1. Record Nr. UNISA996466145803316

Titolo	Evolutionary Computing [[electronic resource]] : AISB Workshop, Leeds, U.K., April 11 - 13, 1994. Selected Papers / / edited by Terence C. Fogarty
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1994
ISBN	3-540-48999-1
Edizione	[1st ed. 1994.]
Descrizione fisica	1 online resource (XII, 340 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 865
Disciplina	006.3
Soggetti	Artificial intelligence Computers Algorithms Pattern recognition Bioinformatics Computational biology Biomathematics Artificial Intelligence Computation by Abstract Devices Algorithm Analysis and Problem Complexity Pattern Recognition Computer Appl. in Life Sciences Mathematical and Computational Biology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Formal memetic algorithms -- A statistical mechanical formulation of the dynamics of genetic algorithms -- Evolutionary stability in simple classifier systems -- Nonbinary transforms for genetic algorithm problems -- Enhancing evolutionary computation using analogues of biological mechanisms -- Exploiting mate choice in evolutionary computation: Sexual selection as a process of search, optimization, and diversification -- An empirical comparison of selection methods in evolutionary algorithms -- An evolution strategy and genetic algorithm

hybrid: An initial implementation and first results -- Genetic algorithms and directed adaptation -- Genetic algorithms and neighbourhood search -- A unified paradigm for parallel Genetic Algorithms -- Distributed coevolutionary genetic algorithms for multi-criteria and multi-constraint optimisation -- Inductive operators and rule repair in a hybrid genetic learning system: Some initial results -- Adaptive learning of a robot arm -- Co-evolving Co-operative populations of rules in learning control systems -- Learning anticipatory behaviour using a delayed action classifier system -- Applying a restricted mating policy to determine state space niches using immediate and delayed reinforcement -- A comparison between two architectures for searching and learning in maze problems -- Fast practical evolutionary timetabling -- Optimising a presentation timetable using evolutionary algorithms -- Genetic algorithms and flowshop scheduling: towards the development of a real-time process control system -- Genetic algorithms for digital signal processing -- Complexity reduction using expansive coding -- The application of genetic programming to the investigation of short, noisy, chaotic data series.

Sommario/riassunto

This volume is based on the Workshop on Evolutionary Computing held in Leeds, U.K. in April 1994 under the sponsorship of the Society for the Study of Artificial Intelligence and Simulation of Behaviour. In addition to the 22 best papers presented at the workshop, there are two invited contributions by Ray Paton and Colin Reever. The volume addresses several aspects of evolutionary computing, particularly genetic algorithms, and its applications, for example in search, robotics, signal processing, machine learning, and scheduling. The papers are organized in sections on theoretical and biological foundations, techniques, classifier systems, and applications.