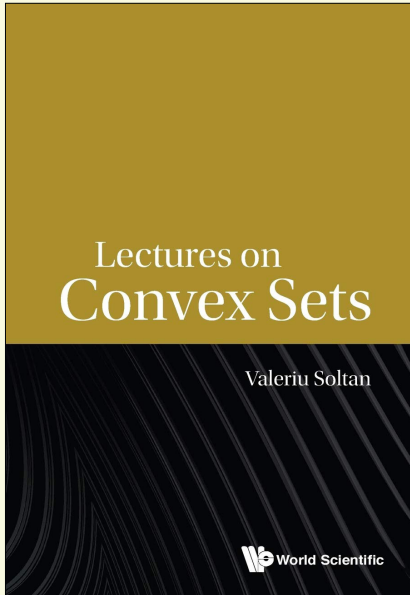


Lectures on Convex Sets



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ABOUT THE BOOK

This book provides a systematic treatment of algebraic and topological properties of convex sets (possibly non-closed or unbounded) in the n -dimensional Euclidean space. Topics under consideration include general properties of convex sets and convex hulls, cones and conic hulls, polyhedral sets, the extreme structure, support and separation properties of convex sets.

Lectures on Convex Sets is self-contained and unified in presentation. The book grew up out of various courses on geometry and convexity, taught by the author for more than a decade. It can be used as a textbook for graduate students and even ambitious undergraduates in mathematics, optimization, and operations research. It may also be viewed as a supplementary book for a course on convex geometry or convex analysis, or as a source for independent study of the subject, suitable for non-geometers.

READERSHIP

Graduate students in mathematics, optimization and operations research.

CONTENTS

- The Affine Structure of \mathbb{R}^n
- Convex Sets
- Convex Hulls
- Convex Cones and Conic Hulls
- Recession and Normal Directions
- Support and Separation Properties
- The Extreme Structure of Convex Sets
- The Exposed Structure of Convex Sets
- Polyhedra