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Nota di contenuto	Applications of Evolutionary Computation: Finding Near-Optimal Portfolios With Quality-Diversity -- Improving Image Filter Efficiency: A Multi-Objective Genetic Algorithm Approach to Optimize Computing Efficiency -- Low-Memory Matrix Adaptation Evolution Strategies exploiting gradient information and Lévy flight -- Memory Based Evolutionary Algorithm for Dynamic Aircraft Conflict Resolution -- GM4OS: an Evolutionary Oversampling Approach for Imbalanced Binary Classification Tasks -- Evolving Staff Training Schedules using an

Extensible Fitness Function and a Domain Specific Language -- On the Utility of Probing Trajectories for Algorithm-Selection -- Nature-inspired Portfolio Diversification using Ant Brood Clustering -- Cellular Genetic Algorithms for identifying variables in hybrid Gene Regulatory Networks.-Evolving Artificial Neural Networks for Simulating Fish Social Interactions -- Heuristics for Evolutionary Optimization for the Centered Bin Packing Problem -- A Hierarchical Approach to Evolving Behaviour-Trees for Swarm Control -- Evolutionary Algorithms for Optimizing Emergency Exit Placement in Indoor Environments -- Finding sets of solutions for temporal uncertain problems -- Interpretable Solutions for Breast Cancer Diagnosis with Grammatical Evolution and Data Augmentation -- Applying Graph Partitioning-Based Seeding Strategies to Software Modularisation -- A Novel Two-Level Clustering-Based Differential Evolution Algorithm for Training Neural Networks -- Iterated Beam Search for Wildland Fire Suppression -- A New Angle: On Evolving Rotation Symmetric Boolean Functions -- Analysis of Evolutionary Computation Methods: Theory, Empirics, and Real-World Applications: On the Potential of Multi-Objective Automated Algorithm Configuration on Multi-Modal Multi-Objective Optimisation Problems -- A Simple Statistical Test Against Origin-Biased Metaheuristics -- Computational Intelligence for Sustainability: Optimizing Urban Infrastructure for E-Scooter Mobility -- Evolutionary Computation in Edge, Fog, and Cloud Computing: Simple Efficient Evolutionary Ensemble Learning on Network Intrusion Detection Benchmarks -- Evolutionary Computation meets Stream Processing -- Evolutionary Computation in Image Analysis, Signal Processing and Pattern Recognition: Integrating Data Augmentation in Evolutionary Algorithms for Feature Selection: A Preliminary Study -- Evolving Feature Extraction Models for Melanoma Detection: A Co-operative Co-evolution Approach -- 3D Motion Analysis in MRI using a Multi-objective Evolutionary k -means Clustering.

Sommario/riassunto

The two-volume set LNCS 14634 and 14635 constitutes the refereed proceedings of the 27th European Conference on Applications of Evolutionary Computation, EvoApplications 2024, held as part of EvoStar 2024, in Aberystwyth, UK, April 3–5, 2024, and co-located with the EvoStar events, EvoCOP, EvoMUSART, and EuroGP. The 51 full papers presented in these proceedings were carefully reviewed and selected from 77 submissions. The papers have been organized in the following topical sections: applications of evolutionary computation; analysis of evolutionary computation methods: theory, empirics, and real-world applications; computational intelligence for sustainability; evolutionary computation in edge, fog, and cloud computing; evolutionary computation in image analysis, signal processing and pattern recognition; evolutionary machine learning; machine learning and AI in digital healthcare and personalized medicine; problem landscape analysis for efficient optimization; softcomputing applied to games; and surrogate-assisted evolutionary optimisation.
