CRC 1227
Designed Quantum States of Matter

GUEST LECTURE

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(Guest of Prof. P.O. Schmidt)

Leibniz Universität Hannover
DQ-mat Colloquium
Tuesday, 09 May 2023, 11.00 am
Room D326
Building 1101, Welfengarten 1

"New ideas in ultralight dark matter searches in the laboratory and in space"

The extraordinary advances in quantum control of matter and light have been transformative in the development of quantum technologies enabling new searches for dark matter, one of the biggest puzzles of modern physics. Deployment of quantum sensors in space presents fantastic opportunities for paradigm-changing discoveries and enables exploration. I will discuss new ideas in ultralight dark matter searches with atomic clocks in the laboratory and in space, including oscillating charge radius effects in atomic clocks, searches for dark matter halo bound to the Sun, testing dark matter distribution in the Solar system with asteroids, and transient effects from exploding boson stars.

All DQ-mat members and all interested are cordially invited to attend.