

Subgap states in majorana wires

Piet BROUWER

Freie Universitaet Berlin
Dahlem Center For Complex Quantum Systems
Arnimallee14
Gebäude Fachbereich Physik-Raum 1.4.19
Dahlem, D-14195 Berlin
Germany

A one-dimensional spin-orbit coupled nanowire with proximity-induced pairing from a nearby s-wave superconductor may be in a topological nontrivial state, in which it has a zero energy Majorana bound state at each end. In this talk, I will discuss how non-idealities in this proposal, such as potential disorder and deviations from a strict one-dimensional limit affect the topological phase and its signatures in a current-voltage measurement.