Special Issue

Recent Advances in Nonlinear Control Theory and System Dynamics

Message from the Guest Editors

Due to their complex dynamic characteristics, nonlinear systems often exhibit multiple stabilities, chaotic behaviors, and complex dynamic responses; therefore, research on nonlinear control theory and system dynamics becomes particularly important. In recent years, with the improvement of computing power and the continuous development of control theory, significant progress has been made in the research on nonlinear control methods; in particular, many breakthroughs have been achieved in aspects such as robust control, optimal control, adaptive control, and sliding mode control. Nevertheless, the application of nonlinear control theory and system dynamics in practical engineering still faces many challenges, such as system uncertainty, external interference, and model mismatch. Therefore, further promoting research on nonlinear control theory and system dynamics remains the key to achieving efficient, stable, and reliable control systems. We welcome you to submit and showcase cutting-edge research achievements in nonlinear system modeling, stability analysis, control strategy design, and dynamic behavior prediction.

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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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