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Altri autori (Persone)	KuoHui-Hsiung <1941-> SenguptaAmbar <1963-> SundarP (Padmanabhan)
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Nota di contenuto	CONTENTS; Preface; Complex White Noise and the Infinite Dimensional Unitary Group T. Hida; 1. Introduction; 2. Complex white noise; 3. Infinite dimensional unitary group; 4. Subgroups of U(Ee); References; Complex Ito Formulas M. Redfern; 1. Introduction; 2. Background and Notation; 3. Complex White Noise Analysis; 4. Calculus of (Dc*)-Valued Processes; 5. Real Case; References; White Noise Analysis: Background and a Recent Application J. Becnel and A . N. Sengupta; 1. Introduction; 2. Background: The Schwartz Space as a Nuclear Space 2.1. Hermite polynomials, creation and annihilation operators2.2. The Schwartz space as a nuclear space; 2.3. The abstract formulation; 2.4. Gaussian measure in infinite dimensions; 3. White Noise Distribution Theory; 3.1. Wiener-Ito isomorphism; 3.2. Properties of test functions; 3.3. The Segal-Bargmann transform; 3.3.1. The S-transform over subspaces; 4. Application to Quantum Computing; 4.1. Quantum algorithms; 4.2. Hidden subspace algorithm; Acknowledgment; References; Probability Measures with Sub-Additive Principal Szego-Jacobi Parameters A. Stan; 1. Introduction; 2. Background 3. Wick product4. Random variables with sub-additive w-parameters;

References; Donsker's Functional Calculus and Related Questions P.-L. Chow and J. Potthoff; 1. Introduction; 2. Donsker's Calculus; 3. Tools from White Noise Analysis and Malliavin Calclus; 3.1. Chaos Decomposition; 3.2. S-Transform; 3.3. Smooth and Generalized Random Variables; 3.4. Differential Operators; 3.5. Characterization Theorem and Wick Product; 4. Fourier-Wiener Transform; 5. Independence and Ito Calculus; 5.1. Independence of Generalized Random Variables; 5.2. Ito Calculus for Generalized Stochastic Processes
5.3. Donsker's Delta Function6. Towards Donsker's Calculus; References; Stochastic Analysis of Tidal Dynamics Equation U. Manna, J. L. Menaldi, and S. S. Sritharan; 1. Introduction; 2. Tidal Dynamics: The Model; 3. Deterministic Setting: Global Monotonicity and Solvability; 4. Stochastic Tide Equation; Acknowledgments; References; Adapted Solutions to the Backward Stochastic Navier-Stokes Equations in 3D P. Sundar and H. Yin; 1. Introduction; 2. Preliminaries; 3. A Priori Estimates; 4. Existence of Solutions; 5. Uniqueness of Solutions; References
Spaces of Test and Generalized Functions of Arcsine White Noise Formulas A . Barhoumi, A . Riahi, and H. Ouerdiane1. Introduction; 2. Arcsine White Noise Space; 2.1. Arcsine space in one dimension; 2.2. Construction of the arcsine white noise space; 3. Arcsine Test and Generalized Functions Spaces; 4. Characterization Theorems; 4.1. The S-transform; 4.2. Characterization of test and generalized functions; References; An Infinite Dimensional Fourier-Mehler Transform and the Levy Laplacian K. Saito and K. Sakabe; 1. Introduction; 2. A compensated Levy process and the Levy distributions
3. The Levy Laplacian acting on the Levy distributions

Sommario/riassunto

This volume contains current work at the frontiers of research in infinite dimensional stochastic analysis. It presents a carefully chosen collection of articles by experts to highlight the latest developments in white noise theory, infinite dimensional transforms, quantum probability, stochastic partial differential equations, and applications to mathematical finance. Included in this volume are expository papers which will help increase communication between researchers working in these areas. The tools and techniques presented here will be of great value to research mathematicians, graduat