Kolloquium

Theoretische Physik

Universität Konstanz

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Unconventional Superconductivity in Quantum Dot Systems

The formation of electron pairs is a prerequisite of superconductivity. Due to the fermionic nature of electrons four possible classes of superconducting correlations with definite symmetry in spin, space and time exist. In this talk, we present our recent work on quantum dot systems coupled to conventional s-wave superconductors in the presence of inhomogeneous magnetic fields as a model system exhibiting unconventional pairing. Due to their small number of degrees of freedom, tunable by gate voltages, quantum-dot systems are ideal to gain fundamental insight in unconventional pairing.