



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

Seminar Talk

By

Philipp Haslinger

TU Wien

***“Probing the forces of gravity, blackbody radiation and
dark energy with matter waves”***

Atom interferometry has proven within the last decades its surprising versatility to sense with high precision tiniest forces. In this talk I will give an overview of our recent work using an optical cavity enhanced atom interferometer to sense with gravitational strength for fifths forces^{1,2} and for an on the first-place counterintuitive inertial property of blackbody radiation³.

**Monday, 24 June 2019,
16:30h get-together with coffee and snacks!**

Main Lecture Hall at TU Wien, Atominstitut, Stadionallee 2, 1020 Vienna

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

by

Sebastian Ecker

University of Vienna

“How I stopped worrying and learned to love the noise”

Hosted by: Peter Rabl

[1] P. Hamilton, M. Jaffe, P. Haslinger, et al., Atom-interferometry constraints on dark energy, *Science*. 349 (2015) 849–851.

[2] M. Jaffe, P. Haslinger, V. Xu, et al. Testing sub-gravitational forces on atoms from a miniature, in-vacuum source mass, *Nat. Phys.* 13 (2017) 938–942.

[3] P. Haslinger, M. Jaffe, V. Xu, et al., Attractive force on atoms due to blackbody radiation, *Nat. Phys.* 14 (2018) 257–260.



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