



Mathematics and CS Seminar

Beyond Bogoliubov Dynamics

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Host: Robert Seiringer

In this talk we consider a quantum system of N interacting bosons in the mean field scaling regime. We construct corrections to the Bogoliubov dynamics that approximate the true N -body dynamics in norm to arbitrary precision. The corrections are such that they can be explicitly computed in an N -independent way from the solutions of the Bogoliubov and Hartree equations and satisfy a generalized form of Wick's theorem. We determine the n -point correlation functions of the excitations around the mean field, as well as the reduced densities of the N -body system to arbitrary precision, given only the knowledge of the two-point functions of a quasi-free state and the solution of the Hartree equation.

Thursday, January 30, 2020 04:00pm - 06:00pm

Heinzel Seminar Room / Office Bldg West (I21.EG.101)



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

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