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Collana	Lecture Notes in Mechanical Engineering, , 2195-4364
Disciplina	006.3
Soggetti	Computational intelligence Artificial intelligence Automatic control Robotics Automation Computational Intelligence Artificial Intelligence Control, Robotics, Automation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1. Process parameters optimization by Taguchi method and Whale optimization algorithm of Lathe turning on EN24 steel for prediction of surface roughness -- Chapter 2. Optimization of TWR and SR of superalloy Al/9.6B4C in EDM using advanced optimization techniques -- Chapter 3. Simulation and comparative analysis of sardar sarovar reservoir by meta-heuristic algorithm -- Chapter 4. Determination of Thickness and Refractive Index of Antireflection Coating Thin-Films from Reflectivity Spectrum using Jaya Optimization Algorithm -- Chapter 5. Optimization of worm gear drive for improving efficiency using RCGA -- Chapter 6. Comparing a Parameter Less Technique Jaya with Parameters Based Evolutionary Algorithms -- Chapter 7. Optimal Sizing of PV/Wind/Battery stand-alone hybrid renewable energy system using TLBO algorithm -- Chapter 8. MOJAYA optimization of machining parameters coupled with R-method for the generation of micro holes on GFRP composite using an in-house

developed  $\mu$ -ECDM system -- Chapter 9. Enhanced Fruit Fly Optimization Algorithm for Node Capture Attack in WSN -- Chapter 10. Optimization of Construction Scheduling with Rao Algorithm -- Chapter 11. Using Meta-Heuristic Optimization Methods in Solving Time-Cost-Quality Trade-off Problems -- Chapter 12. A Particle Swarm Optimization based model for Quality, Safety trade-off optimization under constraint duration and cost of construction project -- Chapter 13. Optimum design of pipe network using Rao algorithm -- Chapter 14. Multi-Objective Thermal Exchange Optimization for Truss structure -- Chapter 15. Shape optimization of structures considering varying geometrical and material parameters.

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### Sommario/riassunto

This book comprises peer-reviewed papers presented at the International Conference on Advanced Engineering Optimization Through Intelligent Techniques (AEOTIT) 2022. The book combines contributions from academics and industry professionals and covers advanced optimization techniques across all major engineering disciplines like mechanical, manufacturing, civil, automobile, electrical, chemical, computer, and electronics engineering. The book discusses different optimization techniques and algorithms such as genetic algorithm, non-dominated sorting genetic algorithm-II, and III, differential search, particle swarm optimization, fruit fly algorithm, cuckoo search, teaching-learning-based optimization algorithm, grey wolf optimization, Jaya algorithm, Rao algorithms, and many other latest meta-heuristic techniques and their applications. Various multi-attribute decision-making methods such as AHP, TOPSIS, ELECTRE, PROMETHEE, DEMATEL, R-method, fuzzy logic, and their applications are also discussed. This book serves as a valuable reference for students, researchers, and practitioners and helps them in solving a wide range of optimization problems.

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