



Seminar/Talk

Derivation of Hartree theory for attractive 2D Bose gases

Francois Visconti

LMU München

Host: Robert Seiringer

In this talk, I will present recent results on two-dimensional Bose gases with attractive interactions. More precisely, I will discuss the validity of Hartree theory, which states that the ground state of the system can be accurately described by an uncorrelated Bose-Einstein condensate. In particular, this means that the ground state energy per particle of the system is well-described by a non-linear Schrödinger energy functional, called the Hartree energy functional. For systems with attractive interactions, this question is particularly non-trivial because the system might not even be stable, meaning that the ground state energy per particle might diverge as the number of particles goes to infinity. As I will explain, there is a sharp threshold on the interaction that determines whether or not the system is stable. Based on joint work with Lukas Junge.

Tuesday, October 28, 2025 04:15pm - 05:15pm

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.