



CRC 1227
Designed Quantum States of Matter



GUEST LECTURE

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(Guest of Prof. Klemens Hammerer)

Leibniz Universität Hannover
DQ-mat Colloquium

17 June 2021, 3.00 pm

(via Zoom-Meeting)

"Noisy Intermediate Scale Quantum Computing on Superconducting Devices"

Quantum computing has made significant advances in recent years. In particular a programmable device has performed a computational task that is, to our current knowledge, beyond the reach of classical computing. Quantum computing has thus entered the era of noisy intermediate scale quantum computers (NISQ), where complex algorithms can be performed but universal error corrected computing is not yet possible. In this talk I will introduce quantum computing in superconducting hardware and discuss the “quantum supremacy” experiment to illustrate its capabilities. I will then focus on computing the dynamics of quantum systems as a classically hard task with potential quantum advantage and discuss our recent efforts in Erlangen to make progress in this direction.

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