



Mathematics and CS Seminar

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

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Host: Laszlo Erdős

In this talk I will present a new derivation of the time-dependent Gross-Pitaevskii 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 / Heinzl Seminar Room (I21.EG.101)



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

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<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.