Topological Matter School: Topological excited States and Non-crystalline Systems (TMS2025)

18.Ago - 22.Ago 2025

Cód. Z17-25

Mod.:
Presencial

Edición
2025

Tipo de actividad
Workshop

Fecha
18.Ago - 22.Ago 2025

Ubicación
Palacio Miramar

Idiomas
Inglés

Validez académica
50 horas

Web
https://tms-dipc.org/

DIRECCIÓN

Maia García Vergniory, Donostia International Physics Center

Comité Organizador

Descripción

Excitations play a crucial role in determining fundamental electronic and optical properties of a crystal, and can even give rise to states of matter without any equilibrium counterparts. At the single-layer limit, quantum confinement and enhanced interaction effects lead to exotic many-body phenomena. For example, single-layer semiconductors host tightly bound excitons with large binding energies that remain stable even at room temperature. In bilayer and few-layer stacks, the relative twist angle between layers introduces an additional degree of tunability, enabling the exploration of new emergent phenomena. These include strongly correlated electronic states, adjustable band gaps, unique optical and magnetic properties, and correlated topological phases such as spin Hall and fractional quantum Hall effects.

ORGANIZING COMMITTEE:

- Maia G. Vergniory (DIPC, Max Planck)
- Reyes Calvo (BC Materials)
- Santiago Blanco-Canosa (DIPC, Ikerbasque)
- Adolfo Grushin (Institut NEEL – CNRS)
- Alexander Altland (University of Cologne)
- Julen Ibañez Azpiroz (CFM, Ikerbasque)

Objetivos

The summer school aims to offer a comprehensive introduction to these cutting-edge topics and situate them within the broader framework of emergent phenomena in condensed matter physics.

Colaboradores específicos del curso

Donostia International Physics Center

CRC183 ENTANGLED STATES OF MATTER

topology QUAST spatio-temporal correlations dynamics

Dirigido por:

Maia García Vergniory

Donostia International Physics Center

Precios matrícula

REGISTRATION	HASTA 20-07-2025
Fee Waiver	0 EUR
Regular attendant	400,00 EUR

Lugar

Palacio Miramar

Pº de Miraconcha nº 48. Donostia / San Sebastián

Gipuzkoa