



# Quantum Computing, Complexity and Control (QCCC2026)



**18.Mayo - 22.Mayo 2026**

**Cód. Z70-26**

**Mod.:**

Presencial

**Edición**

2026

**Tipo de actividad**

Workshop

**Fecha**

18.Mayo - 22.Mayo 2026

**Ubicación**

Donostia International Physics Center

**Idiomas**

Inglés

**Validez académica**

50 horas

**Web**

<https://qccc26.github.io/index.html>

**DIRECCIÓN**

**Adolfo del Campo**, University of Luxembourg

# Comité Organizador



# Descripción

This workshop brings together researchers from industry and academia to explore the frontiers of quantum computing, with a focus on recent advances in quantum control and the complexity of quantum dynamics in physical systems. The event aims to foster cross-disciplinary dialogue and collaboration among experts working on Krylov subspace methods in quantum dynamics—including operator growth and Krylov complexity—as well as quantum control strategies based on shortcuts to adiabaticity, such as counter-diabatic driving and adiabatic gauge potentials. In addition, the workshop will highlight the development of quantum algorithms for quantum computing assisted by counter-diabatic driving.

## Topics include:

- Quantum complexity
- Krylov subspace methods
- Quantum dynamics and chaos
- Quantum Computing algorithms
- Quantum control shortcuts to Adiabaticity
- Counter-diabatic driving
- Adiabatic Gauge Potential

## Organizing Committee:

Budhadyta Bhattacharjee (University of Luxembourg)

Adolfo del Campo (University of Luxembourg & DIPC)

Xi Chen (ICMM-CSIC)

Geza Giedke (DIPC)

## Objetivos

This workshop is planned to provide a stimulating platform for the exchange of ideas, building connections and forming collaborations among researchers in academia and industry working at the intersection of quantum dynamics, quantum control, quantum computing and quantum algorithms

By bringing together leading experts on Krylov subspace methods and operator complexity, shortcuts to adiabaticity and counter-diabatic driving, and algorithmic applications of these techniques in quantum computing, this event aims to foster engaging discussions and spark fruitful collaborations.

The goal of this workshop is to generate new synergies that potentially lead to new and significant advances in the the control and computational power of near-term and future quantum technologies.

## Colaboradores específicos del curso



ZIENTZIA, UNIBERTSITATE ETA  
BERRIKUNTZA SAILA  
DEPARTAMENTO DE CIENCIA,  
UNIVERSIDADES E INNOVACIÓN



## Dirigido por:



### **Adolfo del Campo**

University of Luxembourg

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World-leading expertise on Foundations of Nonequilibrium Quantum Matter with applications to Quantum Science and Technology. Pioneering works on Shortcuts To Adiabaticity, Quantum Information Geometry, Quantum Speed Limits and Universal Bounds on Quantum Dynamics, Universality and Control of Classical and Quantum Phase Transitions, Speeding up Adiabatic Quantum Computation.

## Profesorado



**YUE BAN**

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**Lincoln Carr Carr**

Colorado School of Mines

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**Luis Pedro Garcia-Pintos**

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**Alejandro Gomez Cadavid**

Kipu Quantum & University of the Basque Country (EHU)

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**Andras Grabarits Grabarits**

Department Of Physics And Materials Science, University Of Luxembourg, L-1511 Luxembourg

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**Alioscia Hamma Hamma**

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**Takuya Hatomura**

NTT, Inc.

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**Kazuki Ikeda**

UMass Boston

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**Andrew Jordan**

Chapman University

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**Xiaopeng Li**

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**Pratik Nandy**

Vrije Universiteit Brussel

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**Anatoli Polkovnikov**

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**Marek Rams**

Jagiellonian University in Krakow

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**Lea Santos**

University of Connecticut

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**Mikel Sanz**

University of the Basque Country (UPV/EHU)

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**Paolo Zanardi**

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# Precios matrícula

REGISTRATION

HASTA 11-05-2026

Fee Waiver

0 EUR

Regular Attendant

275,00 EUR

# **Lugar**

## **Donostia International Physics Center**

Paseo Manuel Lardizabal, 4, 20018 Donostia/San Sebastián

Gipuzkoa