TECHNISCHE UNIVERSITÄT DRESDEN

Institut für Festkörper- und Materialphysik

IFMP Institut für Festkörper- & Materialphysik

IFMP Seminar

Date Monday, July 15, 2024, at 14:50

REC/C213

BigBlueButton: https://bbb.tu-dresden.de/b/dar-mbs-me8-gsc

Speaker **Uri Vool**
MPI-CPfS

Title **Hybrid superconducting circuits with unconventional superconductors**

Abstract Superconducting circuits (SCs) are quantum devices that display many of the effects of atomic systems but are made up of macroscopic microwave circuit elements. Their tunability, high coherence, and strong coupling has led to their rapid development as a leading implementation of quantum hardware. Traditional SCs are made using known superconductors such as aluminium or niobium, but the integration of novel superconductors (e.g. heavy-fermions or cuprates) as part of the circuit can lead to new scientific insights and new capabilities. Such hybrid circuits are ideal sensors, capable of measuring the superconducting gap structures of new unconventional superconductors using micron-sized samples, which have thus far been inaccessible. This talk will present recent results where we explore novel superconductors with hybrid circuits, and a path towards utilizing them in new hybrid devices for quantum technology.

Host: D. Peets

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