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	Nota di contenuto	Introduction -- Optimum stacking sequence design of composite laminates for maximum buckling load capacity -- Optimum Design of Castellated Beams with Composite Action and Semi-Rigid Connection -- Optimal Design of Steel Curved Roof Frames by Enhanced Vibrating Particles System Algorithm -- Geometry and sizing optimization of steel pitched roof frames -- Two-Stage Optimal Sensor Placement Using Graph-Theory and Evolutionary Algorithms -- The charged system search algorithm for adaptive node moving refinement in discrete least-squares meshless method -- Performance-based multi-objective optimization of large steel structures -- Optimal Seismic Design of Steel Plate Shear Walls Using CBO and ECBO Algorithms -- Colliding Bodies Optimization Algorithm for Structural Optimization of Offshore Wind Turbines with Frequency Constraints -- Colliding Bodies

Optimization for Analysis and Design of Water Distribution Systems -- Optimization of tower crane location and material quantity between supply and demand points -- Optimization of Building Components with SustainabilityAspects in BIM Environment -- Multi-objective optimization of construction site layout -- Multi-objective electrical energy scheduling in smart homes using ant lion optimizer and evidential reasoning.

| Sommario/riassunto | This book discusses the application of metaheuristic algorithms in a number of important optimization problems in civil engineering. Advances in civil engineering technologies require greater accuracy, efficiency and speed in terms of the analysis and design of the corresponding systems. As such, it is not surprising that novel methods have been developed for the optimal design of real-world systems and models with complex configurations and large numbers of elements. This book is intended for scientists, engineers and students wishing to explore the potential of newly developed metaheuristics in practical problems. It presents concepts that are not only applicable to civil engineering problems, but can also used for optimizing problems related to mechanical, electrical, and industrial engineering. It is an essential resource for civil, mechanical and electrical engineers who use optimization methods for design, as well as for students and researchers interested in structural optimization. |