



International Workshop on Spin Research in Graphene Nanostructures (SPRING'23)



18.Sep - 20.Sep 2023

Cod. Z24-23

Mod.:

Face-to-face

Edition

2023

Activity type

Workshop

Date

18.Sep - 20.Sep 2023

Location

Faculties of Psychology / Education, Philosophy and Anthropology (HEFA I)

Languages

English

Academic Validity

30 hours

Web

<https://spring23.dipc.org>

Organising Committee

Fundación
BBVA



Description

The SPRING International workshop on spin research in graphene nanostructures (SPRING23) celebrates the achievements of the EU-funded H2020 FET-Open project SPRING.

Magnetism is a property that had been missing from graphene's impressive list of physical properties – until now. Owing to its unconventional magnetic properties, graphene has been touted as a promising material for spintronics applications. *The ambition of the EU-funded SPRING project is to develop an all-graphene platform, where spins can be used for transporting, storing and processing information.* Researchers from different disciplines will collaborate to fabricate atomically precise open-shell graphene nanostructures, and manipulate their electron spin and charge, and nuclear spin state.

ORGANIZING COMMITTEE:

Thomas Frederiksen (DIPC, Ikerbasque)

Jose Ignacio Pascual (CIC nanoGUNE, Ikerbasque)

Herre van der Zant (TU Delft)

Leo Gross (IBM Zurich GmbH)

Diego Peña (Universidad de Santiago de Compostela)

Arzhang Ardavan (University of Oxford)

Objectives

The aim is to test the potential of graphene as a fundamental building block for spintronic devices.

Course specific contributors



H2020 FET-OPEN
Project # 863098

Directed by



Thomas Frederiksen

Donostia International Physics Center and Ikerbasque

Thomas Frederiksen (TF) obtained his PhD in physics in 2007 from the Technical University of Denmark on the topic of inelastic transport theory for nanoscale systems. In 2008 he was awarded a 5-year Gipuzkoa Fellowship to carry out research at the Donostia International Physics Center (DIPC) and abroad. In 2012 he was appointed Ikerbasque Research Professor at the DIPC where he leads a research group on Nanoelectronics. TF is one of the main developers of the DFT-NEGF code "Inelastica" to perform atomistic simulations of inelastic electron transport and local heating in nanoscale devices.



José Ignacio Pascual

CIC nanoGUNE

Nacho Pascual obtained a PhD in Physical Sciences in 1998 from the Universidad Autónoma de Madrid, Department of Condensed Matter Physics. His studies about quantum electronic transport through atoms and molecules using scanning tunnelling microscopy contributed to the settlement of a new research field in nanoelectronics. In 1999, he moved to Berlin, to the Fritz-Haber Institute der Max-Planck Gesellschaft, hosting there a Marie Curie Fellowship to investigate the rules behind single-molecule vibrational spectroscopy, a newly developed method to characterize chemically adsorbates with STM. After a short stay in Barcelona, at the Institut de Ciencia de Materiales (ICMAB-CSIC), hosting a Ramon y Cajal Fellowship, he moved back to Berlin, now to the Freie Universität, first (2004) as a Junior Professor and posteriorly (2008) as full Professor. There, he expanded his research in the field of Molecular Physics at Surfaces, dealing with various molecular-scale phenomena, from molecular switching behaviour and charge transfer processes, to magnetism and superconductivity. In 2012, he joined nanoGUNE as Ikerbasque Research Professor and Group Leader of the Nanoimaging group. <https://www.nanogune.eu/en/nanogune/people/n>

Teachers



Guido Burkard Burkard

University of Konstanz



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University of Granada



Juan Casado Casado



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Imdea Nanoscience



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Joaquin Fernández Rossier

International Iberian Nanotechnology Laboratory



Dimas Garcia de Oteyza

Nanomaterials and Nanotechnology Research Center



Pavel Jelinek

Institute of Physics of the AS CR



Aurelio Mateo Alonso

POLYMAT, UPV/EHU, Ikerbasque Research Professor

Aurelio Mateo-Alonso obtained his BSc (1999) and MSc (2000) degrees in organic chemistry from Universidad Autónoma de Madrid (Spain). In 2004, he completed his PhD at Queen Mary University of London (UK). Between 2004 and 2009 he was a Postdoctoral Researcher at Università di Trieste (Italy). In 2009 he joined the Freiburg Institute for Advanced Studies (Germany) as a Group Leader. Since 2012 he has been an Ikerbasque Research Professor and Group Leader at POLYMAT and at the University of the Basque Country in San Sebastian (Spain). He has been the recipient of the Young Investigator Prize of Università di Trieste (Italy 2007), the Eugen-Graetz Prize of Universität Freiburg (Germany 2009), the Sigma-Aldrich Young Investigator Prize of the Spanish Royal Chemical Society (Spain 2011), and the Young Investigator Award of the Nanocarbons Division of the Electrochemical Society (USA 2012). In 2016 he received a Consolidator Grant of the European Research Council (ERC).



Igor Roncevic

University of Oxford





Lianne Sellies

Universität Regensburg

Registration fees

REGISTRATION	UNTIL 30-06-2023	UNTIL 31-08-2023
Registration Fee Waiver	0 EUR	0 EUR
Student Registration Fee	125,00 EUR	150,00 EUR
Regular Registration Fee	250,00 EUR	300,00 EUR

Place

Faculties of Psychology / Education, Philosophy and Anthropology (HEFA I)

Avda. de Tolosa 70, (access from the right side), 20018 Donostia/San Sebastián

Gipuzkoa