



EMMI Workshop: Exotic Quantum Matter: Measurement and Control (EQM-MC)



30.Sep - 02.Oct 2026

Cód. Z67-26

Mod.:

Presencial

Edición

2026

Tipo de actividad

Workshop

Fecha

30.Sep - 02.Oct 2026

Ubicación

Palacio Miramar

Idiomas

Inglés

Validez académica

30 horas

Web

<https://eqm-mc-conference.dipc.org/>

DIRECCIÓN

Aran Garcia-Lekue, DIPC

Comité Organizador



Descripción

This three-day EMMI workshop accompanies the four-week program on "Exotic Quantum Matter" organized at DIPIC as the inaugural event of the Sessions in Physics: Advancing Research and Knowledge program. It focuses on the exotic properties of quantum matter such as topological order, strong correlations, fractional excitations, long-range entanglement and, in particular, how to probe and control them using newly developed measurement and manipulation capabilities, including the quantum-gas microscope, STM-ESR, the quantum twisting microscope, or reconfigurable lattices. These tools have been developed for very different experimental systems (ultracold atoms in optical lattices, solid-state nanostructures, atoms or molecules on surfaces) and a particular interest of the workshop is highlight these new capabilities and how they allow to control quantum matter and how to characterize by measuring characteristics such as non-local order parameters, entanglement witnesses, entropies, or spatial and temporal correlation functions.

ORGANIZING COMMITTEE:

- Francesca Ferlaino [Universität Innsbruck, Institut für Experimentalphysik,Technikerstrasse, Austria]
- Aran Garcia Lekue [DIPC - Donostia International Physics Center]
- Géza Giedke Lekue [DIPC - Donostia International Physics Center]
- Tobias Grass [DIPC - Donostia International Physics Center]
- Mohammad Hafezi [University of Maryland, USA]

Objetivos

The aim of the workshop is to foster exchange and explore the potential of state-of-the-art methods to create, probe, and manipulate quantum correlations beyond mean-field approaches.

Colaboradores específicos del curso



Dirigido por:



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Lugar

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