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Autore	Liu, Xiaochun
Titolo	Boundary Value Problems with Global Projection Conditions / Xiaochun Liu, Bert-Wolfgang Schulze
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Titolo uniforme	Boundary Value Problems with Global Projection Conditions
Descrizione fisica	xvi, 410 p. : ill. ; 24 cm
Altri autori (Persone)	Schulze, Bert-Wolfgang
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Titolo	Mathematical Modelling and Optimization of Engineering Problems // edited by J. A. Tenreiro Machado, Necati Özdemir, Dumitru Baleanu
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Soggetti	Mathematical physics Engineering mathematics Mathematical models Mathematical optimization Computer science - Mathematics Mathematical Applications in the Physical Sciences Engineering Mathematics Mathematical Modeling and Industrial Mathematics Optimization Computational Science and Engineering
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1. Heuristic Techniques for Real-time Order Acceptance and Scheduling in Metal Additive Manufacturing -- Chapter 2. Developing A Nationwide Energy Storage Policy by Optimal Size and Site Selection -- Chapter 3. Pontryagin's Principle for a Class of Discrete Time Infinite-horizon Optimal Growth Problems -- Chapter 4. A Medical Modelling Using Multiple Linear Regression -- Chapter 5. Lie group method solution for two-dimensional heat and viscous flow driven by injection through a deformable rectangular channel with porous walls -- Chapter 6. Optimal siting of wind turbines in a windfarm -- Chapter 7. RSM-based Optimization of Excitation Capacitance and Speed for a Self-Excited Induction Generator -- Chapter 8. Distance Constrained Vehicle Routing Problems: A Case Study using Artificial Bee Colony Algorithm -- Chapter 9. Fractional model for type 1 diabetes --

Sommario/riassunto

This book presents recent developments in modelling and optimization of engineering systems and the use of advanced mathematical methods for solving complex real-world problems. It provides recent theoretical developments and new techniques based on control, optimization theory, mathematical modeling and fractional calculus that can be used to model and understand complex behavior in natural phenomena including latest technologies such as additive manufacturing. Specific topics covered in detail include combinatorial optimization, flow and heat transfer, mathematical modelling, energy storage and management policy, artificial intelligence, optimal control, modelling and optimization of manufacturing systems. Presents new approaches to design and optimize emerging manufacturing systems Examines the similarities between design and optimization processes Explains metaheuristics applied to complex engineering problems Features sections on optimization in the energy storage and generation and optimal control in economics and operational research.