



Announcement

Advanced seminar Quantum sensing and metrology

Content

The aim for this seminar is new and rapidly growing field of quantum sensing and metrology. Participants will be able to learn the current 'state of the science' in this interdisciplinary area of quantum technology. Specific topics will include:

- Fundamental limits in sensing and metrology
- Decoherence and precision limits in sensing and metrology
- Weak measurements in metrology
- Mesoscopic nonclassical light for metrology;
- Optomechanical systems;
- Next-generation single-photon sources and their use for quantum measurements
- Quantum entanglement in sensing and metrology
- Diamond magnetometry
- Nanoscale NMR
- Quantum imaging
- New definition of mass unit

Prerequisites

Formal prerequisites: none

Recommended prerequisites: quantum mechanics

Additional Information

The module refers to bachelor and master students

Dates

First meeting: 19.04.2018

Lecturer

Prof. Jelezko, Prof. Reineker, Institute of Quantum Optics