Seminar/Talk

Derivation of the Gross-Pitaevskii Dynamics through Renormalized Excitation Number Operators

Christian Brennecke

University of Bonn

Host: Laszlo Erdös

In this talk I will present a new derivation of the time-dependent Gross-Pitaveskii equation from a system of interacting bosons in $\mathbb{R}^3$. Our derivation is based on a simple Gronwall estimate for suitably renormalized excitation number operators and yields optimal convergence rates. I will conclude the talk with some related open questions on the quasi-free approximation of the many-body dynamics. The talk is based on joint works with W. Kroschinsky and B. Schlein.

Tuesday, December 17, 2024 03:30pm - 04:30pm

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

This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: https://ista.ac.at/en/campus/how-to-get-here/ The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.