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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Mathematical Statistics and Information Theory -- to Riemannian Geometry -- Information Geometry -- Information Geometry of Bivariate Families -- Neighbourhoods of Poisson Randomness, Independence, and Uniformity -- Cosmological Voids and Galactic Clustering -- Amino Acid Clustering -- Cryptographic Attacks and Signal Clustering -- Stochastic Fibre Networks -- Stochastic Porous Media and Hydrology -- Quantum Chaology.

Sommario/riassunto

This volume will be useful to practising scientists and students working in the application of statistical models to real materials or to processes with perturbations of a Poisson process, a uniform process, or a state of independence for a bivariate process. We use information geometry to provide a common differential geometric framework for a wide range of illustrative applications including amino acid sequence spacings in protein chains, cryptology studies, clustering of communications and galaxies, cosmological voids, coupled spatial statistics in stochastic fibre networks and stochastic porous media, quantum chaology. Introduction sections are provided to mathematical statistics, differential geometry and the information geometry of spaces of probability density functions.