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Nota di contenuto	Chapter 1. A New Hybrid Binary Algorithm of Bat Algorithm and Differential Evolution for Feature Selection and Classification -- Chapter 2. Multi-objective Optimization of Engineering Design Problems through Pareto-Based Bat Algorithm -- Chapter 3. A Study on the Bat Algorithm Technique To Evaluate The Skin Melanoma Images -- Chapter 4. Multi-Thresholding with Kapur's Entropy – A Study Using Bat Algorithm with Different Search Operators -- Chapter 5. Application of BAT Inspired Computing Algorithm and Its Variants In Search of Near Optimal Golomb Rulers For WDM Systems: A Comparative Study -- Chapter 6. Levy Flight Opposition Embed Bat Algorithm for Model Order Reduction -- Chapter 7. Application of BAT Algorithm for Detecting Malignant Brain Tumors -- Chapter 8. Bat Algorithm with Applications to Signal, speech and Image Processing- A Review -- Chapter 9. Bat Algorithm Aided System to Extract Tumor in Flair/T2 Modality Brain MRI Slices. .
Sommario/riassunto	This book highlights essential concepts in connection with the traditional bat algorithm and its recent variants, as well as its application to find optimal solutions for a variety of real-world engineering and medical problems. Today, swarm intelligence-based meta-heuristic algorithms are extensively being used to address a wide

range of real-world optimization problems due to their adaptability and robustness. Developed in 2009, the bat algorithm (BA) is one of the most successful swarm intelligence procedures, and has been used to tackle optimization tasks for more than a decade. The BA's mathematical model is quite straightforward and easy to understand and enhance, compared to other swarm approaches. Hence, it has attracted the attention of researchers who are working to find optimal solutions in a diverse range of domains, such as N-dimensional numerical optimization, constrained/unconstrained optimization and linear/nonlinear optimization problems. Along with the traditional BA, its enhanced versions are now also being used to solve optimization problems in science, engineering and medical applications around the globe.

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