



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

Seminar Talk

by

Z. Y. Jeff Ou

Purdue University, West Lafayette, USA

Quantum Metrology with $SU(1,1)$ Interferometers

We will discuss a new type of interferometers that employ nonlinear devices as beam splitters. A specific scheme with parametric amplifiers, the so called $SU(1,1)$ interferometer, is implemented and is compared with a traditional linear interferometer. A new paradigm for quantum interferometry is found that is different from the noise reduction mechanism in squeezed state interferometry. Some applications of the new interferometer will be discussed with topics including atom-light hybrid interferometer and simultaneous measurement of multiple orthogonal parameters.

**Monday, 26 June 2017,
16:30h get-together with coffee and snacks!**

Atominstitut, Stadionallee 2, 1020 Vienna

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

Yijian Meng

TU Vienna

Towards ground-state cooling of atoms close to a nanofiber

Hosted by: Anton Zeilinger