



Invitation to Seminar Talk

# Bogoliubov free energy functional

**Marcin Napiórkowski**  
(IST Austria)

**Host: Robert Seiringer**

The Bogoliubov approximation at zero temperature has recently received a lot of attention. In my talk I shall discuss the Bogoliubov theory at positive temperatures in the case of homogeneous Bose gas. The theory arises by restricting the Hilbert space to translation invariant quasi-free states. I will derive the free energy functional and discuss its certain properties, both from a mathematical (existence of minimizers) and physical point of view (phase diagram). This is joint work with Jan Philip Solovej and Robin Reuvers.

**Thursday, October 16<sup>th</sup> 2014, 4pm**  
Meeting Room, Central Building, 3rd floor



This invitation is valid as a ticket for the IST Shuttle from and to Heiligenstadt Station. Please find a schedule of the IST Shuttle on our webpage (note that the IST Shuttle times are highlighted in dark green): [http://ist.ac.at/fileadmin/user\\_upload/pdfs/IST\\_shuttle\\_bus.pdf](http://ist.ac.at/fileadmin/user_upload/pdfs/IST_shuttle_bus.pdf)  
The IST Shuttle bus is marked IST Shuttle and has the Institute Logo printed on the side.