1.	Record Nr.	UNINA9910792475603321
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	Titolo	Elements of Structural Optimization [[electronic resource] /] / by Raphael T. Haftka, Zafer Gürdal, M.P. Kamat
	Pubbl/distr/stampa	Dordrecht : , : Springer Netherlands : , : Imprint : Springer, , 1990
	ISBN	94-015-7862-1
	Edizione	[2nd ed. 1990.]
	Descrizione fisica	1 online resource (XIV, 402 p. 14 illus.)
	Collana	Solid Mechanics and Its Applications, , 0925-0042 ; ; 1
	Disciplina	624
	Soggetti	Civil engineering
		Mechanics
		Automotive engineering
		Mechanical engineering
		Civil Engineering
		Classical Mechanics
		Automotive Engineering
		Mechanical Engineering
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Bibliographic Level Mode of Issuance: Monograph
	Nota di contenuto	1. Introduction -- 2. Classical Tools in Structural Optimization -- 3. Linear Mathematical Programming -- 4. Unconstrained Optimization -- 5. Constrained Optimization -- 6. Aspects of the Optimization Process in Practice -- 7. Sensitivity of Discrete Systems -- 8. Introduction to Variational Sensitivity Analysis -- 9. Dual and Optimality Criteria Methods -- 10. Decomposition and Multilevel Optimization -- 11. Optimum Design of Laminated Composite Materials -- Name Index. .
	Sommario/riassunto	The field of structural optimization is still a relatively new field undergoing rapid changes in methods and focus. Until recently there was a severe imbalance between the enormous amount of literature on the subject, and the paucity of applications to practical design problems. This imbalance is being gradually redressed now. There is still no shortage of new publications, but there are also exciting applications of the methods of structural optimizations in the automotive, aerospace, civil engineering, machine design and other engineering fields. As a result of the growing pace of applications,

research into structural optimization methods is increasingly driven by real-life problems. Most engineers who design structures employ complex general-purpose software packages for structural analysis. Often they do not have any access to the source the details of program, and even more frequently they have only scant knowledge of the structural analysis algorithms used in this software packages. Therefore the major challenge faced by researchers in structural optimization is to develop methods that are suitable for use with such software packages. Another major challenge is the high computational cost associated with the analysis of many complex real-life problems. In many cases the engineer who has the task of designing a structure cannot afford to analyze it more than a handful of times.