İSTANBUL ANALYSIS SEMINARS

MALLIAVIN CALCULUS AND ITS RECENT APPLICATIONS IN FINANCIAL MATHEMATICS

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Abstract: In this talk, I will start with the fundamentals of Itô calculus. Then, we see that to handle more complicated problems, we need some mathematical tools beyond Itô calculus which is called Malliavin calculus. In the context of Malliavin calculus for Brownian motion, the derivative operator and the divergence operator, which is an extension of Itô integral, will be introduced. Then, the main results in Malliavin calculus will be discussed. I will conclude the talk with some recent applications of this theory in financial mathematics.

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