

Strong uniqueness for Dirichlet operators related to stochastic quantization under exponential/trigonometric interactions on the two-dimensional torus

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Abstract. We consider space-time quantum fields with exponential/trigonometric interactions. In the context of Euclidean quantum field theory, the former and the latter are called the Høegh-Krohn model and the Sine-Gordon model, respectively. The main objective of the present paper is to construct infinite dimensional diffusion processes which solve modified stochastic quantization equations for these quantum fields on the two-dimensional torus by the Dirichlet form approach and to prove strong uniqueness of the corresponding Dirichlet operators.

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