Topological States of Matter (TopoStates)

05.Sep - 10.Sep 2016

Cod. 060-16

Mod.:
Face-to-face

Edition
2016

Activity type
Workshop

Date
05.Sep - 10.Sep 2016

Location
Miramar Palace

Languages
English

Web
http://topostates.dipc.org

Organising Committee

Description

Website of the congress: http://topostates.dipc.org/

Topological quantum matter represents a new class of materials which are characterized by non-local topological properties emerging from purely local (microscopic) degrees of freedom. Our understanding of topological states of matter has been broadened enormously over the last decade. The progress on the theoretical end includes, for example, the prediction of topological insulators and superconductors as well as the exploration of the interplay between symmetry and topology with an aim to classify topological states. A remarkable progress has been also made on the experimental front. Inspired by the theoretical predictions, experimentalists in laboratories across the world are now trying to realize the simplest topological quantum states. Among them much attention attracted Majorana systems, e.g. superconductors that support Majorana zero-energy modes (Majoranas). It is believed that the defects carrying these modes obey non-Abelian statistics and, as such, might be of potential use for quantum computing. There has been remarkable experimental progress in the quest to find Majoranas in various superconducting heterostructures involving semiconducting wires, ferromagnetic chains, and quantum spin Hall materials.

Course specific contributors

Directed by

Sebastian Bergeret

Vitaly Golovach

Ikerbasque Research Associate, Materialen Fisika Zentroa CFM and Donostia International Physics Center, Ikerbasque Research Fellow

Registration fees

REGISTRATION	UNTIL 10-09-2016
GENERAL	150,00 EUR

Place

Miramar Palace

Gipuzkoa