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WIENER PROCESSES AND STOCHASTIC INTEGRALS IN A BANACH SPACE

B. I. Mamporia

Abstract: The representations of Wiener process by uniformly convergent series of one-dimensional Gaussian random processes in a separable Banach space are given (Section I). The Ito stochastic integral of an operator-valued random function by a Wiener process in a Banach space is defined (Section III); Section II contains an auxiliary material: there is defined a stochastic integral of a random function with values in the dual space.

The method of the paper is based on the use of the concept of covariance operator.

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