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Autore	Constante Flores Gonzalo E
Titolo	Optimization via Relaxation and Decomposition : Applications to Large-Scale Engineering Problems // by Gonzalo E. Constante-Flores, Antonio J. Conejo
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Altri autori (Persone)	ConejoAntonio J
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Soggetti	Operations research Mathematical optimization Engineering mathematics Engineering - Data processing Mathematics Algorithms Operations Research and Decision Theory Optimization Mathematical and Computational Engineering Applications Applications of Mathematics
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Nota di contenuto	Relaxation and Decomposition -- Simplifying via Reformulation, Approximation, and Relaxation -- Approximating and Relaxing Optimization Problems -- Learning-Assisted Relaxations and Approximations -- Solving Optimization Problems with Complicating Variables -- Solving Optimization Problems via Lagrangian Decomposition -- Relaxations and Decomposition in Power Systems Operations.
Sommario/riassunto	This book offers an up-to-date description of relaxation/approximation and decomposition techniques, demonstrating how their combined use efficiently solves large-scale optimization problems relevant to engineering, particularly in electrical, and industrial engineering, with a focus on energy. Specifically, it

presents linear and nonlinear relaxations and approximations that are relevant to optimization problems, introduces complicating constraints and complicating variables decomposition techniques that can take advantage of relaxations and approximations, and examines their applications in the engineering field. Written in an accessible engineering language and filled with numerous illustrative examples and end-of-chapter exercises for all chapters, this book is a valuable resource for advanced undergraduate and graduate students, researchers, and practitioners in power engineering and industrial engineering. Moreover, business students with a keen interest in decision-making problems will also benefit greatly from its practical insights.

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