March 2019

Ph.D. in Condensed Matter Theory:

Topic: Theoretical modeling of topological materials for information devices
Primary location: Donostia-San Sebastián (Spain)

A 3-year Ph.D. position (with a possible extension up to a fourth year depending on performance) starting March 2019 is available in Simune Atomistics S.L. www.simune.eu in a close collaboration with the Catalan Institute of Nanoscience and Nanotechnology (ICN2) www.icn2.cat

Simune is a company offering atomistic simulations, software, consultancy, training and support to academia and industry. ICN2 is a non-profit international research institute. Its research lines focus on the newly discovered physical and chemical properties that arise from the behavior of matter at the nanoscale.

This Ph.D. position is funded in a pan-European project "Dissipationless topological channels for information transfer and quantum metrology" (TOCHA). Successful candidate will perform electronic structure simulations to characterize the stability of magnetism in topological insulators and the effects of the doping and defects in the material. Density functional theory and methods based on non-equilibrium Green's functions will be used to describe the charge transport in materials relevant for the quantum metrology. The project will be supervised by Prof. Pablo Ordejón (ICN2, Barcelona) and Simune's team (Donostia-San Sebastián). The successful candidate will be willing to do extended stays in Barcelona and occasionally accept international travel.

Required qualifications and skills:

- Master of science or equivalent degree in condensed matter physics, material science, theoretical chemistry, or related fields
- Strong background in electronic structure methods
- Good programming skills (Python and Fortran)
- High level of English

Experience and interest in the following will be highly valued:

- Actively participating in a technological company
- Experience in projects with industry
- Close collaboration with ICN2, one of the top European institutions in the field of nanoscience and nanotechnology
- Ability to communicate in a multi-institutions project
- Keen interest in learning the cutting-edge technology
- Collaborating and helping to build up other areas of the company

We offer: A competitive salary. A structured training path to obtain technical and transferable skills throughout the Ph.D.

This offer represents an excellent opportunity for personal and professional growth in the field of materials modeling, working within excellent research centers.

To apply: please send CV to careers@simuneatomistics.com