



## Culture, Innovation and Entrepreneurship: connecting the knowledge dots

Bari, Italy | 10-12 June 2015

### Special Track

#### Exploring the Drivers of Complexity in Economic and Financial Networks: Models and Empirics

##### Organizers:

Ilaria Giannoccaro | Polytechnic University of Bari, Italy  
Giorgio Fagiolo | Scuola Superiore Sant'Anna, Italy

##### Description:

This track deals with economic complexity, a topic that is receiving an increasing attention in the literature, because it is being more and more recognized as a fundamental aspect of nowadays economies and markets. One of the most important ingredients of a complex-system approach to economics is network theory, which is emerging as a new and promising field of study in both economics and finance. Network theory investigates the structure and dynamics of economic interactions between individuals, firms, industries, markets and countries. It aims at identifying general properties common to all economic networks, as well as principles that make economic networks more robust and efficient, in the face of the risk of systemic failures possibly induced by increasing interconnectedness.

This track intends to attract empirical and theoretical contributions using a complex-network approach in (micro, meso, macro) economics and finance. Particularly welcome are papers adopting innovative theoretical and empirical methodologies; investigating the drivers of complexity in economic networks; the heterogeneity of actor behaviors and link-formation mechanisms; the role of the "spaces" wherein networks are embedded and by which they are constrained (e.g. geographical, social, institutional, cognitive, etc.); the relationships between (and coevolution of) multi-dimensional economic relationships linking the same set of economic actors; the hierarchical structure of economic networks in the microeconomics of firms and technological innovation; the aggregate impact of network structure and evolution on the performance of actors and the efficiency of the economy.

##### Keywords:

Economic networks, complexity science, financial networks, innovation networks, international networks, network theory, complex adaptive systems

##### Invited talk:

###### *Global Value Trees*

Massimo Riccaboni, IMT Institute for Advanced Studies Lucca

**Abstract:** The fragmentation of production across countries has become an important feature of the globalization in recent decades and is often conceptualized by the term, global value chains (GVCs). When empirically investigating the GVCs, previous studies are mainly interested in knowing how global the GVCs are rather than how the GVCs look like. From a complex networks perspective, we use the World Input-Output Database (WIOD) to study the global production system. We find that the industry-level GVCs are indeed not chain-like but are better characterized by the tree topology. Hence, we compute the global value trees (GVTs) for all the industries available in the WIOD. Moreover, we compute an industry importance measure based on the GVTs and compare it with

other network centrality measures. Finally, we discuss some future applications of the GVTs.

**Guidelines:**

Researchers wishing to contribute are invited to submit an extended abstract (in Word format) of 1000-1500 words by January 25, 2015. Authors are encouraged to follow the guidelines for both extended abstracts as well as full papers that will be made available on IFKAD site.

A selection of papers will be considered for inclusion in a topical issue to be published in *Advances in Complex Systems*.

**Deadlines**

- 25 January 2015 - Abstracts Submission Deadline
- 28 February 2015 - Acceptance notification to authors
- 25 March 2015 - Early-Bird registration deadline
- 20 April 2015 - Full paper submission deadline
- 20 May 2015 - Registration deadline
- 10-12 June 2015 - Conference sessions

**For further information:**

For further information on this special track, please contact:  
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