PhD Course "Mathematical Aspects of Quantum Field Theory"

Dipartimento di Fisica, Aula 202

Martedì 3 giugno 2025, ore 11-13
Mercoledì 4 giugno 2025, ore 11-13 e 16-18
Giovedì 5 giugno 2025, ore 11-13

Stochastic quantisation

Massimiliano Gubinelli
(University of Oxford)

Goal of the lectures is to introduce the so called "stochastic quantization" methods in Euclidean quantum field theory. This is a highly interdisciplinary topic combining recent ideas ranging from PDEs theory, to stochastic analysis and mathematical physics. The goal is to show how to integrate these different tools to solve cutting-edge problems of (Euclidean) quantum field theory, such as the non-perturbative construction of interacting theories.