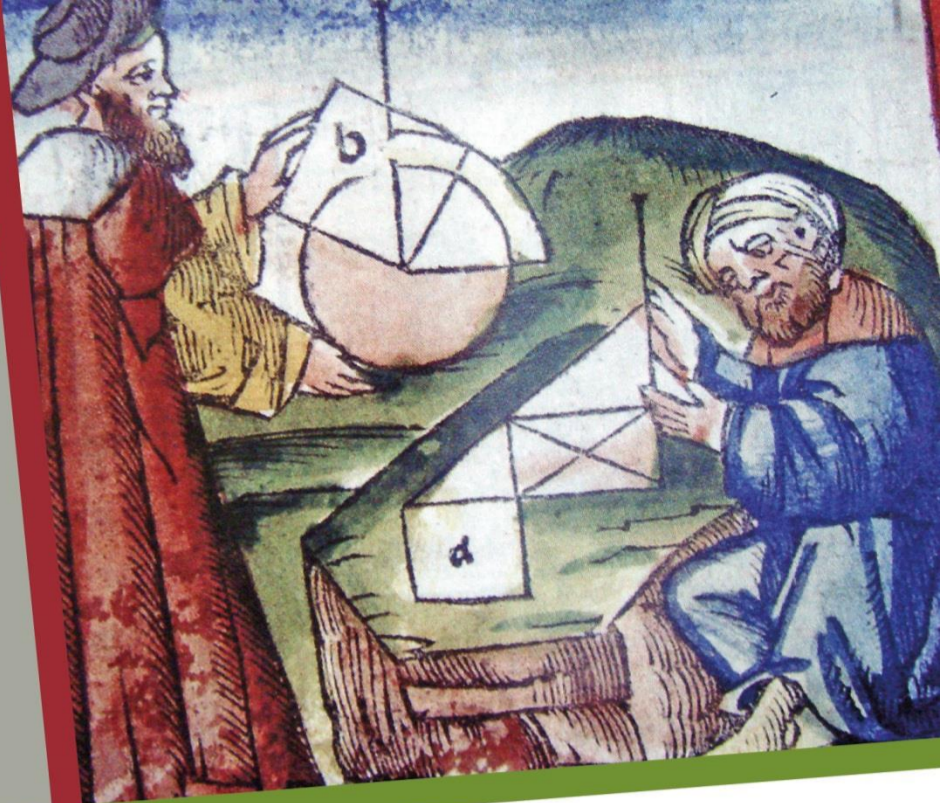




UNIVERSITÀ DEGLI STUDI
DI TRENTO

Dipartimento di Matematica



SEMINARI

Wednesday, February 14 – at 11:30

Seminar Room 1, Via Sommarive 14
and online through the ZOOM platform:

<https://unitn.zoom.us/j/82578903026>

Topic: Trento Probability Seminars

Meeting ID: 825 7890 3026

Passcode: 978062

Francesco Carlo De Vecchi
(Università di Pavia)

Integration by parts formula and quantum field theory

Abstract

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.

Contact persons: Sonia Mazzucchi

CONTATTI

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