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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Part I: Probability and Concentration -- Interpolation of Probability Measures on Graphs -- Entropy and Thinning of Discrete Random Variables -- Structured Random Matrices -- Rates of Convergence for Empirical Spectral Measures: A Soft Approach -- Concentration of MEasure without Independence: A Unified Approach via the Martingale Method -- Strong Data-Processing Inequalities for Channels and Bayesian Networks -- An Application of a Functional Inequality to Quasi Invariance in Infinite Dimensions -- Borell's Formula on a Riemannian Manifold and Applications -- Fourth Moments and Products: Unified Estimates -- Asymptotic Expansions for Products of Characteristic Functions Under Moment Assumptions of non-Integer Orders -- Part II: Convexity and Concentration for Sets and Functions -- Non-Standard Constructions in Convex Geometry: Geometric Means of Convex Bodies -- Randomized Isoperimetric Inequalities -- Forward and Reverse Entropy Power Inequalities in Convex Geometry -- Log-Concave Functions -- On Some Problems Concerning Log-Concave Random Vectors -- Stability Results for Some Geometric Inequalities and their Functional Versions -- Measures of Sections of Convex Bodies -- On Isoperimetric Functions of Probability Measures Having Log-Concave

	Densities with Respect to the Standard Normal Law -- Counting Integer Points in Higher-Dimensional Polytopes -- The Chain Rule Operator Equation for Polynomials and Entire Functions.
Sommario/riassunto	This volume presents some of the research topics discussed at the 2014-2015 Annual Thematic Program Discrete Structures: Analysis and Applications at the Institute of Mathematics and its Applications during the Spring 2015 where geometric analysis, convex geometry and concentration phenomena were the focus. Leading experts have written surveys of research problems, making state of the art results more conveniently and widely available. The volume is organized into two parts. Part I contains those contributions that focus primarily on problems motivated by probability theory, while Part II contains those contributions that focus primarily on problems motivated by convex geometry and geometric analysis. This book will be of use to those who research convex geometry, geometric analysis and probability directly or apply such methods in other fields.