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Autore	Gutiérrez Cristian E
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Collana	Progress in Nonlinear Differential Equations and Their Applications, , 1421-1750 ; ; 89
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Generalized Solutions to Monge-Ampère Equations -- Uniformly Elliptic Equations in Nondivergence Form -- The Cross-sections of Monge-Ampère -- Convex Solutions of detDu=1 in R<i>n -- Regularity Theory for the Monge-Ampère Equation -- W^2,p Estimates for the Monge-Ampère Equation -- The Linearized Monge-Ampère Equation -- Interior Hölder Estimates for Second Derivatives -- References -- Index.
Sommario/riassunto	Now in its second edition, this monograph explores the Monge-Ampère equation and the latest advances in its study and applications. It provides an essentially self-contained systematic exposition of the theory of weak solutions, including regularity results by L. A. Caffarelli. The geometric aspects of this theory are stressed using techniques from harmonic analysis, such as covering lemmas and set decompositions. An effort is made to present complete proofs of all theorems, and examples and exercises are offered to further illustrate important concepts. Some of the topics considered include generalized solutions, non-divergence equations, cross sections, and convex

solutions. New to this edition is a chapter on the linearized Monge-Ampère equation and a chapter on interior Hölder estimates for second derivatives. Bibliographic notes, updated and expanded from the first edition, are included at the end of every chapter for further reading on Monge-Ampère-type equations and their diverse applications in the areas of differential geometry, the calculus of variations, optimization problems, optimal mass transport, and geometric optics. Both researchers and graduate students working on nonlinear differential equations and their applications will find this to be a useful and concise resource.