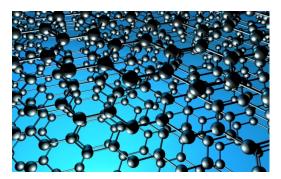


# Optics, Electronics and Magnetism in 2D Materials Workshop (OEM-2D)



# Mai. 21 - Mai. 24 2024

Kod. Z03-24

**Mod.:** Aurrez aurrekoa

**Edizioa** 2024

**Jarduera mota** Workshop

**Data** Mai. 21 - Mai. 24 2024

**Kokalekua** Psikologia eta Hezkuntza, Filosofia eta Antropologia Fakultateak (HEFA I)

**Hizkuntzak** Ingelesa

Balio akademikoa 40 ordu

Webgunea https://oem2d.dipc.org/

### Antolakuntza Batzordea









# Azalpena

Optics, Electronics and Magnetism in 2D Materials worshop (OEM-2D) is a dynamic and cutting-edge event at the intersection between materials science and condensed matter physics, with experts in the field of two-dimensional nanostructures including flakes, layers and nanostructures, and studying phenomena related to electronics, magnetism and optics. This workshop focuses on the structure-property interplay in its shaping of the electronics and magnetic materials of today. Other nanostructures related to surfaces are also welcome. OEM-2D aims to foster collaboration, bringing together leading researchers and scientists from diverse disciplines, such as devices, modelling,... to facilitate the exchange of knowledge and ideas, paving the way for the studying innovative materials to be used in the engineering of future technologies such as valleytronics, spintronics and quantum computing.

#### **ORGANIZING COMMITTEE:**

Prof. Garnett Bryant, Joint Quantum Institute, National Institute of Standards and Technology, United States; University of Maryland, United States

Prof. Dr. R Thomas Weitz, Georg-August University Göttingen, Germany

Dr. Anna Seiler, Georg-August University Göttingen, Germany

Dr. Marta Pelc, Nicolaus Copernicus University, Poland

Prof. Karolina Słowik, Nicolaus Copernicus University, Poland

Senior Researcher Dr. Andrés Ayuela, Donostia International Physics Center (DIPC), Spain; Centro de Física de Materiales-MPC CSIC-UPV/EHU, Spain

### Helburuak

At OEM-2D, our primary aim is to establish and enhance collaborations between experts in the field, enabling cross-exchange of ideas and research across various subdisciplines. By promoting a synergy of expertise, we aim to accelerate progress and breakthroughs in the realms of optics, electronics, and magnetism, with a particular emphasis on graphene and other interesting nanostructures.

Another vital aim of this workshop is to serve as a platform for sharing insights and initiating collaborative projects. We envision OEM-2D as a hub for the exchange of knowledge, enabling participants to leverage their collective expertise and embark on groundbreaking research endeavors. Our goal is to create an environment where new ideas flourish and synergies are harnessed to their fullest potential.

Furthermore, we are committed to help the next generation of researchers. OEM-2D places a strong emphasis on connecting Ph.D. students and postdoctoral researchers with the latest developments at the forefront of these fields. By bridging the gap between established researchers and emerging talent, we aim to cultivate the future leaders in materials science and provide them with the resources and networks necessary for their growth and success. Through a combination of in-depth sessions and networking opportunities, OEM-2D offers an invaluable educational experience for young scholars and aspiring researchers.

#### **Best poster prizes**

Two prizes of  $\notin 100$  each will be awarded to posters presented at the poster session of the congress. The prize will be paid by bank transfer a few days after the end of the congress.

#### Ikastaroaren laguntzaile espezifikoak





HEZKUNTZA SAILA DEPARTAMENTO DE EDUCACIÓN

# Zuzendaritza



# Andrés Ayuela

Donostia International Physics Center (DIPC) Centro de Física de Materiales - MPC CSIC- UPV/EHU

# Irakasleak



**Eva Andrei** rutgers university



Dario Bercioux ---Donostia International Physics Center



**Erez Berg** Weizmann Insitute



Andres Castellanos-Gomez



### **Leonor Chico**

Universidad Complutense de Madrid



# Joel Cox

University of Southern Denmark



Xiaodong Cui University of Hong Kong



Lorenzo Del Re Max Planck Institute for Solid State Research



#### **Andrea Ferrary**

University of Cambridge



#### **Gregory Fiete**

Northeastern University, Professor



**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.



### nonunuor mogo

LMU München



#### **Stephan Hofmann**



#### Shahal Ilani

Weizmann Institute



**Fabian Jaroslav** Univeristy of Regensburg

Jaroslav Fabian (PhD 1997, SUNY Stony Brook) is a professor of theoretical physics at the University of Regensburg where he heads the Spintronics Group since 2004. Prior to that Jaroslav Fabian was on the faculty at the Karl-Franzens University in Graz, and a research associate in University of Maryland at College Park, and Max-Planck Institute for Complex Systems in Dresden. Research activities of Jaroslav Fabian span a wide spectrum of theoretical and computational solid state physics, but are particularly focused on the physics of 2D materials and on the field of spintronics. He is a member of Graphene Flagship, and several collaborative research initiatives. Recently, he has been excited about the art of creating novel electronic and magnetic properties by proximity effects in stacks of 2D materials.



Wlodzimierz Jaskolski Nicolaus Copernicus University, professor



#### **Frank Koppens**

ICFO

Prof. Frank Koppens obtained his PhD in experimental physics at Delft University, at the Kavli Institute of Nanoscience, The Netherlands. After a postdoctoral fellowship at Harvard University, Since August 2010, Koppens is group leader at the Institute of Photonic Sciences (ICFO). The quantum nano-optoelectronics group of Prof. Koppens focuses on both science and technology of novel two-dimensional materials and quantum materials. Prof. Koppens is vice-chairman of the executive board of the graphene flagship program, a 1000 MillionEuro project for 10 years. He is also the leader of the optoelectronics workpackage within the flagship. Koppens has received numerous ERC awards: the ERC starting grant, the ERC consolidator grant, and four ERC proof-of-concept grants. Other awards include the Christiaan Hugyensprijs 2012, the national award for research in Spain, the IUPAP young scientist prize in optics, and the ACS photonics investigator award. Since 2018 Koppens is on the Clarivate list for highly cited researchers, in the physics category. Koppens has been elected as fellow of the American Physical Society in 2022. In total, Koppens has published more than 120 refereed papers (H-index 69).



Nicolás Lorente Palacios



Paweł Machnikowski

Wrocław University of Science and Technology



### Alejandro Manjavacas

Instituto de Óptica - CSIC



#### Magdalena Marganska Lyzniak

University of Regensburg



### Stevan Nadj-Perge Nad Perge

California Institute of Technology



# Alexey Nikitin

Donostia International Physics Center (DIPC), Ikerbasque Research Associate



**Hryhoriy Polshyn** 

Institute of Science and Technology Austria



#### **Pawel Potasz**



## **Carsten Rockstuhl**

Karlsruhe Institute of Technology



**Eli Zeldov** Weizmann Institute of Science



**Fan Zhang** University of Texas at Dallas



### Michał Zieliński

Nicolaus Copernicus University, Toruń, Poland



**Richard Silver** 

NIST

# Matrikula prezioak

REGISTRATION FEES	2024-05-14 ARTE
Fee Waiver	0 EUR
Regular attendant	

# Kokalekua

## Psikologia eta Hezkuntza, Filosofia eta Antropologia Fakultateak (HEFA I)

Tolosa Hiribidea 70, (eskubitara dagoen sarrera), 20018 Donostia

Gipuzkoa