1. Record Nr. UNINA9910484517103321 Autore Okwu Modestus O. Titolo Metaheuristic optimization: nature-inspired algorithms swarm and computational intelligence, theory and applications / / Modestus O. Okwu, Lagouge K. Tartibu Cham, Switzerland:,: Springer,, [2021] Pubbl/distr/stampa ©2021 **ISBN** 3-030-61111-6 Edizione [1st ed. 2021.] Descrizione fisica 1 online resource (XII, 192 p. 112 illus., 92 illus. in color.) Collana Studies in computational intelligence;; Volume 927 Disciplina 006.3 Soggetti Computational intelligence Metaheuristics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Nota di contenuto Introduction To Optimization -- Particle Swarm Optimisation --Artificial Bee Colony Algorithm -- Ant Colony Algorithm -- Grey Wolf Optimizer -- Whale Optimization Algorithm -- Bat Algorithm -- Ant Lion Optimization Algorithm -- Grasshopper Optimisation Algorithm (Goa) -- Moths-Flame Optimization Algorithm -- Genetic Algorithm --Artificial Neural Network -- Future of Nature Inspired Algorithm, Swarm and Computational Intelligence. This book exemplifies how algorithms are developed by mimicking Sommario/riassunto nature. Classical techniques for solving day-to-day problems is timeconsuming and cannot address complex problems. Metaheuristic algorithms are nature-inspired optimization techniques for solving real-life complex problems. This book emphasizes the social behaviour of insects, animals and other natural entities, in terms of converging power and benefits. Major nature-inspired algorithms discussed in this book include the bee colony algorithm, ant colony algorithm, grey wolf optimization algorithm, whale optimization algorithm, firefly algorithm, bat algorithm, ant lion optimization algorithm, grasshopper optimization algorithm, butterfly optimization algorithm and others.

> The algorithms have been arranged in chapters to help readers gain better insight into nature-inspired systems and swarm intelligence. All

the MATLAB codes have been provided in the appendices of the book to enable readers practice how to solve examples included in all sections. This book is for experts in Engineering and Applied Sciences, Natural and Formal Sciences, Economics, Humanities and Social Sciences.