

Announcement

Seminar on Deformation Quantization

18. 11. 2022 at 2pm CEST/CET

Seminar room SE 30

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Strict deformation quantization in quantum lattice models

Quantization in general refers to the transition from a classical to a corresponding quantum theory. The inverse issue, called the classical limit of quantum theories, is considered a much more difficult problem. A rigorous and natural framework that addresses this problem exists under the name strict (or C^* -algebraic) deformation quantization. In this talk, I will first introduce this concept by means of relevant definitions. Next, I will show its connection with the classical limit of quantum theories, starting with a brief summary of the theory in the context of mean-field quantum theories. Finally, I will discuss the results of a recent work on how strict deformation quantization applies to more realistic models described by local interactions for periodic boundary conditions, e.g., the quantum Heisenberg spin chain.

Invited by Stefan Waldmann