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with Metaheuristics of the AODV Routing Protocol for Vehicular Ad-Hoc Networks -- WiMAX Network Planning Using Adaptive-Population-Size Genetic Algorithm -- Markov Chain Models for Genetic Algorithm Based Topology Control in MANETs -- Particle Swarm Optimization for Coverage Maximization and Energy Conservation in Wireless Sensor Networks -- Efficient Load Balancing for a Resilient Packet Ring Using Artificial Bee Colony -- TCP Modification Robust to Packet Reordering in Ant Routing Networks -- Solving the Physical Impairment Aware Routing and Wavelength Assignment Problem in Optical WDM Networks Using a Tabu Search Based Hyper-Heuristic Approach -- A Generalized, Location-Based Model of Connections in Ad-Hoc Networks Improving the Performance of Ant Routing -- Using Code Bloat to Obfuscate Evolved Network Traffic -- ABC Supported Handoff Decision Scheme Based on Population Migration -- EvoENVIRONMENT Contributions -- A Hyper-Heuristic Approach for the Unit Commitment Problem -- Application of Genetic Programming Classification in an Industrial Process Resulting in Greenhouse Gas Emission Reductions -- Influence of Topology and Payload on CO_2 Optimised Vehicle Routing -- Start-Up Optimisation of a Combined Cycle Power Plant with Multiobjective Evolutionary Algorithms -- EvoFIN Contributions -- A Study of Nature-Inspired Methods for Financial Trend Reversal Detection -- Outperforming Buy-and-Hold with Evolved Technical Trading Rules: Daily, Weekly and Monthly Trading -- Evolutionary Multi-stage Financial Scenario Tree Generation -- Evolving Dynamic Trade Execution Strategies Using Grammatical Evolution -- Modesty Is the Best Policy: Automatic Discovery of Viable Forecasting Goals in Financial Data -- Threshold Recurrent Reinforcement Learning Model for Automated Trading -- Active Portfolio Management from a Fuzzy Multi-objective Programming Perspective -- Evolutionary Monte Carlo Based Techniques for First Passage Time Problems in Credit Risk and Other Applications in Finance -- Calibrating the Heston Model with Differential Evolution -- Evolving Trading Rule-Based Policies -- EvoMUSART Contributions -- Evolving Artistic Styles through Visual Dialogues -- Graph-Based Evolution of Visual Languages -- Refinement Techniques for Animated Evolutionary Photomosaics Using Limited Tile Collections -- Generative Art and Evolutionary Refinement -- Aesthetic Learning in an Interactive Evolutionary Art System -- Comparing Aesthetic Measures for Evolutionary Art -- The Problem with Evolutionary Art Is ... -- Learning to Dance through Interactive Evolution -- Jive: A Generative, Interactive, Virtual, Evolutionary Music System -- A Neural Network for Bass Functional Harmonization -- Combining Musical Constraints with Markov Transition Probabilities to Improve the Generation of Creative Musical Structures -- Dynamic Musical Orchestration Using Genetic Algorithms and a Spectro-Temporal Description of Musical Instruments -- Evolutionary Sound Synthesis: Rendering Spectrograms from Cellular Automata Histograms -- Sound Agents -- From Evolutionary Composition to Robotic Sonification -- Musical Composer Identification through Probabilistic and Feedforward Neural Networks -- EvoTRANSLOG Contributions -- Using an Evolutionary Algorithm to Discover Low CO_2 Tours within a Travelling Salesman Problem -- A Genetic Algorithm for the Traveling Salesman Problem with Pickup and Delivery Using Depot Removal and Insertion Moves -- Fast Approximation Heuristics for Multi-Objective Vehicle Routing Problems -- Particle Swarm Optimization and an Agent-Based Algorithm for a Problem of Staff Scheduling -- A Math-Heuristic for the Multi-Level Capacitated Lot Sizing Problem with Carryover.

Sommario/riassunto   Evolutionary computation (EC) techniques are e?cient, nature-inspired

me- ods based on the principles of natural evolution and genetics. Due to their - ciency and simple underlying principles, these methods can be used for a diverse rangeofactivitiesincludingproblemsolving, optimization,machinelearningand pattern recognition. A large and continuously increasing number of researchers and professionals make use of EC techniques in various application domains. This volume presents a careful selection of relevant EC examples combined with a thorough examination of the techniques used in EC. The papers in the volume illustrate the current state of the art in the application of EC and should help and inspire researchers and professionals to develop e?cient EC methods for design and problem solving. All papers in this book were presented during EvoApplications 2010, which included a range of events on application-oriented aspects of EC. Since 1998, EvoApplications — formerly known as EvoWorkshops — has provided a unique opportunity for EC researchers to meet and discuss application aspects of EC and has been an important link between EC research and its application in a variety of domains. During these 12 years, new events have arisen, some have disappeared, whileothershavematuredtobecomeconferencesoftheirown,such as EuroGP in 2000, EvoCOP in 2004, and EvoBIO in 2007. And from this year, EvoApplications has become a conference as well.