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Nota di contenuto	1 Stochastic analysis for Poisson processes -- 2 Combinatorics of Poisson stochastic integrals with random integrands -- 3 Variational analysis of Poisson processes -- 4 Malliavin calculus for stochastic processes and random measures with independent increments -- 5 Introduction to stochastic geometry -- 6 The Malliavin-Stein method on the Poisson space -- 7 U-statistics in stochastic geometry -- 8 Poisson point process convergence and extreme values in stochastic geometry -- 9 U-statistics on the spherical Poisson space -- 10 Determinantal point processes.
Sommario/riassunto	Stochastic geometry is the branch of mathematics that studies geometric structures associated with random configurations, such as random graphs, tilings and mosaics. Due to its close ties with

stereology and spatial statistics, the results in this area are relevant for a large number of important applications, e.g. to the mathematical modeling and statistical analysis of telecommunication networks, geostatistics and image analysis. In recent years – due mainly to the impetus of the authors and their collaborators – a powerful connection has been established between stochastic geometry and the Malliavin calculus of variations, which is a collection of probabilistic techniques based on the properties of infinite-dimensional differential operators. This has led in particular to the discovery of a large number of new quantitative limit theorems for high-dimensional geometric objects. This unique book presents an organic collection of authoritative surveys written by the principal actors in this rapidly evolving field, offering a rigorous yet lively presentation of its many facets.