

1. Record Nr.	UNINA9910734865303321
Autore	Borkar Vivek S.
Titolo	Elementary Convexity with Optimization // by Vivek S. Borkar, K. S. Mallikarjuna Rao
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	981-9916-52-6
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (148 pages)
Collana	Texts and Readings in Mathematics, , 2366-8725 ; ; 83
Disciplina	929.605
Soggetti	Mathematical optimization Optimization
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Continuity and existence of optima -- Differentiability and local optimality -- Convex sets -- Convex functions -- Convex optimization -- Optimization algorithms: an overview -- Epilogue.
Sommario/riassunto	This book develops the concepts of fundamental convex analysis and optimization by using advanced calculus and real analysis. Brief accounts of advanced calculus and real analysis are included within the book. The emphasis is on building a geometric intuition for the subject, which is aided further by supporting figures. Two distinguishing features of this book are the use of elementary alternative proofs of many results and an eclectic collection of useful concepts from optimization and convexity often needed by researchers in optimization, game theory, control theory, and mathematical economics. A full chapter on optimization algorithms gives an overview of the field, touching upon many current themes. The book is useful to advanced undergraduate and graduate students as well as researchers in the fields mentioned above and in various engineering disciplines.