



Advances in Operations Research

Special Issue on  
**Stochastic Models: Advances in Theory and Applications**

# CALL FOR PAPERS

The issue aims to cover recent advances in the theory and applications of stochastic models. The focus will especially be on topics including new results/new tools for the analysis of stochastic models, in particular, advances in dealing with large and complex systems and innovative applications of stochastic models to real world systems that give new insights into the design of these systems. Possible areas of application include the following: communication systems, manufacturing, production, service operations, supply chain/inventory management, biological, and energy and cloud systems.

Potential topics include, but are not limited to:

- ▶ Queueing models and scheduling disciplines
- ▶ Queueing network models
- ▶ Markov processes
- ▶ Matrix analytic methods
- ▶ Fluid and diffusion limits
- ▶ Large deviations analysis
- ▶ Rare event simulation
- ▶ Mean field approximation
- ▶ Multidimensional Markov chains
- ▶ Large-scale Markov chains
- ▶ Perfect sampling
- ▶ Computational methods for stochastic models
- ▶ Stochastic biological models
- ▶ Performance models for telecommunications and information systems
- ▶ Stochastic models for power-saving policies in communication systems
- ▶ Performance models for call centers and data centers
- ▶ Risk models
- ▶ Supply chains
- ▶ Stochastic models in manufacturing
- ▶ Production and inventory management

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