

How to apply?

The summer school is addressed to highly motivated **graduate and PhD students** as well as researchers interested in behavioral economics, agent-based modeling and data science.

If you are interested, please send an **application** containing a **letter of motivation** (max. 1.5 pages), including a statement as to which track (behavioral economics, agent-based modeling **or** data science) you wish to attend, and **your CV** to tom.bauermann@rub.de. You will be notified by e-mail regarding the status of your application in May 2019.

Application period: 15th February 2019 until 30th April 2019

Participation Fee: **75€** for members of the **Netzwerk ökonomische Bildung und Beratung** (NÖBB e.V.) and **95€** for non-members. The fees include lunches and coffee breaks as well as one social dinner. Support for travel costs cannot be provided.

For further information:

<https://www.noebb.de/summer-school-methods-2019>

We gratefully acknowledge the financial support received from the **Research Institute for Societal Development** (Forschungsinstitut für Gesellschaftliche Weiterentwicklung).

The Summer School is organized by the **Chair for Macroeconomics at the Ruhr-University Bochum**, the **Netzwerk ökonomische Bildung und Beratung** (NÖBB e.V.), and the **Research Institute for Societal Development** (Forschungsinstitut für Gesellschaftliche Weiterentwicklung e.V. (FGW)).

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Summer School on Complexity Economics, Behavioral Economics and Data Science

02 Sept. – 04 Sept. 2019

Location:
Ruhr-Universität Bochum



The complexity of economic processes is increasing and standard economic theory and methodology have reached their limits. Therefore, economic professionals as well as young and experienced researchers are seeking new knowledge and analytical methods capable of addressing economic complexity. In our Summer School on Complexity Economics, Behavioral Economics and Data Science, we provide an introduction to Behavioral Economics, Agent-Based Modeling, and Data Science, as well as an introduction to Complexity and Pluralism in Economics to PhD students and graduate students.

Lectures on Complexity and Pluralism by Dr. Claudius Gräbner (ICAE Linz)

This talk will give a brief introduction to economic philosophy and will provide students with the analytical tools from the philosophy of science to adequately appreciate the methods to be learned in the upcoming days. The goal is to understand the link between the complexity of economies and the need for pluralism in economic theory as well as to understand the need for a pluralism in economic methodology.

Behavioral Economics by Prof. Dr. Christian Cordes (Universität Bremen) and Dr. Wolfgang Luhan (University of Portsmouth)

The course gives an introduction to Behavioural Economics. We will discuss alternatives to standard rational choice theory, covering areas such as social preferences, decisions under risk and uncertainty and preferences anomalies. The applied part of the course will cover basics of experimental design and a hands-on demonstration of a software package used for economic lab experiments. Further, participants are introduced to insights of cultural evolution theory and gain a deeper understanding of the cultural roots of human cognition and its impact on decision-making.

Agent-Based Modeling by Prof. Dr. Michael Roos and Tom Bauermann (both Ruhr-Universität Bochum)

The participants of this course will learn to incorporate the insights from complexity economics into (macro-) economic agent-based models

(ABMs). In contrast to standard equilibrium models, ABMs view agents as heterogeneous, boundedly rational, interacting individuals. Besides learning the essential concepts of ABM, this course provides students with the programming skills needed to implement their ideas in computer code via NetLogo.

Data Science by Prof. Dr. Ulrich Fritsche (Universität Hamburg)

This course will train participants in the main concepts of data science and text mining in particular. Text mining is the process of analyzing collections of textual materials in order to capture key concepts and themes and uncover hidden relationships and trends without the requirement of knowing the precise words or terms that authors have used to express those concepts. Among other techniques, the classes cover text crawling and frequency analysis, basic lexicometrics, term extraction, (un)supervised learning and basic topic models. The course contains an introduction of the basic concepts as well as hands-on tutorials in R-Studio.

Schedule

🕒	Monday	Tuesday			Wednesday				
9-13	Lect.: Complexity								
	Lect.: Pluralism								
	Lect.: Overview Methods	ABM Lect.	BE Lect.	DS Lect.	ABM Lect.	BE Lect.	DS Lect.		
13-14	Lunch Break								
14-18 parallel	ABM Lect.	BE Lect.	DS Lect.	ABM Lab	BE Lab	DS Lab	ABM Lab	BE Lab	DS Lab
18-19				Group summary		Group summary			
20-22							Social Event		

Glossary: **ABM**= Agent-Based Modelling, **BE**= Behavioral Economics, **DS**=Data Science **Lect.** = Lecture, **Lab** = Lab-Session