

Presented by :

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Introduction to Malliavin calculus

Abstract : We give a short introduction to Malliavin calculus.

We will not give all the complete proofs because this turns out to be rather heavy.

The little resume is composed as follows :

In the first section we introduce isonormal Gaussian processes and note some properties, We study the structure of the space of the range of an isonormal process and we define the Hermite polynomials and some basic properties.

And in the second section, we give a short introduction to Malliavin calculus : we define the Malliavin derivative and we show that the Malliavin derivative is closable.

Bibliographic elements :

D. Nualart : The Malliavin Calculus and Related Topics, Springer-Verlag, 1995.

B. Oksendal : An Introduction to Malliavin Calculus with Applications to Economics, 1996.