

November 2018



Funded PhD in Physics:

Topic: **“Theoretical modeling of topological materials for information devices”**
Primary location: Donostia – San Sebastián (Spain)

A 3-year PhD position (with a possible extension up to a fourth year depending on performance) starting March 2019 is available in SIMUNE Atomistic Simulations. www.simune.eu

SIMUNE is a company expert in atomistic simulations offering advanced atomic-scale simulation solutions to companies and technological organizations.

In this project, associated to a European H2020 grant coordinated by ICN2 (www.icn2.cat), you will apply theoretical approaches (Density Functional Theory) to model the stability of the magnetism in Topological Insulators and Transition Metal Di-Chalcogenides, and the effects of the doping and defects in the material. Advanced methods based on Non-Equilibrium Greens Functions will be used to describe the charge transport in devices made of these materials. The project will be supervised by Prof. Pablo Ordejón (ICN2) and SIMUNE's team.

Experience and interest in the following will be highly valued:

- Actively participating in a high technological company
- Close collaboration with ICN2, one of the top European institutions in the field of nanoscience and nanotechnology
- Interfacing with well-known scientists and cutting-edge technology
- Collaborating and helping to build up other areas of the company

Required qualifications and skills:

- Having obtained a Master or equivalent degree in Condensed-Matter physics, materials science, theoretical chemistry, or related fields
- Strong background in fundamentals of materials
- Good programming skills (python, Fortran)
- High level of English
- Willing to do extended stays in Barcelona (ICN2). Occasional international travel.
- Previous experience in projects with industry would be an asset

We offer:

A structured training path, and technical and transferable skills training throughout the PhD, plus periodical monitoring and evaluation activities.

This offer represents an excellent opportunity for personal and professional growth in a highly international organization that has the potential to become a leader in the field of materials modeling, working in close contact with excellent research centers.

Applicants, please send CV to careers@simune.eu