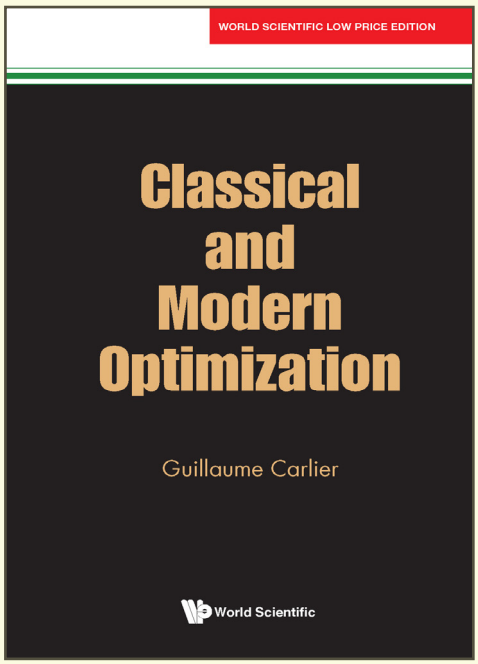
Classical and Modern Optimization



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ABOUT THE BOOK

The quest for the optimal is ubiquitous in nature and human behavior. The field of mathematical optimization has a long history and remains active today, particularly in the development of machine learning.

Classical and Modern Optimization presents a self-contained overview of classical and modern ideas and methods in approaching optimization problems. The approach is rich and flexible enough to address smooth and non-smooth, convex and non-convex, finite or infinite-dimensional, static or dynamic situations. The first chapters of the book are devoted to the classical toolbox: topology and functional analysis, differential calculus, convex analysis and necessary conditions for differentiable constrained optimization. The remaining chapters are dedicated to more specialized topics and applications.

Valuable to a wide audience, including students in mathematics, engineers, data scientists or economists, *Classical and Modern Optimization* contains more than 200 exercises to assist with self-study or for anyone teaching a third- or fourth-year optimization class.

READERSHIP

Thought-leaders, executives, industry strategists, research scientists, graduate students, advanced undergraduate students, policy-makers, research funding agencies, private research institutions, government regulators, investors, corporate managers, purchasing agents, and entrepreneurs in the areas of computer science, quantum computing, information theory, neuroscience, and physics.

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