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	Nota di contenuto	Preface; Contents; 1. Preliminaries and Discrete Parameter White Noise; 1.1 Preliminaries; 1.2 Discrete parameter white noise; 1.3 Invariance of the measure ; 1.4 Harmonic analysis arising from O(E) on the space of functionals of Y = {Y (n)}; 1.5 Quadratic forms; 1.6 Differential operators and related operators; 1.7 Probability distributions and Bochner-Minlos theorem; 2. Continuous Parameter White Noise; 2.1 Gaussian system; 2.2 Continuous parameter white noise; 2.3 Characteristic functional and Bochner-Minlos theorem; 2.4 Passage from discrete to continuous 2.5 Stationary generalized stochastic processes3. White Noise Functionals; 3.1 In line with standard analysis; 3.2 White noise functionals; 3.3 Infinite dimensional spaces spanned by generalized linear functionals of white noise; 3.4 Some of the details of quadratic functionals of white noise; 3.5 The T -transform and the S-transform; 3.6 White noise (t) related to -function; 3.7 Infinite dimensional space generated by Hermite polynomials in (t)'s of higher degree; 3.8 Generalized white noise functionals; 3.9 Approximation to Hida distributions 3.10 Renormalization in Hida distribution theory4. White Noise Analysis; 4.1 Operators acting on (L2)-; 4.2 Application to stochastic

Sommario/riassunto	This book provides the mathematical definition of white noise and gives its significance. White noise is in fact a typical class of idealized elemental (infinitesimal) random variables. Thus, we are naturally led to have functionals of such elemental random variables that is white noise. This book analyzes those functionals of white noise, particularly the generalized ones called Hida distributions, and highlights some interesting future directions. The main part of the book involves infinite dimensional differential and integral calculus based on the variable which is white noise. The present