

The Vienna Doctoral Programme on Complex Quantum Systems
invites you to a

Seminar Talk

by

Quentin Glorieux

Labaratoire Kastler Brossel (LKB)

Ecole Normale Supérieure Sorbonne Université - CNRS

***“Quantum simulation with light:
from superfluidity to Hawking radiation”***

During this presentation I will introduce the basics of hydrodynamics with light in two important systems: exciton-polariton micro-cavities and warm rubidium vapors. Using the analogy between the non-linear Schrodinger equation and the Gross-Pitaevskii equation, I will answer the question about “Can we observe superfluidity with light ?”

I will also discuss recent non-linear and quantum optics experiments through the perspective of hydrodynamics and I will show what are the surprising consequences of this approach. Finally, I will review recent attempts to observe an analogue of the Hawking radiation at a black hole horizon with table-top experiments.

**Monday, 12 November 2018,
16:30h get-together with coffee and snacks!**

Lise Meitner Hörsaal, Strudlhofgasse 4, 1st floor, Vienna

The seminar talk will be preceded by a CoQuS Student talk at 17:00h
by

Valeria Saggio

University of Vienna

“Experimental few-copy multi-particle entanglement detection”

Hosted by: Arno Rauschenbeutel