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Descrizione fisica	1 online resource (xxi, 945 pages) : illustrations
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Soggetti	Engineering design - Mathematical models
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	I. The basic concepts -- Introduction to design optimization -- Optimum design problem formulation -- Graphical solution method and basic optimization concepts -- Optimum design concepts : optimality conditions -- More on optimum design concepts : optimality conditions -- II. Numerical methods for continuous variable optimization -- 6. Optimum design : numerical solution process and Excel solver -- Optimum design with MATLAB -- Linear programming methods for optimum design -- More on linear programming methods and optimum design -- Numerical methods for unconstrained optimum design -- More on numerical methods for unconstrained optimum design -- Numerical methods for constrained optimum design -- More on numerical methods for constrained optimum design -- Practical applications of optimization -- III. Advanced and modern topics on optimum design --- Discrete variable optimum design concepts and methods -- Global optimization concepts and methods -- Nature-inspired search methods -- Multi-objective optimum design concepts and methods -- 19. Additional topics on optimum design.
Sommario/riassunto	This text describes engineering design optimization in a rigorous, yet simplified manner, illustrates various concepts and procedures with simple examples, and demonstrates their applicability to engineering design problems.

