Edge states and self-adjoint extensions in a one dimensional model.

Juan Felipe López Restrepo (Universidad de los Andes)

Abstract

In this talk, discrete Kitaev chain is presented as a one dimensional quantum system which exhibits a topological phase transtion, characterized by Majorana modes at the edges of the chain. Then, continuum limit is presented with the necesity of self-adjoint extensions of a one dimensional Dirac operator that encodes the boundary data, in order to obtain the Hamiltonian spectrum.