

# 1<sup>st</sup> EAEPE – RA[X] Workshop

New Frontiers and Methodological Advances in  
Cooperation and Network Research  
November 2 – 3, 2015 in Essen, Germany

## PROGRAM

**Organized by:**

EAEPE Research Area [X] Coordinators

**Muhamed Kudic**

Stifterverband für die  
Deutsche Wissenschaft

**Sidonia von Proff**

Philipps University  
Marburg

### Aim and scope

Neither individual economic actors, firms, nor other types of organizations act in isolation. Instead economic entities are typically interconnected in multiple ways. Research into cooperation and networks has been a central topic in the social sciences for several years. Networks come in a remarkably diverse range of forms, from interpersonal networks (e.g. inventor networks) to intra-organizational networks (e.g. knowledge transfer channels in multinational companies), inter-organizational networks (e.g. industry innovation networks) and international trade networks (e.g. exchange of goods between nations). The **1<sup>st</sup> EAEPE – RA[X] workshop** focuses thematically on the ‘**dynamics of networks**’, still a widely unexplored research topic.

The **first day** of the workshop will provide an opportunity for junior and senior researchers to present their work and discuss methodological challenges, data availability issues, the handling of missing data, issues surrounding units of analysis, and many other related issues. In particular, early-stage and unpublished papers are invited to be presented. We give priority to contributions that apply a novel methodological approach.

The **second day** of the workshop will provide an opportunity to participate in “**interactive working groups**” that will be led by experienced researchers. Each working group is centered on a novel methodological approach. A brief introduction will be followed by interactive working phases and discussions. The main objective is to provide fast access to new methods in the field of cooperation and network research. A preliminary description of each of the six interactive working groups is provided below.





# EAEPE

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**Thematic focus:** *The use of empirical methods and models in cooperation and network research (1.5 hrs):*

**Room:** **HDT 420**

**Session Chair:** **Bogner Kristina**

- 11.45-12.05 Russo, Margherita; Caloffi, Annalisa; Rossi, Federica; Fiordelmondo, Valentina; Ghinoi, Stefano; Righi Riccardo  
“Multidimensional networks emerging in a regional policy programme?”
- 12.05-12.15 Discussion
- 12.15-12.35 Dai, Shuanping; Davydova, Aleksandra  
“Collaboration Networks of Chinese Electric Mobility Firms: Structure Pattern and Policy Implications”
- 12.35-12.45 Discussion
- 12.45-1.05 Hermann, Johannes; Toepfer, Stefan  
“Structural similarity and dependency of research networks in the German PV-Industry”
- 01.05-01.15 Discussion

**01.15 pm – 02.00 pm** **Joint lunch: HDT Casino**

## Paper session (II):

**Thematic focus:** *Understanding the emergence of complex systems (1.5 hrs):*

**Room:** **HDT 420**

**Session Chair:** **Toepfer Stefan**

- 02.00-02.20 Garas Antonios; Tomasello Mario; Schweizer, Frank  
“Selection rules in alliance formation: strategic decisions or abundance of choice?”
- 02.20-02.30 Discussion
- 02.30-02.50 Fritsch, Michael; Zoellner, Moritz  
“The fluidity of regional innovation networks”
- 02.50-03.00 Discussion
- 03.00-03.20 Mandel, Antoine; Khorenzhenko Igor  
“Modeling formation of EUETS trade networks”
- 03.20-03.30 Discussion

Coffee break (30 min)



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**Thematic focus:** *Applications of network methods and implications of policy makers and practitioners (1.5 hrs):*  
**Room:** *HDT 420*  
**Session Chair:** *Tomasello Mario*

04.00-04.20	Helbach, Christoph, Keldenich, Klemenz, Rothgang, Michael, <u>Yang, Guanzhong</u> "Call Me if You Can – An Experimental Investigation of Information Sharing in Knowledge Networks"
04.20-04.30	Discussion
04.30-04.50	<u>Yang, Liu</u> "The value network: a mechanism of entrepreneurship's effects on poverty alleviation"
04.50-05.00	Discussion
05.00-05.20	<u>Vermeulen, Ben</u> "Spatio-temporal patterns in inventor networks. Analysis of patent forward citation graphs"
05.20-05.30	Discussion

**06.30 pm – 09.00 pm**    **Joint dinner:**    **Mezzo-Mezzo Essen**  
(Kettwiger Str. 36, 45127 Essen)



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## DAY 2

3 November 2015

### Overview – interactive working groups

**09.30 am – 10.00 am Registration:**

**10.00 am – 12.00 am**

#### Interactive working group, slot I

**Working Group I-1:** Matching cooperation data - practices from the RegDemo project

Room: **HDT 419**

Dr. Wilfried Ehrenfeld  
Halle Institute for Economic Research (IWH)

The preparation of large-scale datasets is a challenge for every empirical project. In this interactive working group we will focus on new approaches for matching relational data. First, we start by addressing some typical data matching problems in large-scale cooperation and network datasets. Next, we discuss how these problems can be solved. In doing so, we refer to new techniques and data matching algorithms which were used in the RegDemo project. Finally, participants are invited to present their own data matching problems and discuss potential solutions.

**Working Group I-2:** SIENA models – an interactive introduction to the Rsiena package

Room: **HDT 420**

Dr. Tobias Buchmann  
University of Hohenheim

SIENA stands for “Simulation Investigation for Empirical Network Analysis”. The model combines random utility models and Markov processes, and simulates the evolution of networks between several points in time for which empirical observations are available. The SIENA model allows for the analysis of social influence as a driving force behind the evolution of networks. The interactive working group I-2 will provide an introduction to the analysis of longitudinal network data using the Rsiena package and based on a sample dataset. The participants can present and discuss their own research ideas.

**12.00 am – 01.00 pm    Joint lunch: HDT Casino**

**01.00 pm – 01.30 pm**

**The Stifterverband Research Data Center: A presentation of the R&D database**

Room: **HDT 420**

Dr. Barbara Grave, Stifterverband

The Stifterverband Research Data Center provides a unique micro-database on the research and development activities (R&D) of all German enterprises, which can be used by external scientists working on non-commercial empirical research projects. Core indicators are the internal and external R&D expenditures of enterprises based on use of funds and source of funding, R&D personnel based on type of activity and gender composition, the regional distribution of R&D, and innovation indicators. Some time series are available from 1979 onwards.

**01.30 pm – 03.30 pm**

**Interactive working group, slot II**

**Working Group II-1:** An introduction to agent-based modeling – experiences from the SimCo project

Room: **HDT 419**

Prof. Dr. Johannes Weyer, Fabian Adelt & Sebastian Hoffmann (TU Dortmund University)

Agent-based modelling and simulation (ABMS) is a tool to investigate the interaction of autonomous, heterogeneous entities in complex systems. ABMS can be used for network research and especially the analysis of networks' dynamics. The workshop starts with a brief introduction to agent-based modeling. We will present standard software and provide useful tips and tricks, how to apply ABMS to network research. The SimCo Model ("Simulation of the Governance of Complex Systems") will be presented throughout the workshop. Participants can present and discuss their own research ideas.

**Working Group II-2:** Qualitative methods in cooperation and network research

Room: **HDT 420**

Dr. Michael Rothgang  
Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI)

While quantitative methods allow for a rigorous investigation, the qualitative analysis of networks and cooperation dynamics gives insights into observable patterns of cooperation processes and network development. In addition, the findings from a qualitative inquiry provide an input into model development and help us to understand and reality-test the results of quantitative studies. We present methods that can be used, and discuss examples that show the benefit of qualitative methods of investigation.

**03.30 pm – 04.00 pm    coffee break**



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**04.00 pm – 06.00 pm**

### Interactive working group, slot III

**Working Group III-1:** General purpose technologies as an emergent property – introduction and applications

Room: **HDT 419**

Dr. Ivan Savin  
Karlsruhe Institute of Technology (KIT) &  
Bureau d'Economie Théorique et Appliquée (BETA)

Within the workshop we address the product-technology network structure, where the discovery of any good is the result of the adoption of several technologies with one another. In such a network growth model, where networks exhibit a bipartite and multiplex structure, we present how technology pervasiveness is an endogenous output of several key factors. We discuss the role of those factors involved and the resulting policy implications.

**Working Group III-2:** Experimental methods in cooperation and network research

Room: **HDT 420**

Dipl.-Vw. Johanna Kokot & Lisa Einhaus, M.A.  
University of Duisburg-Essen, Essen Laboratory for  
Experimental Economics (ELFE)

Economic experiments are a complementary method to field studies in economic research. They allow ceteris paribus conditions to be implemented and, thus, behavior to be investigated in a highly controlled way. The workshop introduces the method of experimental economics and demonstrates how questions in cooperation and network research can be addressed through laboratory experiments.

**06.00 pm – 06.15 pm**      **Farewell address**

Announcement of publication possibilities (Journal Special Issue and Book)