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	Nota di contenuto	Talks -- An Algorithmic Chemistry for Genetic Programming -- Assessing the Effectiveness of Incorporating Knowledge in an Evolutionary Concept Learner -- Automated Re-invention of a Previously Patented Optical Lens System Using Genetic Programming -- Bayesian Automatic Programming -- Dynamic Size Populations in Distributed Genetic Programming -- Evolution of Robot Controller Using Cartesian Genetic Programming -- Evolving L-Systems to Capture Protein Structure Native Conformations -- Evolving Rules for Document Classification -- Genetic Programming in Wireless Sensor Networks -- Genetic Transposition in Tree-Adjoining Grammar Guided

Genetic Programming: The Duplication Operator -- GP-EndChess: Using Genetic Programming to Evolve Chess Endgame Players -- GP-Gammon: Using Genetic Programming to Evolve Backgammon Players -- GP-Robocode: Using Genetic Programming to Evolve Robocode Players -- Incorporating Learning Probabilistic Context-Sensitive Grammar in Genetic Programming for Efficient Evolution and Adaptation of Snakebot -- Multi-logic-Unit Processor: A Combinational Logic Circuit Evaluation Engine for Genetic Parallel Programming -- Operator-Based Distance for Genetic Programming: Subtree Crossover Distance -- Repeated Patterns in Tree Genetic Programming -- Tarpeian Bloat Control and Generalization Accuracy -- The Tree-String Problem: An Artificial Domain for Structure and Content Search -- Using Genetic Programming for Multiclass Classification by Simultaneously Solving Component Binary Classification Problems -- Posters -- Context-Based Repeated Sequences in Linear Genetic Programming -- Evolution of a Strategy for Ship Guidance Using Two Implementations of Genetic Programming -- Evolution of Vertex and Pixel Shaders -- Evolve Schema Directly Using Instruction Matrix Based Genetic Programming -- Evolving Defence Strategies by Genetic Programming -- Extending Particle Swarm Optimisation via Genetic Programming -- Inducing Diverse Decision Forests with Genetic Programming -- mGGA: The meta-Grammar Genetic Algorithm -- On Prediction of Epileptic Seizures by Computing Multiple Genetic Programming Artificial Features -- Relative Fitness and Absolute Fitness for Co-evolutionary Systems -- Teams of Genetic Predictors for Inverse Problem Solving -- Understanding Evolved Genetic Programs for a Real World Object Detection Problem -- Undirected Training of Run Transferable Libraries -- Zero Is Not a Four Letter Word: Studies in the Evolution of Language.

| Sommario/riassunto | In this volume we present the contributions for the 18th European Conference on Genetic Programming (EuroGP 2005). The conference took place from 30 March to 1 April in Lausanne, Switzerland. EuroGP is a well-established conf- ence and the only one exclusively devoted to genetic programming. All previous proceedings were published by Springer in the LNCS series. From the outset, EuroGP has been co-located with the EvoWorkshops focusing on applications of evolutionary computation. Since 2004, EvoCOP, the conference on evolutionary combinatorial optimization, has also been co-located with EuroGP, making this year's combined events one of the largest dedicated to evolutionary computation in Europe. Genetic programming (GP) is evolutionary computation that solves complex problems or tasks by evolving and adapting a population of computer programs, using Darwinian evolution and Mendelian genetics as its sources of inspiration. Some of the 34 papers included in these proceedings address foundational and theoretical issues and there is also a wide variety of papers dealing with di?erent application areas, such as computer science, engineering, language processing, biology and computational design, demonstrating that GP is a powerful and practical problem-solving paradigm. |