

ICTS Seminar

Title : Renormalization group study of the interplay between Majorana fermions and Kondo effects in quantum dots

Speaker : Rukhsan Ul-haq, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore

Date : Monday, December 18, 2017

Time : 10:00 AM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : Majorana fermions have recently been at the forefront of the research in condensed matter physics and quantum computation because of their anyonic statistics and topological protection which makes them promising candidates as topological qubits. In my presentaiton I will discuss about the interplay between Majorana fermions and Kondo effect in a setup which consists of quantum dot coupled to normal leads on one side and to topological superconductor on another side. I will focus on the renormalization study of the effective Hamiltonian for this setup. I will also talk about an experimental proposal which can be feasibly done on quantum dots to probe the signatures of Majorana fermions in Kondo effect.