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Collana	Studies in Computational Intelligence, , 1860-9503 ; ; 1096
Altri autori (Persone)	MelinPatricia
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Soggetti	Computational intelligence Artificial intelligence Computational Intelligence Artificial Intelligence
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Nota di contenuto	A decision-making approach based on multiple neural networks for clustering and prediction of time series -- Approximation of Physicochemical Properties based on a Mes-sage Passing Neural Network Approach -- Quantvolutional Neural Network applied to MNIST -- Traffic Sign Recognition Using Fuzzy Preprocessing and Deep Neural Networks -- Fuzzy dynamic adaptation of an Artificial Fish Swarm Algo-rithm for the Optimization of Benchmark Functions -- Particle Swarm Optimization Algorithm with Improved Opposi-tion-Based Learning (IOBL-PSO) to Solve Continuous Problems -- Study on the effect of chaotic maps in the formation of new uni-verses in the Multiverse Optimizer algorithm -- Performance comparative of surrogate models as fitness func-tions for metaheuristic algorithms -- A New Continuous Mycorrhiza Optimization Nature-Inspired Algorithm -- Optimal Tuning of an Active Disturbance Rejection Controller using a Particle Swarm Optimization algorithm -- Optimization of Fuzzy Controllers using Distributed Bioinspired Methods with Random parameters -- Application of Compensatory Fuzzy Logic in Diabetes Problem Using Pima-Indians Dataset -- Comparison of the effect of parameter adaptation in bio-inspired CS algorithm using Type-2 Fuzzy Logic -- Interpretability of an Archimedean Compensatory Fuzzy Logic

in Data Analytics: some case studies -- A new selection and class prediction using type-1 fuzzy logic applied to a convolutional neural network -- Relaxed Differential Evolution Algorithm -- Automatic Characterization of Time Series Using Metaheuristic Algorithms for Epidemics Spread Analysis -- Comparative study of heuristics for the One-dimensional Bin Packing Problem -- Experimental Evaluation of Adaptive Operators Selection Methods for the Dynamic Multiobjective Evolutionary Algorithm Based on Decomposition (DMOEA/D) -- Automated Machine Learning to improve stock-market forecasting using PSO and LSTM networks -- Evolutionary Gaussian-Gradient: A new optimization algorithm for the electromechanical design of gravitational batteries -- A comparison between selection operators heuristics of perturbation in CSP -- Trajectory Tracking Control of Wheeled Mobile Robots Using Neural Networks and Feedback Control Techniques -- An Evolutionary Bilevel Optimization Approach for Neuroevolution -- Recovering from population extinction in the Animal Life Cycle Algorithm (ALCA) -- Multi-objective optimization through coevolution and outranking methods with uncertainty management -- EDA Experimental Proposal with Mallows Distribution applied to the Mixed No-idle Permutation Flowshop Scheduling problem -- Interval Type-3 Fuzzy Decision Making in Material Surface Quality Control -- Interval Type-3 Fuzzy Decision Making in Quality Evaluation for Speaker Manufacturing.

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#### Sommario/riassunto

In this book, recent theoretical developments on fuzzy logic, neural networks and optimization algorithms, as well as their hybrid combinations, are presented. In addition, the above-mentioned methods are presented in application areas such as, intelligent control and robotics, pattern recognition, medical diagnosis, decision-making, time series prediction and optimization of complex problems. The book contains a collection of papers focused on hybrid intelligent systems based on soft computing techniques. There are a group of papers with the main theme of type-1 and type-2 fuzzy logic, which basically consists of papers that propose new concepts and algorithms based on type-1 and type-2 fuzzy logic and their applications. There also a group of papers that offer theoretical concepts and applications of meta-heuristics in different areas. Another group of papers outlines diverse applications of fuzzy logic, neural networks and hybrid intelligent systems in medical problems. There are also some papers that present theory and practice of neural networks in different application areas. In addition, there are papers that offer theory and practice of optimization and evolutionary algorithms in different application areas. Finally, there are a group of papers describing applications of fuzzy logic, neural networks and meta-heuristics in pattern recognition and classification problems.

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