Space-time white noises in a nonlinear expectation space

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29 May 2024, 17:15–18:15* Berlin time
IRTG 2544: "Stochastic Analysis in Interaction"
— Berlin Probability Colloquium —

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Abstract

Under the framework of nonlinear expectation, we introduce a new type of random fields, which contains a type of space-time white noise as a special case. Based on this result, we also introduce a space white noise. Different from the case of linear expectation, in which the probability measure is given and fixed.

Under the uncertainty of probability measures, space white noises are intrinsically different from the space cases, which is generalized from G-Gaussian processes which are different from a G-Brownian motion (joint work with Xiaojun JI).

*Punctual, i.e. sine tempore!