



## Physical Sciences Seminar

# The excitation spectrum of Bose gases interacting through singular potentials

**Chiara Boccato**

IST Austria

Host: Robert Seiringer

We consider systems of  $N$  bosons in a box with periodic boundary conditions, interacting through a repulsive two-body potential of the form  $\frac{1}{N^\beta} V(N^\beta x)$ . For all  $0 < \beta < 1$ , and for sufficiently small coupling constant  $\kappa > 0$ , we establish the validity of Bogoliubov theory, identifying the ground state energy and the low-lying excitation spectrum up to errors that vanish in the limit of large  $N$ . Joint work with Christian Brennecke, Serena Cenatiempo and Benjamin Schlein.

**Thursday, November 23, 2017 04:00pm - 06:00pm**

Big Seminar room Ground floor / Office Bldg West (I21.EG.101)



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