

2nd Workshop on Agent-based modelling at ESCP Europe

Agent-based modelling in economics – from toy model to verified tool of analysis

A platform for discussion + tutorial on the validation and verification of ABM

May 19th-20th 2017 at ESCP Europe Business School Berlin

Organized by SustBusy: Research Center on Business and Society – Towards a Sustainable World

The best model of a cat is a cat, preferably the same cat.¹ Science needs models to study phenomena which can't be tested in reality. A 1:1 model would be as complex as the real world and take as long to run. Models thus have to be abstract simplifications. Standard economic mathematical models are high abstractions based on unrealistic behavioral assumptions.

Agent-based models (ABM) have been established as an alternative, offering the potential to integrate empirically observed facts, but economic ABM are still often toy models. They may be helpful to illustrate interrelations or dynamics, but the relevance of their analysis is hard to prove.

The workshop wants to discuss how economic ABM can become more credible by designing them following standard principles of validation and verification. We would like to exchange ideas about methods discussed in literature, such as sensitivity analyses, guidelines for rigor², or the "systematic design of experiments" (DOE)³.

We encourage all scientists working with ABM in economics and basic experience with model validation to send an abstract of 300-500 words by **March 26th 2017** via email to sustbusy@escpeurope.eu, together with the application form available at www.sustbusy.eu. Scientists without a paper may apply explaining their motivation. Active participation is required by agreeing to serve as discussant for a paper. Notification of acceptance will be given after a review process by March 31, full papers are due by May 5th 2017. The workshop is free of charge. For more information please consult our workshop's website www.sustbusy.eu and do not hesitate to contact us.

We are looking forward to welcome you in Berlin,

Sylvie Geisendorf

¹ Quote adapted from: Rosenblueth A. and Wiener N. (1945) The Role of Models in Science. *Philos Sci.* 12:316–321

² Rand W. and Rust R. (2011) Agent-Based Modeling in Marketing: Guidelines for Rigor. *Intern J of Res in Marketing.* 28:181-193

³ Lorscheid I., Heine BO. And Meyer M. (2012) Opening the 'black box' of simulations: increased transparency and effective communication through the systematic design of experiments. *Comput Math Oran Theory.* 18:22-62

