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Call for a special session on

## "Structuration processes in complex dynamic systems – theory, methods and economic implications"

EAEPE Annual Conference 2015 Genova, Italy, 17-19 September

By now it is well-recognized that real-world networks (such as inventor networks, innovation networks etc.) are characterized by typical structural patterns, e.g. core-periphery structures (Borgatti and Everett 1999), fattailed degree distributions (Barabasi and Albert 1999), small world properties (Watts and Strogatz 1998) etc. In other words, real-world networks are complex dynamic systems that significantly differ from random benchmarks. However, we still face more questions than answers in this area of research.

For instance, we have a rather incomplete understanding of how these large-scale network patterns emerge and solidify over time. The measurement and identification methods are still underdeveloped. The use of novel methods and analytical techniques such as numerical and stochastic agent-based models can help us to understand how even simple rules lead to self-organizing processes and pattern formation in complex systems. Furthermore, we do not yet completely understand how structural properties affect the overall stability of the entire system. Do bankruptcy cascades play a role in economic crises and what part does the network structure play in this effect? Which nodes are critical for keeping the system together? Closely related to robustness issues are diffusion processes on complex networks. We still do not fully understand how these real-world network properties affect diffusion and knowledge transfer among actors involved. Finally, we still know very little on how systemic properties of large complex systems at the macro level affect the economic performance of the embedded actors at the micro level.

The latter issues indicate that we still miss a holistic theoretical framework for the explanation of network change and structuration phenomena. Original institutional economics has insisted that economic systems are subject to complex, self-organizing, self-stabilizing, and path dependent processes, even though many new methods of complex systems modeling were not yet available at the time. Similarly, evolutionary economists, sociologists and management scholars have significantly contributed to a better understanding of the issues raised above. Can complexity economics provide a framework for the integration of determinants and mechanisms that explain structuration processes in dynamic systems?

In this joint session on "structuration processes in complex dynamic systems" we explicitly welcome both theoretical and methodological submissions from all kinds of scientific fields and with interdisciplinary methodological backgrounds. We especially welcome mixed-methods approaches for explaining the emergence, solidification and dissolution of networks by combining e.g. experimental and simulation methods.

The sessions will be accompanied by a panel discussion during the conference. Selected papers are eligible for a special issue of the "Forum for Social Economics".

## **Important Dates:**

Paper Submission Deadline Notification of Acceptance Full Paper Submission 1 May 2015 8 June 2015 4 September 2015

Abstract submissions (300-750 words) should be made through the online submission system at the <u>conference website</u>. Please select the topic "Structuration Processes in Complex Systems" in the drop-down menu. You need a registered EAEPE-account to submit your abstract. Registration is possible on the <u>EAEPE website</u>. For questions please contact the organizers of the special session: Torsten Heinrich (<u>torsten.heinrich@uni-bremen.de</u>) and Muhamed Kudic (<u>muhamed.kudic@stifterverband.de</u>)

For more information on the overall conference with the theme "A New Role for the Financial System" visit: <u>www.eaepe.org</u>