1. Record Nr. UNINA9910647243003321

Titolo	Nonlinear Systems : Dynamics, Control, Optimization and Applications to the Science and Engineering / / edited by Quanxin Zhu
Pubbl/distr/stampa	[Place of publication not identified] : , : MDPI - Multidisciplinary Digital Publishing Institute, , 2023
ISBN	3-0365-6323-7
Descrizione fisica	1 online resource (232 pages)
Disciplina	510
Soggetti	Mathematics - Data processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	About the Editor vii -- Nonlinear Systems: Dynamics, Control, Optimization and Applications to the Science and Engineering 1 -- Eliminating Stick-Slip Vibrations in Drill-Strings with a Dual-Loop Control Strategy Optimised by the CRO-SL Algorithm 3 -- Global Stability of Delayed Ecosystem via Impulsive Differential Inequality and Minimax Principle 19 -- Improved Rotor Flux and Torque Control Based on the Third-Order Sliding Mode Scheme Applied to the Asynchronous Generator for the Single-Rotor Wind Turbine 31 -- Finite-Time Passivity Analysis of Neutral-Type Neural Networks with Mixed Time-Varying Delays 47 -- Research on Intellectualized Location of Coal Gangue Logistics Nodes Based on Particle Swarm Optimization and Quasi-Newton Algorithm 73 -- Symbolic Regulator Sets for a Weakly Nonlinear Discrete Control System with a Small Step 91 -- Operator Methods of the Maximum Principle in Problems of Optimization of Quantum Systems 105 -- Uniform Persistence and Global Attractivity in a Delayed Virus Dynamic Model withApoptosis and Both Virus-to-Cell and Cell-to-Cell Infections 119 -- Adaptive Evolutionary Computation for Nonlinear Hammerstein Control Autoregressive Systems with Key Term Separation Principle 135 -- Stability of Impulsive Stochastic Delay Systems with Markovian Switched Delay Effects 155 -- Neural Adaptive Fixed-Time Attitude Stabilization and Vibration Suppression of Flexible Spacecraft 167 -- Optimal Timing Fault Tolerant Control for Switched Stochastic Systems with Switched Drift Fault 185 -- Synchronization of

Epidemic Systems with Neumann Boundary Value under Delayed Impulse 201 -- Analysis of Equilibrium Points in Quantized Hill System 211.

Sommario/riassunto

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.