



CRC 1227  
Designed Quantum States of Matter



## GUEST LECTURE

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(Guest of Prof. Dr. Piet O. Schmidt and Prof. Dr. Klemens Hammerer)

Leibniz Universität Hannover  
DQ-mat Colloquium

**25 November 2021, 3.00 pm**

**(via Zoom-Meeting)**

### **"Ultracold atom-ion interactions"**

In this colloquium I will review the progress in the last decade of a new field of experimental research: the study of ultracold atoms and ions. I'll describe the different techniques that were developed in this field, their advantages and limitations and their use in the search for quantum signatures in atom-ion scattering. Finally I will review a recent technique, developed at the Weizmann Institute of Science, in which quantum logic methods are used in order to study the interaction of ions of arbitrary species with ultracold atoms.

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