

The Nanoscience Cooperative Research Center, CIC nanoGUNE, located in Donostia / San Sebastian, Basque Country (Spain), is currently looking for a

MASTER STUDENT
to work on
MINECO_RETOS_2019_FunMolSys_CIC07_Pascual-Artacho

NanoGUNE is a research center devoted to conducting world-class nanoscience research for a competitive growth of the Basque Country. NanoGUNE is a member of the Basque Research and Technology Alliance ([BRTA](#)) and is recognized by the Spanish Research Agency as a *María de Maeztu* Unit of Excellence.

The **position** is offered in the Theory Group, led by Artacho Cortés, Emilio (e.artacho@nanogune.eu). The Theory Research Group works both in the development of simulation techniques and in their application to different problems..

The candidate will join a **research line** focusing on Computational and theoretical condensed matter physics. Complex solids and liquids, using first-principles molecular dynamics based on density-functional theory and on linear-scaling density-functional theory. Nanoscale oxide heterostructures including multiferroics, liquid water, and water/solid interfaces, and non-adiabatic processes related to radiation damage of materials.. More information can be found at <https://www.nanogune.eu/theory>.

The aim of the **project** is to - Project: CIC072019001 - Magnetismo y estados topológicos de sistemas moleculares creados en superficies -FunMolSys

- Introduction: SHORT DESCRIPTION: Carbon nanoribbons are nanometrically narrow stripes of graphene, which display an interesting variety of electronic properties, including tunable conduction and topologically protected states, which can be exploited in quantum technologies in different ways. In collaboration with the experimental group of Nanoimaging in Nanogune, different ribbons, including atomic scale modifications and on a various substrates, will be studied using quantummechanical first-principles simulations.

- Work Plan: DETAILS OF THE PROJECT: Using theory and first-principles calculations, the project aims to characterize electronic states of nanoribbons of controlled characteristics realized in experiments, which should display topologically protected states, and help analyzing the experimental results themselves by comparing with their simulated counterparts..

The successful **candidate** will have a .
Additionally, the candidate should demonstrate experience in the following skills:
Although not compulsory, the following points will be considered:

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We promote teamwork in a diverse and inclusive environment and welcome all kinds of applicants regardless of age, disability, gender, nationality, race, religion, or sexual orientation.

The position is expected to start in 01/10/2021 and for a total length of up to 10 months (01/10/2021 - 31/07/2022) in the Theory Group. The contract will be funded by the .

Candidates should **apply** by completing the form below and attaching the following documents:

- a. A complete CV
- b. A cover letter and at least two reference letters grouped in a single PDF file

The **deadline** for applications is **30/06/2021**.

NOTES:

- (i) All applicants will receive an answer after the end of the selection process; but please note that due to the large number of submissions that are expected, we cannot provide individual feedback.*
- (ii) Additional information about nanoGUNE's commitment towards [HR excellence in Research and Gender Equality](#) are available on our website.*
- (iii) We encourage you to subscribe to our [HR mailing list](#) to receive information related to nanoGUNE's open positions and open calls for different training and talent attraction programs.*