

Abstract

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The excitation spectrum of the Bose gas in the Gross-Pitaevskii regime

Joint work with C. Brennecke, S. Cenatiempo and B. Schlein.

We consider a gas of interacting bosons trapped in a box of side length one in the Gross-Pitaevskii limit. We establish the validity of Bogoliubov's prediction for the ground state energy and the low-energy excitation spectrum.