

Stochastic renormalization in QFT

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This is a joint work with M. Gubinelli and J. Lorinczi [JFA 2014]. By using a stochastic method we renormalize UV cutoff imposed on a scalar quantum field model. This is an alternative of the method by Edward Nelson who renormalized UV cutoff by a functional analysis method. Physical and mathematical interpretations of the renormalized term is given and some application are discussed.