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Soggetti	Algorithms Computer science Artificial intelligence Application software Computer science—Mathematics Discrete mathematics Theory of Computation Artificial Intelligence Computer and Information Systems Applications Discrete Mathematics in Computer Science
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Nota di contenuto	The Effect of Distinct Geometric Semantic Crossover Operators in Regression Problems -- Learning Text Patterns Using Separate-and-Conquer Genetic Programming -- Improving Geometric Semantic Genetic Programming with Safe Tree Initialisation -- Grant Dick On the Generalization Ability of Geometric Semantic Genetic Programming -- Automatic Derivation of Search Objectives for Test-Based Genetic Programming -- Evolutionary Design of Transistor Level Digital Circuits Using Discrete Simulation -- M3GP – Multiclass Classification with GP -- Evolving Ensembles of Dispatching Rules Using Genetic Programming for Job Shop Scheduling -- Attributed Grammatical

Evolution Using Shared Memory Spaces and Dynamically Typed Semantic Function Specification -- Indirectly Encoded Fitness Predictors Coevolved with Cartesian Programs -- Tapped Delay Lines for GP Streaming Data Classification with Label Budgets -- Cartesian GP in Optimization of Combinational Circuits with Hundreds of Inputs and Thousands of Gates -- Genetic Programming for Feature Selection and Question-Answer Ranking in IBM Watson -- Automatic Evolution of Parallel Recursive Programs -- Proposal and Preliminary Investigation of a Fitness Function for Partial Differential Models -- Evolutionary Methods for the Construction of Cryptographic Boolean Functions -- TEMPLAR – A Framework for Template-Method Hyper-Heuristics -- Circuit Approximation Using Single- and Multi-objective Cartesian GP.

Sommario/riassunto

This book constitutes the refereed proceedings of the 18th European Conference on Genetic Programming, EuroGP 2015, held in Copenhagen, Spain, in April 2015 co-located with the Evo 2015 events, EvoCOP, Evo MUSART and Evo Applications. The 12 revised full papers presented together with 6 poster papers were carefully reviewed and selected from 36 submissions. The wide range of topics in this volume reflects the current state of research in the field. Thus, we see topics as diverse as semantic methods, recursive programs, grammatical methods, coevolution, Cartesian GP, feature selection, initialisation procedures, ensemble methods and search objectives; and applications including text processing, cryptography, numerical modelling, software parallelisation, creation and optimisation of circuits, multi-class classification, scheduling and artificial intelligence.