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Nota di contenuto	Intro -- Preface -- Contents -- Particle Swarm Optimization Based Optimization for Industry Inspection -- 1 Introduction -- 2 Image Acquisition, Feature Extraction and Processing -- 2.1 Gabor Feature Extraction and Image Processing -- 3 Experimental Process and Results -- 3.1 Effect with Different Iterations of Parameter Optimization Using PSO -- 4 Conclusion -- References -- Ant Algorithms: From Drawback Identification to Quality and Speed Improvement -- 1 Introduction -- 2 Classic Ant Algorithms -- 3 Ant Algorithms and Truck Loading -- 4 Ant Algorithms and Job Scheduling -- 5 Ant Algorithms and Graph Coloring -- 6 Conclusion -- References -- Fault Location Techniques Based on Traveling Waves with Application in the Protection of Distribution Systems with Renewable Energy and Particle Swarm Optimization -- 1 Introduction -- 2 Basic Principle of Fault Determination -- 2.1 Fault Section Determination -- 3 Determination of the Interphase Short Circuit Fault Location -- 4 Traveling Waves -- 4.1 Wavelet Transform -- 5 Fundamentals of Particle Swarm Optimization -- 6 Determination of Fault Location for Electric Power Distribution Networks with DGs -- 6.1 Dynamic Protection Suitable for the High Incorporation of Renewable Energy Sources into the Electric Energy Distribution System -- 6.2 Microgrid Protection with High Incorporation

of Renewable Energies -- 7 Applicability of Dynamic Protection Based on Traveling Waves in Electrical Systems with High Incorporation of Renewable Energy Sources -- 8 Particle Swarm Optimization Algorithm -- 9 Future Applications -- 10 Conclusion -- References -- Improved Particle Swarm Optimization and Non-quadratic Penalty Method for Non-linear Programming Problems with Equality Constraints -- 1 Introduction -- 1.1 Penalty Function Method -- 1.2 Penalty Function -- 2 Particle Swarm Optimization -- 2.1 Improvements in PSO. 3 Methodology -- 4 Parameter Setup -- 5 Experimental Setup -- 6 Conclusion -- 7 Future Work -- References -- Recent Trends in Face Recognition Using Metaheuristic Optimization -- 1 Introduction -- 2 Metaheuristic Optimization Approaches -- 2.1 Genetic Algorithms (GAs) -- 2.2 Particle Swarm Optimization (PSO) -- 2.3 Ant Colony Optimization (ACO) -- 2.4 Bacterial Foraging Optimization Algorithm (BFOA) -- 2.5 Firefly Algorithm (FA) -- 3 Biometrics Modalities -- 3.1 Face Recognition System -- 3.2 Performance Metrics -- 4 Face Recognition Based Optimization Approaches -- 5 Databases and Discussion -- 5.1 Databases -- 5.2 Discussion -- 5.3 Future Trends -- 6 Conclusion -- References -- Chaos Game Optimization Algorithm with Crossover Operator for Solving Constraint Engineering Optimization Problems -- 1 Introduction -- 2 Chaos Game Optimization (CGO) -- 3 Crossover Based Chaos Game Optimization (CrCGO) -- 4 Numerical Results -- 4.1 Benchmark Optimization Problems -- 4.2 Contender Methods -- 4.3 Evaluation Criteria -- 4.4 Non-parametric Statistical Tests -- 4.5 Results and Discussions -- 5 Conclusion -- References -- UAV-Assisted IoT Data Collection Optimization Using Gaining-Sharing Knowledge Algorithm -- 1 Introduction -- 2 System Model and Problem Formulation -- 3 Gaining-sharing Knowledge (GSK) Algorithm -- 4 Results and Discussion -- 5 Conclusion -- References -- Energy Aware Tikhonov-Regularized FPA Technique for Task Scheduling in Wearable Biomedical Devices -- 1 Introduction -- 2 Wearable Biomedical System Overview -- 3 Problem Formulation -- 3.1 Objective Function -- 3.2 Tikhonov Regularization and Operation Constraints -- 3.3 Flower Pollination Optimization Algorithm -- 4 Experiments and Discussion -- 4.1 Energy Consumption Profiling -- 4.2 Parameters Setup and Trials -- 5 Conclusion -- References. Material Generation Algorithm Combined with Epsilon Constraint Handling Scheme for Engineering Optimization -- 1 Introduction -- 2 Material Generation Algorithm -- 3 Problem Statement -- 3.1 Constrained Optimization -- 3.2 Constraint Handling -- 4 Engineering Design Problems of CEC 2020 -- 5 Numerical Investigations -- 6 Conclusion -- References -- Optimum Design of Truss Structures with Atomic Orbital Search Considering Discrete Design Variables -- 1 Introduction -- 2 Atomic Orbital Search -- 3 Problem Statement -- 4 Numerical Investigations -- 4.1 10-Bar Truss Structure -- 4.2 25-Bar Truss Structure -- 4.3 52-Bar Truss Structure -- 4.4 160-Bar Truss Structure -- 5 Conclusion -- References.
