



mathematics



Special Issue Reprint

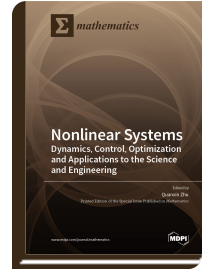
Nonlinear Systems

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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, as highly correlated nonlinear phenomena, evolving over a large range of time scales and length scales, control the underlying systems and processes in their spatiotemporal evolution. Indeed, available data, be they physical, biological, or financial, and technologically complex systems and stochastic systems, such as 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 show 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, and can be considered a veritable contribution to the literature. Original papers relating to the objective presented above are especially welcome subjects.

Potential topics include, but are not limited to: Stability analysis of discrete and continuous dynamical systems; Nonlinear dynamics in biological complex systems; Stability and stabilization of stochastic systems; Mathematical models in statistics and probability; Synchronization of oscillators and chaotic systems; Optimization methods of complex systems; Reliability modeling and system optimization; Computation and control over networked systems.



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