Central Limit Theorem for generalized measures in a multidimensional space

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One of the important generalized measures is the so-called Feynman measure. Using this measure mathematicians defined the Feynman path integral. This generalized measure cannot be identified with any sigma-additive Borel measure. Below we regard an approach to approximation of the Feynman type measure which was invented by O.G. Smolyanov. In the case of locally convex topological vector space the Feynman measure can be approximated by sigma-additive complex measures as shown in [1] without a detailed proof. In this talk we’ll provide a sequence of sigma-additive complex measures which converges in some sense to a Feynman type measure on a Euclidean space. The formula is similar to the Remizov’s one with operators.

References