Stochastic fractional calculus operators:

Basic concepts and applications

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In this talk, we give the basic concepts and definitions of the fractional-order integral and fractional order derivatives of the second order stochastic processes. The main properties of these operators will be given. Some problems of stochastic and random differential equations will be studied. The combination between the fractional order derivative and stochastic Ito-differential and integral will be studied in some coupled systems of nonlocal stochastic and random differential equations.

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