1. Record Nr. UNINA9910633964703321

Titolo	Optimisation Algorithms and Swarm Intelligence / / edited by Nodari Vakhania, Mehmet Emin Aydin
Pubbl/distr/stampa	London : , : IntechOpen, , 2022
ISBN	1-83968-666-9
Descrizione fisica	1 online resource
Disciplina	006.3824
Soggetti	Swarm intelligence Engineering design - Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. Multi Strategy Search with Crow Search Algorithm -- 2. Hybrid Genetic Algorithms -- 3. Flexible Project Scheduling Algorithms -- 4. Particle Swarm Optimization of Convolutional Neural Networks for Human Activity Prediction -- 5. Particle Swarm Optimization Algorithms with Applications to Wave Scattering Problems -- 6. On the Efficacy of Particle Swarm Optimization for Gateway Placement in LoRaWAN Networks -- 7. Pareto-Based Multiobjective Particle Swarm Optimization: Examples in Geophysical Modeling.
Sommario/riassunto	Optimisation is one of the unavoidable key subjects in engineering and other real-world problems, which attracts researchers' and practitioners' attention for decades. On the other hand, computational algorithms nowadays play a definitive role in most real-life applications, from mobile phones to supercomputers, Internet servers, manufacturing, etc. An intelligent method for the enumeration of feasible solutions may lead to efficient computational algorithms. Swarm intelligence emerges as a rather new and novel of field computational intelligence that turned into a hot spot in optimization studies last two decades. This book brings together a number of research articles within the intersection of these two prominent subjects, which introduces techniques and approaches in detail and demonstrates how optimisation problems can be solved with heuristic and swarm intelligence approaches. It contains a few contributions on Particle Swarm Optimisation (PSO) area, which is one of renown swarm

		optimisation approaches that will shed light to issues around optimisation with swarm intelligence to guide junior researchers with implementation details provided.

2. Record Nr. UNINA9910784638503321

Autore	Kolman Bernard
Titolo	Elementary linear programming with applications / / Bernard Kolman, Robert E. Beck
Pubbl/distr/stampa	San Diego, California ; ; London, England : , : Academic Press, , 1995 ©1995
ISBN	0-08-053079-6
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (474 p.)
Collana	Computer Science and Scientific Computing
Disciplina	519.7/2
Soggetti	Linear programming
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Front Cover; Elementary Linear Programming with Applications; Copyright Page; Dedication; Table of Contents; Preface; Acknowledgments; Prologue; Chapter 0. Review of Linear Algebra (Optional); 0.1 Matrices; 0.2 Gauss-Jordan Reduction; 0.3 The Inverse of a Matrix; 0.4 Subspaces; 0.5 Linear Independence and Basis; Further Reading; Chapter 1. Introduction to Linear Programming; 1.1 The Linear Programming Problem; 1.2 Matrix Notation; 1.3 Geometry of Linear Programming Problems; 1.4 The Extreme Point Theorem; 1.5 Basic Solutions; Further Reading; Chapter 2. The Simplex Method 2.1 The Simplex Method for Problems in Standard Form2.2 Degeneracy and Cycling (Optional); 2.3 Artificial Variables; Further Reading; Chapter 3. Further Topics in Linear Programming; 3.1 Duality; 3.2 The Duality Theorem; 3.3 Computational Relations between the Primal and Dual Problems; 3.4 The Dual Simplex Method; 3.5 The Revised Simplex Method; 3.6 Sensitivity Analysis; 3.7 Computer Aspects (Optional); Further Reading; Chapter 4. Integer Programming; 4.1 Examples; 4.2 Cutting Plane Methods; 4.3 Branch and Bound Methods; 4.4 Computer

	Aspects (Optional); Further Reading Chapter 5. Special Types of Linear Programming Problems5.1 The Transportation Problem; 5.2 The Assignment Problem; 5.3 Graphs and Networks: Basic Definitions; 5.4 The Maximal Flow Problem; 5.5 The Shortest Route Problem; 5.6 The Critical Path Method; 5.7 Computer Aspects (Optional); APPENDIX A: Karmarkar's Algorithm; APPENDIX B: Microcomputer Software; APPENDIX C: SMPX; Answers to Odd-Numbered Exercises; Index
Sommario/riassunto	Linear programming finds the least expensive way to meet given needs with available resources. Its results are used in every area of engineering and commerce: agriculture, oil refining, banking, and air transport. Authors Kolman and Beck present the basic notions of linear programming and illustrate how they are used to solve important common problems. The software on the included disk leads students step-by-step through the calculations. The Second Edition is completely revised and provides additional review material on linear algebra as well as complete coverage of elementary linear program