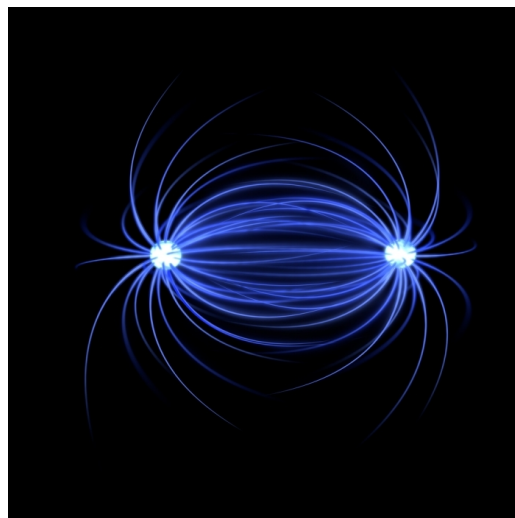




New Developments in Non-linear Transport and Magnetism (NLTM)



26.mai - 29.mai 2026

Cod. Z53-26

Modalité:

En personne

Édition

2026

Type d'activité

Workshop

Date

26.mai - 29.mai 2026

Location

Materialen Fisika Zentroa (CSIC-UPV/EHU)

Langues

Anglais

Reconnaissance officielle par l'État

40 heures

Comité d'organisation



Description

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)

Objectifs

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.

Collaborateurs spécifiques au cours



Directed by



Fernando de Juan Sanz

Donostia International Physics Center

Tarifs inscription

REGISTRATION FEES	JUSQU'AU 17-05-2026
Fee Waiver	0 EUR
Regular Attendant	200,00 EUR

Lieu

Gipuzkoa