

<<The monge-ampere equ>>

图书基本信息

书名：<<The monge-ampere equationMonge-Ampere方程>>

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内容概要

The classical Monge-Ampère equation has been the center of considerable interest in recent years because of its important role in several areas of applied mathematics.

In reflecting these developments, this work stresses the geometric aspects of this beautiful theory, using some techniques from harmonic analysis covering lemmas and set decompositions.

Moreover, Monge-Ampère type equations have applications in the areas of differential geometry, the calculus of variations, and several optimization problems, such as the Monge-Kantorovitch mass transfer problem. The book is an essentially self-contained exposition of the theory of weak solutions, including the regularity results of L.A.

Caffarelli.

The presentation unfolds systematically from introductory chapters, and an effort is made to present complete proofs of all theorems.

Included are examples, illustrations, bibliographical references at the end of each chapter, and a comprehensive index.

Topics covered include: Generalized Solutions * Non-divergence Equations * The Cross-Sections of Monge-Ampère Convex Solutions of $D^2u = 1$ in R^n * Regularity Theory * $W^{2,p}$ Estimates The Monge-Ampère Equation is a concise and useful book for graduate students and researchers in the field of nonlinear equations.

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