
Post-doctoral positions in analogue electron quantum simulator

ICFO is offering postdoctoral positions to well-qualified, highly motivated and dynamic young scientists who wish to enhance their scientific career in a friendly and stimulating environment.

The successful candidate will be joining the international **QTWIST program** that includes **Prof. Jarillo-Herrero (MIT) and Amir Yacoby (Harvard) as well as research groups of Prof. Adrian Bachtold, Prof. Carmen Rubio Verdú and Prof. Frank Koppens (ICFO).**

We are seeking highly motivated and skilled condensed matter Research Scientists to join our cutting-edge project on the development of a novel analogue electron quantum simulator. The goal is to construct a new experimental tool based on a graphene superlattice to not only measuring macroscopic observables, such as electrical resistivity and magnetization, but also probing the many-body quantum wavefunction of correlated electronic states. This new quantum simulator platform may unravel the microscopic nature of high-Tc superconductivity and other correlated electron states, such as heavy fermions in a Kondo lattice, integer and fractional Chern insulators, and orbital ferromagnets.

"An electronic quantum simulator-Programa Fundamentos de la Fundación BBVA 2022".

Apply here: <https://jobs.icfo.eu/?detail=896>

Eligibility and Conditions

Candidates must hold an internationally-recognized Ph.D.-equivalent degree (or evidence of its completion in the nearest future) preferably in condensed matter physics.

The candidate should have experience in electron transport of correlated systems and fabrication of van der Waals heterostructures.

ICFO is an equal opportunity employer. Candidates are selected exclusively on merit and potential on the basis of submitted application material. No restrictions related to disabilities, citizenship or gender apply to ICFO positions. ICFO abides by the principles of openness, efficiency, transparency, supportiveness, and international comparability as stated in the European Charter for Researchers and the European Code of Conduct for the Recruitment of Researchers.

Salaries for ICFO Postdoctoral positions are assigned by the Selection Committee, based on experience and seniority of the applicant, as well as the assigned tasks and responsibilities within the group. Standard salaries range from a lower level aligned with national Ramon-y-Cajal fellowships to higher levels aligned with Marie Skłodowska-Curie individual fellowships.

The contract is offered for a period of 3 years.

Additionally, a family allowance is also available on request and after corresponding approval for people with family charges in the terms described in the corresponding policy.

Application procedure

Suitable candidates are requested to submit:

- Presentation letter with a declaration of interest,
- Curriculum Vitae, including contact details,
- The contact e-mail of two potential referees.

Candidates will be assessed as they apply and the call will remain open until the suitable candidate is identified.

Candidates may contact jobs@icfo.eu for formal enquiries regarding the application, as well as address scientific enquiries to Adrian.Bachtold@icfo.eu, Carmen.Rubio@icfo.eu and/or Frank.Koppens@icfo.eu.

For update information about the hosting group, please visit:

- <https://www.icfo.eu/research-group/24/nem/home>
- <https://www.icfo.eu/research-group/33/stm/home/437>
- <https://www.icfo.eu/research-group/18/qno/home/437>

For updated information about ICFO, please visit <https://www.icfo.eu>.

Deadlines

The call will remain open until the positions are filled.