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## Editorial

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**Biographical notes:** Giovanni Cerulli is a Senior Researcher at IRCrES-CNR, Research Institute on Sustainable Economic Growth, National Research Council of Italy, Unit of Rome. His research interest is in applied economics and econometrics, with a special focus on causal inference and machine learning. He has developed original causal inference models, such as dose-response and treatment models with social interaction, and also provided Stata implementations. He has published articles in several high-quality scientific journals and is currently Editor-in-Chief of the *International Journal of Computational Economics and Econometrics*.

Antonio Iovanella received his PhD in Operational Research at the Sapienza University of Rome. He is a Lecturer at the Department of Enterprise Engineering, University of Rome Tor Vergata. His research interests are related to complex networks, SNA, graph theory, and optimisation. He has been involved in several projects and consultations in the following areas of interest: supply chain management, decision support systems, and business process management. He is involved in several European projects regarding technology transfer and innovation management. He is a Business Innovation Manager for the Enterprise Europe Network. He has published research papers in national and international journals, conference proceedings as well as chapters of books.

Giovanna Ferraro is a Lecturer at the Department of Enterprise Engineering of the University of Rome Tor Vergata and Adjunct Professor at the Department of Engineering and Architecture of the University of Parma. Her research interests are related to complex networks, SNA and innovation management. She is involved in several European projects regarding technology transfer and business innovation management. She is the author of several research papers published in international journals.

Eleonora Pierucci is an Associate Professor of Applied Economics at Roma Tre University. Her research interests lie in two main fields related to (international and interregional) risk sharing and industrial economics with a particular focus on technology transfer. On these topics, she has published on several international journals such as the *European Journal of Political Economy*, *Regional Studies*, *Review of Economics of the Households*, and *The Journal of Technology Transfer*. She was a Schuman-Fulbright Scholar at University of Massachusetts Lowell (USA). Currently, he is an academic coordinator of the Erasmus+ Jean Monnet Project ‘Understanding European economic policy: towards a deeper union’.

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The last few years have witnessed an unprecedented production and availability of information on many aspects of social and economic life. Huge datasets on people and institutions, detailed spatial and relational data, vast collection of new figures on health-related subjects, data collection from the web and mobile devices, are in an impressive surge.

The related increase in computing power and algorithm development, and the need to ‘turn information into knowledge’, has promoted a proliferation of new research on the intersection between data science, statistics, computer science and artificial intelligence both at academic and industry level.

The intermingling development of hardware and software solutions is pushing forward the ability to produce sophisticated tangible and intangible artifacts able to learn from experience and/or extract value from data.

How can big data and machine learning revolution help to address societal ‘big challenges’? How can we improve our capacity to extract ‘knowledge’ from ‘information’? What specific methods are suitable for addressing thought-provoking research questions in this area of research? How can we reduce uncertainty and increase predictive power within complex socio-economic systems?

This special issue presents papers partly dealing with previous challenging questions, thus promoting an open scientific debate within the community.

These are revised versions of papers presented at IWcee18 – International Workshop on Computational Economics and Econometrics – held in Rome, June 26–28, 2018 at IRCrES-CNR, the Research Institute on Sustainable Economic Growth of the National Research Council of Italy.