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Soggetti   Computers
                    Evolutionary biology
                    Algorithms
                    Artificial intelligence
                    Bioinformatics
                    Computational biology
                    Theory of Computation
                    Evolutionary Biology
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Nota di contenuto   Fast evolutionary learning of minimal radial basis function neural
                    networks using a genetic algorithm -- Evolutionary design of synthetic
                    routes in chemistry -- A genetic algorithm for job-shop problems with
                    various schedule quality criteria -- Two applications of genetic
                    algorithms to component design -- Characterizing signal behaviour
                    using genetic programming -- Spatial reasoning with genetic
                    algorithms an application in planning of safe Liquid Petroleum Gas sites
                    -- Restricted evaluation genetic algorithms with Tabu search for
                    optimising Boolean functions as multi-level AND-EXOR networks --

Generation of structured process models using Genetic Programming -- Genetic Programming for feature detection and image segmentation -- A temporal view of selection and populations -- Evolving software test data — GA's learn self expression -- Efficient Evolution Strategies for Exploration in mobile robotics -- Learning the "next" dimension -- Global selection methods for massively parallel computers -- Investigating multiploidy's niche -- Evolutionary divide and conquer for the set-covering problem -- The simulation of localised interaction and learning in artificial adaptive agents -- The Royal Road functions: description, intent and experimentation -- Adaptive Restricted Tournament Selection for the identification of multiple sub-optima in a multi-modal function -- Analysis of possible genome-dependence of mutation rates in genetic algorithms -- Inoculation to initialise evolutionary search -- Co-evolution of operator settings in genetic algorithms -- A comparative study of steady state and generational genetic algorithms for use in nonstationary environments.

Sommario/riassunto	This book contains a selection of papers presented at a workshop on evolutionary computing sponsored by the Society for the Study of Artificial Intelligence and Simulation of Behaviour, AISB, at the University of Sussex in Brighton, UK, in April 1996. The 22 revised full papers included in the book, together with one invited contribution, were carefully reviewed by the program committee. Twelve contributions investigate applications of evolutionary computing in various areas, such as learning, scheduling, searching, genetic programming, image processing, and robotics. Eleven papers are devoted to evolutionary computing theory and techniques.