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Nota di contenuto	Fundamentals -- Basic theory of convexity -- Convex generalized differentiation -- Enhanced calculus and fenchel duality -- Variational techniques and further subgradient study -- Miscellaneous topics on convexity -- Convexified Lipschitzian analysis -- List of Figures -- Glossary of Notation and Acronyms -- Subject Index.
Sommario/riassunto	This book presents a unified theory of convex functions, sets, and set-valued mappings in topological vector spaces with its specifications to locally convex, Banach and finite-dimensional settings. These developments and expositions are based on the powerful geometric approach of variational analysis, which resides on set extremality with its characterizations and specifications in the presence of convexity. Using this approach, the text consolidates the device of fundamental facts of generalized differential calculus to obtain novel results for convex sets, functions, and set-valued mappings in finite and infinite dimensions. It also explores topics beyond convexity using the fundamental machinery of convex analysis to develop nonconvex

generalized differentiation and its applications. The text utilizes an adaptable framework designed with researchers as well as multiple levels of students in mind. It includes many exercises and figures suited to graduate classesin mathematical sciences that are also accessible to advanced students in economics, engineering, and other applications. In addition, it includes chapters on convex analysis and optimization in finite-dimensional spaces that will be useful to upper undergraduate students, whereas the work as a whole provides an ample resource to mathematicians and applied scientists, particularly experts in convex and variational analysis, optimization, and their applications. .