.repec.org/a/eee/moneco/v57y2010i2p189-202.html>
- Mancini, Tommaso. 2010. Dynare User Guide. <http://www.dynare.org/documentation-and-support/user-guide>.
- Ratto, Marco. 2008. Analysing DSGE Models with Global Sensitivity Analysis." Computational Economics 31 (2):115-139. URL <http://ideas.repec.org/a/kap/compec/v31y2008i2p115-139.html>.
- Ratto Marco. 2011. Algorithms for identification analysis under the DYNARE environment: final version of software." Monfispol report, Joint Research Centre, European Commission. <http://www.monfispol.eu/reports/IdentifFinalDeliverable.pdf>.
- Planas, C., M. Ratto, and A. Rossi (2015). Slice sampling in Bayesian estimation of DSGE models. Mimeo. European Commission, Joint Research Centre. https://archives.dynare.org/DynareConference2015/papers/Ratto_Planas_Rossi.pdf

Acknowledgments

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