

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

## PRE-DOCTORAL RESEARCHER

to work on

### Computational simulation of condensed matter from quantum theory

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 Prof. Emilio Artacho Cortés ([e.artacho@nanogune.eu](mailto:e.artacho@nanogune.eu)). Theory Research Group works both in the development of simulation techniques and in their application to different problems. The **research project** is focused on the development of theory and methodology for the computational simulation of condensed matter (solids and liquids) from quantum theory. The project is part of the wider project "SIESTA ecosystem of materials simulation techniques".

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 Research in computational condensed matter physics, including theoretical and method development, and application to 2D materials and irradiated matter.

The successful **candidate** will have a Bologna Masters degree or equivalent (minimum 5 years of university education) in physics or close discipline, with knowledge of

quantum and solid state physics, as well as basics of scientific computing (programming, compiling and using codes).

**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 01/10/2023 and for a total length of up to 47 months (01/10/2023 - 27/09/2027) in the Theory Group.

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

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

The **deadline** for applications is **15/09/2023**.

*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.*