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Titolo	White noise on bialgebras // Michael Schurmann
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Collana	Lecture Notes in Mathematics, , 0075-8434 ; ; 1544
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Soggetti	Quantum theory - Mathematics Global analysis (Mathematics)
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Nota di contenuto	Basic concepts and first results -- Symmetric white noise on Bose Fock space -- Symmetrization -- White noise on bose fock space -- Quadratic components of conditionally positive linear functionals -- Limit theorems.
Sommario/riassunto	Stochastic processes with independent increments on a group are generalized to the concept of "white noise" on a Hopf algebra or bialgebra. The main purpose of the book is the characterization of these processes as solutions of quantum stochastic differential equations in the sense of R.L. Hudson and K.R. Parthasarathy. The notes are a contribution to quantum probability but they are also related to classical probability, quantum groups, and operator algebras. The Az ma martingales appear as examples of white noise on a Hopf algebra which is a deformation of the Heisenberg group. The book will be of interest to probabilists and quantum probabilists. Specialists in algebraic structures who are curious about the role of their concepts in probability theory as well as quantum theory may find the book interesting. The reader should have some knowledge of functional analysis, operator algebras, and probability theory.