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	Nota di contenuto	-- 1. Introduction to Metaheuristic methods. -- 2. A novel method for initializing populations using the Metropolis-Hastings (MH) technique. -- 3. A measure of diversity for metaheuristic algorithms employing population-based approaches. -- 4. Population Control in Metaheuristic Algorithms: Can Fewer Be Better?. -- 5. Exploration Paths Derived from Trajectories Extracted from Second-Order System Responses. -- 6. Utilizing the Moth Swarm Algorithm to Improve Image Contrast. -- 7. Enhancing Anisotropic Diffusion Filtering via Multi-Objective Optimization. -- 8. Fractional Fuzzy Controller Calibration Using metaheuristic Techniques. -- 9. Striving for Optimal Equilibrium in Metaheuristic Algorithms: Is It Attainable?.
	Sommario/riassunto	This book encompasses three distinct yet interconnected objectives. Firstly, it aims to present and elucidate novel metaheuristic algorithms that feature innovative search mechanisms, setting them apart from conventional metaheuristic methods. Secondly, this book endeavors to systematically assess the performance of well-established algorithms across a spectrum of intricate and real-world problems. Finally, this book serves as a vital resource for the analysis and evaluation of metaheuristic algorithms. It provides a foundational framework for

assessing their performance, particularly in terms of the balance between exploration and exploitation, as well as their capacity to obtain optimal solutions. Collectively, these objectives contribute to advancing our understanding of metaheuristic methods and their applicability in addressing diverse and demanding optimization tasks. The materials were compiled from a teaching perspective. For this reason, the book is primarily intended for undergraduate and postgraduate students of Science, Electrical Engineering, or Computational Mathematics. Additionally, engineering practitioners who are not familiar with metaheuristic computation concepts will appreciate that the techniques discussed are beyond simple theoretical tools because they have been adapted to solve significant problems that commonly arise in engineering areas.