

*Special Issue Reprint*

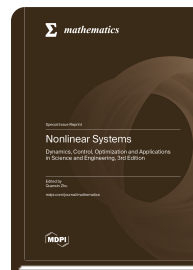
## **Nonlinear Systems: Dynamics, Control, Optimization and Applications in Science and Engineering, 3rd Edition**

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Open Mathematics is a challenging notion for theoretical modeling, technical analysis, and numerical simulation in physics and mathematics, as well as in many other fields. It involves highly correlated nonlinear phenomena that evolve over a large range of time scales and length scales and control the underlying systems and processes in their spatiotemporal evolution. Indeed, the available data, be they physical, biological, or financial, as well as technologically complex systems and stochastic systems including mechanical or electronic devices, can be managed from the same conceptual approach, both analytically and through computer simulation, using effective nonlinear dynamics methods.

The aim of this Special Issue is to highlight papers that demonstrate the dynamics, control, optimization, and applications of nonlinear systems. This has recently become an increasingly popular subject, with impressive growth concerning applications in engineering, economics, biology, and medicine; therefore, this Special Issue can be considered a veritable contribution to the literature.

Potential topics include, but are not limited to, the following: the stability analysis of discrete and continuous dynamical systems; nonlinear dynamics in biological complex systems; the stability and stabilization of stochastic systems; mathematical models in statistics and probability; the synchronization of oscillators and chaotic systems; optimization methods for complex systems; reliability modeling and system optimization; computation and control of systems.



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