

## Agent-Based Computational Macroeconomics

Bielefeld University Mini-course - Fall 2013

Peter Howitt, Brown University

**Outline:** The course will cover the use of agent-based computational economics (ACE) as an alternative approach to macroeconomic theory, focusing on models that Professor Howitt has helped to construct.

### Lecture Schedule:

Tue, Sept. 24	10:15	Introduction to ACE macro modeling
Tue, Sept. 24	18:00	An Agent-Based Model of the Housing Market
Wed, Sept 25	10:15	The Emergence of Economic Organization
Thu, Sept. 26	10:15	The Effects of Inflation on Macroeconomic Performance
Fri, Sept. 27	10:15	Banks, Market Organization and Macroeconomic Performance

### Reading list:

- Ashraf, Quamrul, Boris Gershman and Peter Howitt. "Macroeconomics in a Self-Organizing Economy." *Revue de l'OFCE, Debates and Policies* 124 (2012): 43-65.
- Ashraf, Quamrul, Boris Gershman and Peter Howitt, "How Inflation Affects Macroeconomic Performance: An Agent-Based Computational Investigation." Unpublished, Brown University, June 2013. [http://www.econ.brown.edu/faculty/Peter\\_Howitt/working/Inflation.pdf](http://www.econ.brown.edu/faculty/Peter_Howitt/working/Inflation.pdf)
- Ashraf, Quamrul, Boris Gershman and Peter Howitt, "Banks, Market Organization and Macroeconomic Performance: An Agent-Based Computational Analysis." Unpublished, Brown University, May 2011. [http://www.econ.brown.edu/faculty/Peter\\_Howitt/working/agh.pdf](http://www.econ.brown.edu/faculty/Peter_Howitt/working/agh.pdf)
- Dawid, Herbert, Simon Gemkow, Philipp Harting, Sander van der Hoog, and Michael Neugart. "The Eurace@Unibi Model: An Agent-Based Macroeconomic Model for Economic Policy Analysis." <http://www2.econ.iastate.edu/tesfatsi/eurace-unibi-model-2011-v1.pdf>.
- Delli Gatti, D., C. Di Guilmi, E. Gaffeo, G. Giulioni, M. Gallegati, and A. Palestrini. "A New Approach to Business Fluctuations: Heterogeneous Interacting Agents, Scaling Laws and Financial Fragility." *Journal of Economic Behavior and Organization* 56 (2005): 489-512.
- Dosi, Giovanni, G. Fagiolo, and A. Roventini. "Schumpeter Meeting Keynes: A Policy-Friendly Model of Endogenous Growth and Business Cycles." *Journal of Economic Dynamics and Control* 34 (2010): 1748-67.
- Howitt, Peter. "The Microfoundations of the Keynesian Multiplier Process." *Journal of Economic Interaction and Coordination* 1 (May 2006): 33-44.
- Howitt, Peter. "What Have Central Bankers Learned from Modern Macroeconomic Theory?" *Journal of Macroeconomics* 34 (March 2012): 11-22.
- Howitt, Peter and Robert Clower. "The Emergence of Economic Organization." *Journal of Economic Behavior and Organization* 41 (January 2000): 55-84.
- Tesfatsion, Leigh. "Agent Based Computational Economics: A Constructive Approach to Economic Theory." In *Handbook of Computational Economics*, edited by Leigh Tesfatsion and Kenneth L. Judd, 831-80. Vol. 2. Amsterdam: North-Holland, 2006.