

On-line SPICE-SPIN+X Seminars



Wednesday, 15 September 2021, 15:00 (CET)

The seminar will be via Zoom ([Meeting ID: 820 1931 1716](#)) and live streamed in the SPICE YouTube Channel.

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Local magnetic measurements of quantum materials



Magnetic moments and moving charges produce magnetic fields. Probing these stray magnetic fields on a local scale can provide a unique window into a variety of phenomena in quantum materials. In this talk, I will discuss three examples of how we use a local magnetic probe to study different properties of quantum materials. First, we visualize a spatially modulated superconducting transition in microstructures fabricated from a heavy-fermion superconductor. Second, we visualize the current density in a quantum anomalous Hall insulator by imaging the magnetic field produced by the current. Third, we measure the superconducting diamagnetic response of an atomically thin van der Waals superconductor for the first time.