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| Nota di contenuto | Introduction and Overview: Hybrid Metaheuristics in Structural Engineering - Including Machine Learning Applications -- The Development of Hybrid Metaheuristics in Structural Engineering -- Optimum Design of Reinforced Concrete Columns in Case of Fire -- Hybrid Social Network Search and Material Generation Algorithm for Shape and Size Optimization of Truss Structures -- Development of a Hybrid Algorithm for Optimum Design of a Large-Scale Truss Structure. |
| Sommario/riassunto | From the start of life, people used their brains to make something better in design in ordinary works. Due to that, metaheuristics are essential to living things, and several inspirations from life have been used in the generation of new algorithms. These algorithms have unique features, but the usage of different features of different algorithms may give more effective optimum results in means of precision in optimum results, computational effort, and convergence. This book is a timely book to summarize the latest developments in the optimization of structural engineering systems covering all classical approaches and new trends including hybrids metaheuristic algorithms. Also, artificial intelligence and machine learning methods are included to predict optimum results by skipping long optimization processes. The main objective of this book is to introduce the fundamentals and |

current development of methods and their applications in structural engineering. .