

Excitation spectrum of dilute trapped Bose gases

Phan Thanh Nam

LMU Munich

`nam@math.lmu.de`

We will discuss the low-lying eigenvalues of trapped Bose gases in the Gross-Pitaevskii regime. In particular, we will derive a nonlinear correction to the Bogoliubov approximation, thus capturing precisely the two-body scattering process of the particles. This extends a result of Boccato, Brennecke, Cenatiempo and Schlein on the homogeneous Bose gas. The talk is based on joint work with Arnaud Triay.