



e-conversion



Seminarankündigung

**Dienstag, 1. Oktober 2019
15:00 Uhr**

ZNN, Seminarraum EG 0.001

“Finding and surpassing coherence limitations in superconducting qubits”

In this talk I will introduce the materials challenges in superconducting qubit (SCqubit) devices. Despite several decades of progress in the field, there are still a significant number of unknown factors which degrade resonator coherence time by orders of magnitude from the theoretical limit. I will give a general introduction into SCqubit devices with a focus on materials and fabrication followed by our newest results on understanding the deviation of even world leading devices from the idealized structure and composition via advanced characterization techniques at the Molecular Foundry. Finally, I will discuss the impact of these nonidealities and the techniques we are developing to overcome these limitations and create the next generation of high performance SCqubit devices.

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