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#### Sommario/riassunto

This book presents essential concepts of traditional Flower Pollination Algorithm (FPA) and its recent variants and also its application to find optimal solution for a variety of real-world engineering and medical problems. Swarm intelligence-based meta-heuristic algorithms are extensively implemented to solve a variety of real-world optimization problems due to its adaptability and robustness. FPA is one of the most successful swarm intelligence procedures developed in 2012 and extensively used in various optimization tasks for more than a decade. The mathematical model of FPA is quite straightforward and easy to understand and enhance, compared to other swarm approaches. Hence, FPA has attracted attention of researchers, who are working to find the optimal solutions in variety of domains, such as N-dimensional numerical optimization, constrained/unconstrained optimization, and linear/nonlinear optimization problems. Along with the traditional bat algorithm, the enhanced versions of FPA are also considered to solve a variety of optimization problems in science, engineering, and medical applications.

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