

Euro Area Business Cycle Network Training School

Heterogeneous Agent Models in Continuous Time with Monetary Policy Applications

By

Prof Benjamin Moll
(Princeton University, NBER and CEPR)

Hosted by: University of Mannheim, Germany

4-6 June 2018

www.eabcn.org

Deadline: 6pm (GMT), Friday 2 March 2018

General Description

We are pleased to announce details of the latest EABCN Training School; a three-day course entitled “Heterogeneous Agent Models in Continuous Time with Monetary Policy Applications”. **Prof Benjamin Moll** will teach the course. It is primarily aimed at participants in the Euro Area Business Cycle Network but applications will also be considered from doctoral students, post-doctoral researchers and economists working in central banks and government institutions outside of the network, as well as commercial organisations (fees applicable for non-network organisations).

Course Contents

A recent literature argues that Heterogeneous Agent New Keynesian (HANK) models provide a useful framework for the analysis of macroeconomic shocks and policies, particularly for better understanding the transmission mechanism of monetary policy. Central Banks often have access to (or collect themselves) high-quality micro data and such heterogeneous agent models also open up the door to bringing this micro data to the table in order to empirically discipline macro theories.

This training course develops tools for the analysis and numerical solution of heterogeneous agent models. Continuous-time methods have proven useful in this regard because, in continuous time, heterogeneous agent models can be conveniently solved as systems of partial differential equations. The emphasis of the training course will be on providing the necessary background for participants to apply these tools in practice, with particular focus on numerical solution techniques using finite difference methods.

The training course will cover the following applications:

- General equilibrium models with incomplete markets and uninsured idiosyncratic labour income risk as in Aiyagari (1994), Bewley (1986) and Huggett (1993) that are widely used to study the role of income and wealth distribution in the macroeconomy
- Heterogeneous agent models with both idiosyncratic and aggregate risk as in Den Haan (1997) and Krusell and Smith (1998)
- Heterogeneous Agent New Keynesian (HANK) models

- First attempts at Bayesian estimation of HANK models
- (Time permitting) Theories with multiple assets and non-convexities as well as stopping time problems

How to Apply:

The course will take place at the University of Mannheim in Mannheim (Germany). Participants will be invited to make their own arrangements regarding their travel, accommodation and meals. Further information will be available to successful applicants. Candidates should apply online by going to the following link <http://portal.cepr.org/eabcn-training-school-heterogeneous-agent-models-continuous-time-monetary-policy-applications> and upload your CV by 6pm (GMT), Friday 2 March 2018. If you have any issues logging in, please get in touch with Mandy Chan at mchan@cepr.org

PhD students should also send a statement that specifies the ways participating in the school will be useful for their current research (max 300 words). You can attach your statement as an additional file.

About the Instructor:

Prof Benjamin Moll is an associate professor of economics and international affairs, as well the Cyril E. Black University Preceptor at Princeton University. He is also a faculty research fellow of the National Bureau of Economics and a research affiliate at the Centre for Economic Policy Research. He has had visiting appointments in the department of economics at Harvard, New York University and Stanford.

Moll's current research explores the role of income and wealth distribution in the macroeconomy. One line of this work is concerned with the causes of inequality, in particular understanding what drove the rise in income and wealth inequality at the very top of the distribution observed in the U.S. over the past forty years. A second line of this work examines how the presence of inequality affects how economists should think about macroeconomic policy.

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