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Nota di contenuto	- The Sharp Sobolev Inequality and its Stability: An Introduction -- Nonlinear Potential Theoretic Methods in Nonuniformly Elliptic Problems -- Reduction Principles -- The Monge-Ampere Equation -- Injective Ellipticity, Cancelling Operators, and Endpoint Gagliardo-Nirenberg-Sobolev Inequalities for Vector Fields.
Sommario/riassunto	This book is dedicated to exploring optimization problems of geometric-analytic nature, which are fundamental to tackling various

unresolved questions in mathematics and physics. These problems revolve around minimizing geometric or analytic quantities, often representing physical energies, within prescribed collections of sets or functions. They serve as catalysts for advancing methodologies in calculus of variations, partial differential equations, and geometric analysis. Furthermore, insights from optimal functional-geometric inequalities enhance analytical problem-solving endeavors. The contributions focus on the intricate interplay between these inequalities and problems of differential and variational nature. Key topics include functional and geometric inequalities, optimal norms, sharp constants in Sobolev-type inequalities, and the regularity of solutions to variational problems. Readers will gain a comprehensive understanding of these concepts, deepening their appreciation for their relevance in mathematical and physical inquiries.
