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Nota di contenuto	A Comprehensive Survey of Meta-heuristic Algorithms -- Order Reduction of the Time-independent Linear Systems Using the Firefly Algorithm with Neighbourhood Attraction -- Intelligent Voltage Control of Electric Vehicles to Manage Power Quality Problems Using Improved Weed Optimization Algorithm -- Apple Spots and Defects Detection Based on Machine Vision, Fuzzy Systems, and Improved Gray Wolf Optimization Algorithm -- Technical and Economic Evaluation of the Optimal Placement of Fuel Cells in the Distribution System of Petrochemical Industries Based on Improved Firefly Algorithm -- Modeling and Optimal Control of Power System Frequency Load Controller by Applying Disturbance in the System by a Modified Version of Firefly Algorithm -- Design of a System for Melanoma Diagnosis Using Image Processing and Hybrid Optimization Techniques -- Multi-criteria Building Performance Optimization by Mm-based Iaso Method: A Case Study -- A Chameleon Swarm Optimization Model for the Optimal Adjustment of Retrofit Values in Spanish Houses -- Brain Tumor Segmentation Based on Zernike Moments, Enhanced Ant Lion Optimization, and Convolutional Neural Network in Mri Images -- Enhancing Cyber- Physical Resiliency Based on Meta-heuristic

Algorithms for Microgrids Against Malicious Attacks -- An Optimized Combination of Spectral and Spatial Features for Hyperspectral Images Classification via Arithmetic Optimization Algorithm -- Multi-objective Optimization Using the Simulation of Net-zero Energy Residential Buildings with the African Vulture Optimizer -- A Systematic Literature Survey in Alzheimer Disease Using Optimization Techniques -- A Survey on Optimization Methods Used for Early Prediction and Diagnosis of Schizophrenia Disorder -- Serially Fused Dual-deep-features Based Chest X-ray Classification Scheme to Detect Tuberculosis -- Chaotic-moth-flame-algorithm Based Scheme to Design Pid Controller for Benchmark Avr.

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Sommario/riassunto

This book discusses different methods of modifying the original metaheuristics and their application in computer and electrical engineering. As the race to develop advanced technology accelerates, a new era of "metaheuristics" has emerged. Through researched-based techniques and collaborative problem-solving, this book helps engineers to find efficient solutions to their engineering challenges. With the help of an expert guide and the collective knowledge of the engineering community, this comprehensive guide shows readers how to use machine learning and other AI techniques to reinvent smart engineering. From understanding the fundamentals to mastering the latest metaheuristics models, this guide provides with the skills and knowledge that need to stay ahead in the technology race. In the previous volume, authors focused on the application of original metaheuristics on electrical and computer sciences. This volume learns how AI and modified metaheuristics can be used to optimize algorithms and create more efficient electrical engineering designs. It gets insights on how data can be effectively processed and discover new techniques for creating sophisticated automation systems. It maximizes the potential of readers' computer and electrical engineering projects with powerful metaheuristics and optimization techniques.

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