



Mathematical Problems in Engineering

Special Issue on **Modelling and Simulation in Operations and Complex Supply Chains**

CALL FOR PAPERS

As manufacturing practice shifts toward the outsourcing paradigm, the Supply Chain Management (SCM) takes place throughout a high number of entities, thus generating a significant interdependence among them. Modeling such complex systems by classic analytic methods represents a challenge since they are characterized by many actors assuming different roles, acting simultaneously and continuously, and reacting to the actions of other agents with a nonpredetermined order. To overcome the inconveniences and limitations of the analytic methods, simulation has been broadly used in modeling and evaluating a wide range of different strategies in SCM, as well as a decision-making tool to improve supply chain performance. However, there is still room for gaining further insights on a wide variety of topics concerning operations and SCM analysis via what-if analysis.

The objective of this special issue is to bring together high quality research in the modelling and performance evaluation via simulation of innovative supply and production networks, including service networks.

Papers for this special issue must demonstrate substantial new contributions, and authors must explicitly indicate the scientific advances compared to the previously published research literature.

Potential topics include, but are not limited to:

- ▶ Managing uncertainties in complex supply chains
- ▶ Performance evaluation in operations and supply chains
- ▶ Collaborative practices, negotiation, and contracts
- ▶ Collaborative solutions for coordination and integration of port logistic chains
- ▶ Assembly/distribution supply chains
- ▶ Operations and supply chain design
- ▶ Supplier selection in multiechelon systems
- ▶ Multiagent Systems, discrete event simulation, and system dynamic in operations and SCM

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