

Special Issue

Recent Advances in Adaptive Control Theory and Applications for Nonlinear Systems

Message from the Guest Editors

Adaptive control serves as a foundational element of modern control engineering, enabling systems to autonomously maintain performance, stability, and robustness in the face of dynamic uncertainties and changing operating conditions. Its importance extends beyond theoretical innovation to mission-critical applications, effectively bridging the gap between idealized models and practical implementation. This Special Issue aims to highlight recent advances in the adaptive control theory and practical implementations. In response to feedback from the Editorial Board, we explicitly welcome contributions that also cover advanced topics in robust adaptive control with fixed/predefined-time convergence, data-driven adaptive dynamic programming and learning, adaptive control for multi-agent systems, adaptive model predictive control, adaptive control under multi-constraints, and hybrid learning-adaptive control fusion. We encourage works that combine theoretical developments with real-world applications of control techniques. Contributions exploring the convergence between robust linear theory and nonlinear dynamics are especially welcome.

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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