



# Quantum Phenomena in 2D Matter (QP2DM)



**17.Juil - 21.Juil 2023**

**Cod. Z14-23**

**Modalité:**

En personne

**Édition**

2023

**Type d'activité**

Workshop

**Date**

17.Juil - 21.Juil 2023

**Location**

Miramar Palace

**Langues**

Anglais

**Reconnaissance officielle par l'État**

50 heures

**Comité d'organisation**



## Description

Modern theoretical, experimental, and applied physics of two-dimensional (2D) systems explore and employ the great richness of their quantum properties. These properties are probed by various experimental techniques, such as charge, spin, exciton, and heat transport, optical, microwave, and scanning-probe spectroscopies, photoresistance, etc. Over the recent years, the available variety of 2D systems has grown dramatically and include various semiconductor and oxide heterostructures, atomically thin layers (or bi-layers) of graphene, transition metal dichalcogenides, and their heterostructures. Some of the most celebrated phenomena realized in these 2D systems are quantum Hall effects, Wigner crystals, stripes and bubble phases, and excitonic Bose condensates. More exotic phenomena are expected to emerge as the quality of the 2D systems and experimental tools are improved, which is an ongoing process.

### ORGANIZING COMMITTEE:

- Michael Zudov (University of Minnesota, USA)
- Evgeny Sherman (University of the Basque Country UPV/EHU, Ikerbasque)
- Vitaly Golovach (University of the Basque Country UPV/EHU, Ikerbasque)

## Objectifs

The aim of this workshop is to bring together leading experts and the researchers at the beginning of their careers in the field of quantum physics of 2D matter for presentation and discussion of their recent results and ongoing developments. Exchange of ideas and expectations of the future progress in the field will help its development in next several years.

## Collaborateurs spécifiques au cours



**EHU QC**

EHU Quantum Center



HEZKUNTZA SAILA

DEPARTAMENTO DE EDUCACIÓN

## Directed by



### **Vitaly Golovach ---**

Ikerbasque Research Associate, Materialen Fisika Zentroa CFM and Donostia International Physics Center

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## Professeurs



**Shaffique Adam**

National University of Singapore

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**Eva Andrei**

rutgers university

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**Ankita Anirban**

Springer Nature

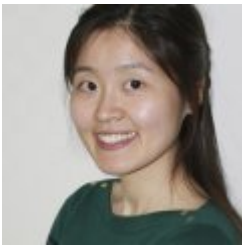
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**Alexey Berdyugin**

The University of Manchester

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**Deung-Jang (DJ) Choi**

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

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**Swarup Deb Deb**

Institute for Physics, University of Rostock

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**Lingjie Du**

NANJING UNIVERSITY

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**Rui-Rui Du**

Peking University, Professor

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**Lloyd Engel**

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**Yuval Gefen**

Weizmann Institute

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**Leonid Golub Golub**

Regensburg University, Germany

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**Alejandro Gonzalez-Tudela**

Instituto de Fisica Fundamental-CSIC

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**Francisco Guinea López**

IMDEA Nanoscience - DIPC

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**Adbhut Gupta Gupta**

Princeton University

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**Bertrand Halperin Halperin**

Harvard University

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**Alex Hamilton**

UNSW

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**Zeyu Hao**

Harvard University

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**Masayuki Hashisaka**

The University of Tokyo, Associate Professor

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**Harold Hwang**

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**Maxim Ilin**

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## **Takuya Iwasaki**

National Institute for Materials Science

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## **Jainendra Jain**

Penn State University

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## **Fabian Jaroslav**

Univeristy of Regensburg

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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.



## **Jelena Klinovaja**

University of Basel

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**Piotr Kossacki**

University of Warsaw

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**Ze Kvon**

Institute of Semiconductor Physics, Novosibirsk

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**Mariia Labendik**

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**Alex Levchenko**

University of Wisconsin-Madison

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**Yang Liu**

Peking University, Assistant Professor

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**Daniel Loss Loss**

University of Basel

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**Allan MacDonald**

University of Texas at Austin

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**Michael Manfra Manfra**

Purdue University

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**Xavier Marie**

INSA- Université de Toulouse

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**Denis Maryenko**

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**Yigal Meir Meir**

Ben Gurion University

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**Miguel Moreno Ugeda**

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**Markus Morgenstern**

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**Alberto MORPURGO**

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**Elisabetta Paladino**

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**Stuart Parkin**

MPI of Microstructure Physics

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**Loren Pfeiffer Pfeiffer**

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**Leonid Ponomarenko**

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**Maksim Savchenko Savchenko**

TU Wien

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**Chi Zhang**

Institute of Semiconductors, Chinese Academy of Science, Professor

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**Qianhui Shi**

UCLA

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**Jun Zhu Zhu**

Penn State University

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**Inti Sodemann Villadiego**

University of Leipzig

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**Michael Zudov Zudov**

University of Minnesota

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# Tarifs inscription

REGISTRATION FEES	JUSQU'AU 09-07-2023
Fee Waiver	0 EUR
Regular fee	400,00 EUR

## **Lieu**

### **Miramar Palace**

Pº de Miraconcha nº 48. Donostia / San Sebastián

Gipuzkoa