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	Nota di contenuto	Introduction -- Evaluation Complexity Bounds for Smooth Constrained Nonlinear Optimization using Scaled KKT Conditions and High-order Models -- Data-Dependent Approximation in Social Computing -- Multi-Objective Evolutionary Optimization Algorithms for Machine Learning: a Recent Survey -- No Free Lunch Theorem, a Review -- Piecewise Convex-Concave Approximation in the Minimax Norm -- A Decomposition Theorem for the Least Squares Piecewise Monotonic Data Approximation Problem -- Recent Progress in Optimization of Multiband Electrical Filters -- Impact of Error in Parameter Estimations on Large Scale Portfolio Optimization -- Optimal Design of Smart Composites -- Tax Evasion as an Optimal Solution to a Partially Observable Markov Decision Process.

Sommario/riassunto

This book focuses on the development of approximation-related algorithms and their relevant applications. Individual contributions are written by leading experts and reflect emerging directions and connections in data approximation and optimization. Chapters discuss state of the art topics with highly relevant applications throughout science, engineering, technology and social sciences. Academics, researchers, data science practitioners, business analysts, social sciences investigators and graduate students will find the number of illustrations, applications, and examples provided useful. This volume is based on the conference Approximation and Optimization: Algorithms, Complexity, and Applications, which was held in the National and Kapodistrian University of Athens, Greece, June 29–30, 2017. The mix of survey and research content includes topics in approximations to discrete noisy data; binary sequences; design of networks and energy systems; fuzzy control; large scale optimization; noisy data; data-dependent approximation; networked control systems; machine learning ; optimal design; no free lunch theorem; non-linearly constrained optimization; spectroscopy.