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Descrizione fisica	1 online resource (XIII, 171 p. 100 illus., 79 illus. in color.)
Collana	Engineering Optimization: Methods and Applications, , 2731-4057
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Soggetti	Computational intelligence Electric power production Artificial intelligence Algorithms Mathematical optimization Computational Intelligence Electrical Power Engineering Artificial Intelligence Optimization
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Nota di contenuto	Review on intelligent methods in Electrical power systems -- Investigation of Electric Load Forecasting Methods: A Weka Application (Regression and Optimization) -- Integration of Intelligent Systems for Efficient Smart Grid Management -- An Application of Artificial Bee Colony and Cohort Intelligence in Automatic Generation Control of Thermal Power System -- Distribution System Losses and Its Allocation: Effects of Load Power Factor and Distributed Generations -- IoT based Intelligent Home Automation System using IFTTT with Google Assistant -- A review on Meta-heuristic Optimization Methods for Efficient Power System Operation -- Ice thickness control circuit to automate the milk chilling system -- SCGB Neural Network based Micro-grid AC Side Fault Analysis -- Artificial intelligence based system for detection and classification of faults in Induction motor.
Sommario/riassunto	This book provides a comprehensive review of the latest developments

in optimization based learning algorithms within the field of electrical engineering. It covers various power system applications including efficient power system operation, load forecasting, fault analysis, home automation and efficient smart grid management. Each application is accompanied by case studies and a literature review in self-contained chapters. The book is dedicated to study the effectiveness of intelligent methods in addressing the power system problems and its mitigation using optimization algorithms. It discusses several optimization algorithms such as random forest algorithm, metaheuristic algorithm, scaled conjugate gradient descent algorithm, artificial bee colony algorithm etc. and their usability in intelligent decision makers for the various optimization problems in electrical engineering. This timely book serves as a practical guide and reference sources for students, researchers and professionals.
