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Nota di contenuto	Principal ideas of classical function theory -- Basic notions of differential geometry -- Curvature and applications -- Some new invariant metrics -- Introduction to the Bergman Theory -- A glimpse of several complex variables.
Sommario/riassunto	In this second edition of a Carus Monograph Classic, Steven Krantz develops material on classical non-Euclidean geometry. He shows how it can be developed in a natural way from the invariant geometry of the complex disc. He also introduces the Bergman kernal and metric and provides profound applications, some of them never having appeared before in print. In general, the new edition represents a considerable polishing and re-thinking of the original successful volume. This is the first and only book to describe the context, the background, the details, and the applications of Ahlfors's celebrated ideas about curvature, the Schwarz lemma, and applications in complex analysis. Beginning from scratch, and requiring only a minimal background in complex variable theory, this book takes the reader up to ideas that are currently active areas of study. Such areas include a) the Caratheodory and Kobayashi metrics, b) the Bergman kernel and metric, c) boundary continuation of conformal maps. There is also an introduction to the theory of several complex variables. Poincare's celebrated theorem about the biholomorphic inequivalence of the ball and polydisc is discussed and proved.