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Schrödinger evolution in a low-density random potential: convergence to solutions of the linear Boltzmann equation

jeudi 31 août 2023 10:15 (45 minutes)

It is a fundamental problem in mathematical physics to derive macroscopic transport equation from the underlying microscopic transport equations. In this talk, we will consider such a problem. To be precise we will consider solutions to a time-dependent Schrödinger equation for a potential localised at the points of a Poisson point process. For these solutions we will present a result stating that the phase-space distribution converges in the annealed Boltzmann-Grad limit to a semiclassical Wigner measure which solves the linear Boltzmann equation.

Orateur: MIKKELSEN, Soeren (University of Bath)