

学术报告

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报告题目： A differential characterization of exponential quantum field theory on the plane

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报告摘要： Characterizing a probability measure through an integration by parts formula is a classical problem in stochastic analysis. It finds applications in (Euclidean) quantum field theory, being related to the solutions of the equations of motion for the correlation functions of the quantum field. We approach this problem in the particular case of quantum field theory with exponential interaction on \mathbb{R}^2 , studying a Fokker-Planck-Kolmogorov equation associated to a stochastic quantization equation for such a model. We prove that, under some conditions on the support of the measure, the solution to this Fokker-Planck-Kolmogorov equation exists and is unique, providing a complete characterization of the exponential measure by an integration by parts formula. The talk is based on a joint work with Massimiliano Gubinelli and Mattia Turra.