Special Issue

Advances in Control of Stochastic Dynamical Systems

Message from the Guest Editors

This Special Issue aims to bring together cutting-edge research that advances the theory, methodology, and applications of control for stochastic systems. We seek to showcase innovative approaches to addressing challenges such as stochastic stability analysis, robust and adaptive control design, optimal control under uncertainty, and filtering and estimation for stochastic dynamics. By integrating insights from probability theory, control engineering, applied mathematics, and related disciplines, this Issue aims to foster cross-disciplinary dialogue and drive the development of practical solutions for real-world stochastic control problems. Topics of interest include, but are not limited to, stochastic stability and stabilization, stochastic optimal control, adaptive and learning-based control for stochastic systems, filtering and state estimation in stochastic environments, and applications of stochastic control in various engineering and scientific domains. Your contributions will help shape the landscape of stochastic control research, providing valuable insights for both theoretical advancement and practical implementation.

Guest Editors

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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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