Special Issue

Markov Decision Processes with Applications

Message from the Guest Editors

Markov decision process (MDP), also known as stochastic dynamic programming, is a mathematical framework for dynamic and sequential decision-making under stochastic uncertainty. MDPs have been investigated extensively and informed sequential decision-making in a variety of application areas including reinforcement learning, finance, inventory control, scheduling, and clinical trials, just to name a few. The purpose of this Special Issue is to collect and present some state-of-the-art developments in the theory, methodology and applications of MDPs.

Keywords

- Markov processes
- stochastic control
- dynamic programming
- decision making
- reinforcement learning

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Deadline for manuscript submissions

closed (31 May 2024)

Mathematics

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 4.6

mdpi.com/si/152675

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Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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