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Nota di contenuto	Artificial Neural Networks -- Genetic Algorithm -- Ant Colony Optimization (ACO) -- An Application for Process System Control.
Sommario/riassunto	Artificial neural networks, genetic algorithms and the ant colony optimization algorithm have become a highly effective tool for solving hard optimization problems. As their popularity has increased, applications of these algorithms have grown in more than equal measure. While many of the books available on these subjects only provide a cursory discussion of theory, the present book gives special emphasis to the theoretical background that is behind these algorithms and their applications. Moreover, this book introduces a novel real time control algorithm, that uses genetic algorithm and ant colony optimization algorithms for optimizing PID controller parameters. In general, the present book represents a solid survey on artificial neural networks, genetic algorithms and the ant colony optimization algorithm and introduces novel practical elements related to the application of these methods to process system control.