



ICFO-MIT INTERNATIONAL SCHOOL ON THE FRONTIERS OF LIGHT: Emergent Phenomena in Moire Materials

July 06, 2020 to July 10, 2020

15:00 to 19:00

Online

Topic:

Moiré systems with 2D materials offer a novel platform for exploring a plethora of exotic phenomena. The emerging field of **twistronics** embodies a fundamentally new approach to

engineering the electronic and optical properties of materials and devices. A tantalising example is the so-called **magic angle rotation** between sheets of graphene or semi-conducting 2D materials, which has shown superconducting phases similar to those of unconventional high-T_c materials. The wide tunability of Moire systems offers many exciting new possibilities to explore.

Overview:

This year the school is organized in partnership with researchers from MIT.

Due the evolving COVID-19 situation, for the first time the **ICFO Schools on the Frontiers of Light** will be held online with sessions spread out over 2 weeks, and they're are open to all interested attendees.

The sessions gather leading experimentalists and theorists, and will cover the optics and electronics of twisted 2D materials: Twistronics, Correlated electron systems, Excitonics, Mott insulators, Polaritonics, Superconductivity, Magnetism, Topology, etc.

ICFO Schools on the Frontiers of Light aim at giving talented young researchers and students worldwide a first introduction to a thematic research area and a taste of an international research environment. These schools incorporate a dynamic and social learning environment beyond participating in lectures.

The online event will include **seminars, round table discussions, hot topics sessions and poster session**, where students will have the opportunity to interact and present their current research.

The organizing faculty members are Dima Efetov, Frank Koppens, Adrian Bachtold, Maciej Lewenstein, Antoine Reserbat-Plantey, and Dr Robert Sewell and Pablo Jarillo-Herrero from MIT.

Lecturers & Speakers:

Eva Andrei (Rutgers)

Leni Bascones (ICMM Madrid)

Dimitri Basov (Columbia)

Andrei Bernevig (Princeton)
Rafael Fernandes (Minnesota)
Paco Guinea (IMDEA Madrid)
James Hone (Columbia)
Atac Imamoglu (ETH Zurich)
Pablo Jarillo-Herrero (MIT)
Jeanie Lau (Ohio State)
Allan MacDonald (Texas)
Xavier Marie (INSA Toulouse)
Marco Polini (IIT Pisa)
Lucile Savary (ENS Lyon)
Jie Shan (Cornell)
Senthil Todadri (MIT)
Ashvin Vishwanath (Harvard)
Ali Yazdani (Princeton)
Eli Zeldov (Weizmann)

Application:

To register for the online school click [HERE](#)

The registration will remain open until the end of the event, on **July 17, 2020**



ICFO- MIT, OSA, Gencat



Frontiers School Website