

Meetings of the Belgian Quantum Physics Initiative

Special lectures



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Quantum Gases in Optical Boxes

Optical boxes have had a transformative impact on experiments with ultracold atoms [1].

They have allowed inter alia the creation of homogeneous-density quantum gases, a milestone in quantum many-body physics with ultracold atoms. These uniform gases have since opened many new research avenues by simplifying the interpretation of complex measurements and by enabling previously inaccessible experiments.

In this short course, I will give a selected overview of exciting recent results on this topic, ranging from the thermodynamics of strongly correlated systems, to collective excitations across normal-superfluid transitions, to far-from-equilibrium dynamics.

[1] N. Navon, R.P. Smith, Z. Hadzibabic, Nature Phys. 17, 1334 (2021)

Thursday 23rd MARCH 2023 AT 2 P.M.

1:30pm: Welcome coffee

2:00pm: Lecture (part one)

3:00pm: Coffee break and discussions

4:00pm: Lecture (part two)