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Soggetti	Artificial intelligence Algorithms Numerical analysis Computer programming Software engineering Operations research Artificial Intelligence Numerical Analysis Programming Techniques Software Engineering Operations Research and Decision Theory
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	I. Genetic Algorithms -- 1 GAs: What Are They? -- 2 GAs: How Do They Work? -- 3 GAs: Why Do They Work? -- 4 GAs: Selected Topics -- II. Numerical Optimization -- 5 Binary or Float? -- 6 Fine Local Tuning -- 7 Handling Constraints -- 8 Evolution Strategies and Other Methods -- III. Evolution Programs -- 9 The Transportation Problem -- 10 The Traveling Salesman Problem -- 11 Drawing Graphs, Scheduling, Partitioning, and Path Planning -- 12 Machine Learning -- Conclusions -- References.
Sommario/riassunto	Genetic algorithms are founded upon the principle of evolution, i.e., survival of the fittest. Hence evolution programming techniques, based on genetic algorithms, are applicable to many hard optimization

problems, such as optimization of functions with linear and nonlinear constraints, the traveling salesman problem, and problems of scheduling, partitioning, and control. The importance of these techniques has been growing in the last decade, since evolution programs are parallel in nature, and parallelism is one of the most promising directions in computer science. The book is self-contained and the only prerequisite is basic undergraduate mathematics. It is aimed at researchers, practitioners, and graduate students in computer science and artificial intelligence, operations research, and engineering. This second edition includes several new sections and many references to recent developments. A simple example of genetic code and an index are also added. Writing an evolution program for a given problem should be an enjoyable experience - this book may serve as a guide to this task.
