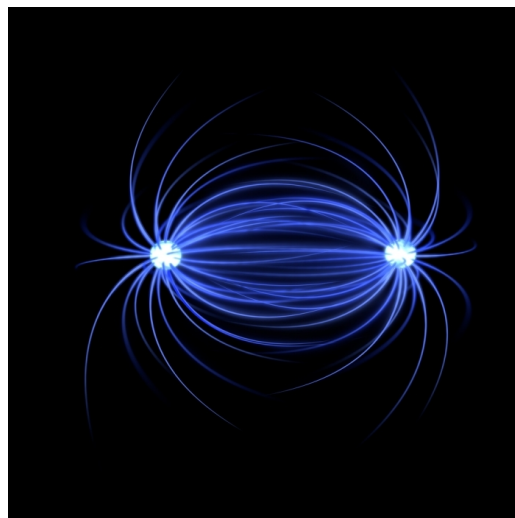




New Developments in Non-linear Transport and Magnetism (NLTm)



26.Mayo - 29.Mayo 2026

Cód. Z53-26

Mod.:

Presencial

Edición

2026

Tipo de actividad

Workshop

Fecha

26.Mayo - 29.Mayo 2026

Ubicación

Centro de Física de Materiales (CSIC-UPV/EHU)

Idiomas

Inglés

Validez académica

40 horas

Web

<https://nltm.dipc.org/>

DIRECCIÓN

Fernando de Juan Sanz, Donostia International Physics Center

Comité Organizador



Descripción

Non-linear electron transport phenomena in solids, which occur when inversion symmetry is absent, have been widely studied in quantum materials both as fundamental properties associated to wavefunction Berry phases and for device applications in current rectification and frequency doubling. While the breaking of inversion symmetry is usually due to the crystal structure itself, in recent years it has been appreciated that certain types of magnetic order also break inversion symmetry and give rise to new non-linear effects which are magnetically switchable.

In this workshop, leading experts in non-linear transport will be able to share the latest developments in this field. These will include transport effects like DC non-linear longitudinal and Hall effects, as well as optical effects like shift and injection photocurrents and second harmonic generation. The workshop will cover different experimental techniques and a wide range of magnetic, non-centrosymmetric systems, and will have a strong focus on experiment-theory crosstalk and the connection with quantum geometric and topological aspects of such effects.

ORGANIZING COMMITTEE:

- Fernando de Juan Sanz (DIPC)
- Adolfo González Grushin (DIPC)

Objetivos

We aim to foster new collaborations by creating a forum for discussion of emerging materials, mechanisms, and device-relevant non-linear phenomena.

We also aim to highlight the latest research in the field, bringing novel experiments from different perspectives under a common thread.

Finally, we hope to identify open challenges and future research directions in magnetically switchable non-linear effects and their potential technological applications, and to strengthen the conceptual framework linking symmetry breaking, Berry-phase physics, and non-linear responses in condensed matter systems.

Colaboradores específicos del curso



Dirigido por:



Fernando de Juan Sanz

Donostia International Physics Center

Precios matrícula

REGISTRATION FEES	HASTA 17-05-2026
Fee Waiver	0 EUR
Regular Attendant	200,00 EUR

Lugar

Centro de Física de Materiales (CSIC-UPV/EHU)

Pº Manuel de Lardizabal, 4. 20018 Donostia / San Sebastián

Gipuzkoa