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Soggetti	Mathematics - Data processing Engineering design Mechanics, Applied Solids Aerospace engineering Astronautics Computational Science and Engineering Engineering Design Solid Mechanics Aerospace Technology and Astronautics Enginyeria d'estructures Matemàtica Optimització matemàtica Llibres electrònics
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Nota di contenuto	Review of turning mass dampers and application of improved harmony search -- Optimal design of truss systems: The force density perspective -- CI-SAPF for structural optimization considering Buckling and Natural Frequency constraints -- Improved Drosophila Food-Search Algorithm for Structural and Mechanical Optimization Problems -- Topology optimization in linear elasticity, plasticity and fracture mechanics -- Application of Constrained version of Variations of Cohort Intelligence for Truss Structure Problems -- Hybridization of Cohort Intelligence and Fuzzy Logic (CIFL) for truss structure problems

	-- Structural Optimization of ATV chassis Using FEA Analysis -- Design of Quarter Car Model for Active Suspension System and Control Optimization using MATLAB -- Explicit dynamic crash analysis of car of different Materials against a wall using ANSYS.
Sommario/riassunto	This contributed book focuses on optimization methods inspired by nature such as Harmony Search Algorithm, Drosophila Food-Search Algorithm, Cohort intelligence algorithm and its variations, fuzzy logic along with their hybridization variants. It also focuses on multi-objective optimization algorithms such as Non-Dominated Sorting Genetic Algorithm, Particle Swarm Optimization, Evolutionary Algorithm, Pareto Envelope Selection Algorithm, and Strength Pareto Evolutionary Algorithm. The content focuses on topics such as the optimal design of truss systems with various applications, the design and simulation of quarter car systems for comfort design, the road handling design and a balanced system, and topology optimization of 2-dimensional and 3-dimensional structure in linear elasticity, plasticity and fracture mechanics among others. This book is a useful reference for those in academia and industry.