

Model-Based Governance in a Sustainable World

Achieving Effective Impacts through Policy Modelling 2.0

Deadline: 30 October 2018

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Call for Papers

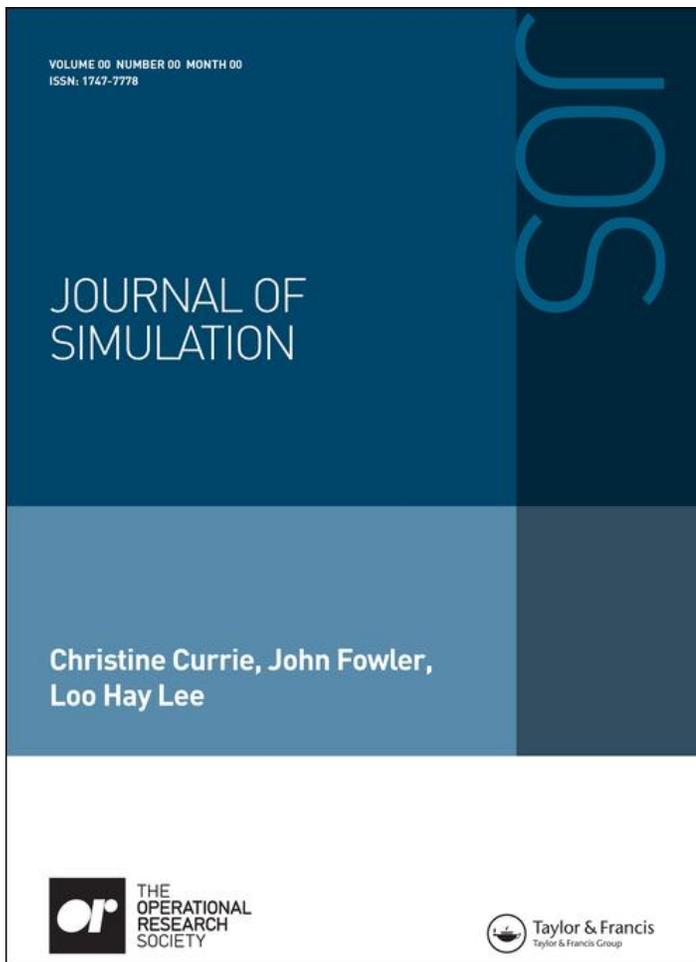
Computer modelling and simulation are increasingly used to support decision-makers in developing, testing and implementing policies and strategies in real world business domains.

In this context, this special issue will address the general subject of “Model-based Governance in a Sustainable World”, specifically aiming at establishing whether, and under which conditions, computer models and simulations may provide the capability of taking correct choices, hence effectively and accurately dealing with complexity in policy-making and strategy development and implementation. The impacts generated by policy/strategy implementations have historically been very difficult to anticipate, due to the many complex and interconnected phenomena. Among them, factors such as dynamic complexity, causal ambiguity and path dependency may severely hamper the ability of decision-makers to design and implement effective strategies and policies aimed at obtaining organizational resilience and hence sustainable results.

The general notion of ‘sustainability’ has been associated to environment, society and politics. Therefore, a perspective inspiring this collection of contributions looks at the deep structural relationships the underpin dynamics of sustainability in different domains.

In this context, different paradigms, techniques and approaches to computer modelling and simulation may play a relevant role, spanning from System Dynamics and Systems Thinking, to Agent-Based Modelling, Discrete Event Simulations, etc. Among them, System Dynamics and ABM have demonstrated their validity for decades, supplying models and tools particularly well suited in providing the basis for strategy development and implementation, and for meaningful learning experiences about the relationships between the structure and the dynamics of complex systems.

Starting from these considerations, this special issue will bring together researchers and practitioners to share their experiences and insights about the opportunities and challenges of using computer modelling and simulation in the field of policy and strategy modelling.



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To address challenges in this area, and dealing with the main issues of “sustainability” and “effective impacts achievement”, the scope of this special issue includes the following topics:

- understanding and representing dynamic complexity and interdependencies;
- promoting the understanding of short, medium and long term consequences of the policies carried out;
- performing scenario analyses;
- exploiting the growing amount of available data (so-called big data), that present significant problems of interpretation and management for policy-makers, in simulation;
- combining the nowadays many available modelling tools and techniques so capture the sometime intrinsic multidisciplinary nature of problems (i.e.: combining ABM to describe agents behavior with SD, to describe the behavior of strategic level variables in a certain multilayered system), so to be also able share and exploit the knowledge of different domain specialists;
- building and using simulation models and games for decision support under uncertainty and to support long-term policy analyses;
- developing advanced simulation tools for testing the resilience of business and governance systems;
- managing unpredictability and uncertainty;
- performing evaluation of outcomes that are difficult to measure;
- achieving effective impacts through organizational resilience and sustainable governance;
- supporting sustainable development through policy-modelling and simulation.

The SI is open to practical contributions as well as theoretical papers covering the list of aforementioned topics. Papers reporting and presenting methodological and technological advances related to the application of simulation modelling-related theory and/or practice will be particularly welcome.

Submission instructions

Papers must be unpublished and must not be submitted for publication elsewhere. Papers should follow the Guidelines for authors of the *Journal of Simulation*.

Editorial information

If you require further information, wish to ask about details or have any comment or question, we warmly invite you to get in touch with the team of guest editors:

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