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Disciplina	510
Soggetti	Applied mathematics Engineering mathematics Mathematical analysis Analysis (Mathematics) Mathematical optimization Mechanics Mechanics, Applied Applications of Mathematics Analysis Optimization Theoretical and Applied Mechanics
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di contenuto	1 Motivation and framework -- 2 Our approach -- 3 Relaxation through moments -- 4 Optimality -- 5 Simulation -- 6 Some extensions -- 7 Some technical proofs.
Sommario/riassunto	This book provides a comprehensive guide to analyzing and solving optimal design problems in continuous media by means of the so-called sub-relaxation method. Though the underlying ideas are borrowed from other, more classical approaches, here they are used and organized in a novel way, yielding a distinct perspective on how to approach this kind of optimization problems. Starting with a discussion of the background motivation, the book broadly explains the sub-relaxation method in general terms, helping readers to grasp, from the

very beginning, the driving idea and where the text is heading. In addition to the analytical content of the method, it examines practical issues like optimality and numerical approximation. Though the primary focus is on the development of the method for the conductivity context, the book's final two chapters explore several extensions of the method to other problems, as well as formal proofs. The text can be used for a graduate course in optimal design, even if the method would require some familiarity with the main analytical issues associated with this type of problems. This can be addressed with the help of the provided bibliography.

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