The mission of the Catalan Institute of Nanoscience and Nanotechnology (ICN2) is to achieve the highest level of scientific and technological excellence in Nanoscience and Nanotechnology. Its research lines focus on the newly-discovered physical and chemical properties that arise from the behaviour of matter at the nanoscale. ICN2 has been awarded with the Severo Ochoa Center of Excellence distinction for three consecutive periods (2014-2018 and 2018-2022 and 2023-2026). ICN2 comprises 19 Research Groups, 7 Technical Development and Support Units and Facilities, and 2 Research Platforms, covering different areas of nanoscience and nanotechnology.

Job Title: Research Support Technician - Artificial Intelligence applied to Neuromorphic computing

Research area or group: Theoretical and Computational Nanoscience Group

Description of Group/Project:
The TCN group is launching an activity on marrying Artificial Intelligence with its activities and numerical tools to access charge transport information in complex (disordered) van der Waals heterostructures. The project will contribute to the establishement of such a platform and interface with in-house computational artillery of TCN (www.lsquant.org) and to demonstrate predictive power of the methlogy on neurmorphic computing applications.

Main Tasks and responsibilities:
- Perform DFT simualtions on 2D materials such as trasition metal dichalcogenides.
- Develop machine learning potentials and molecular dynamics simulations.
- Contribute to the implementation of developed tools on the in-house LSQUANT code (www.lsquant.org) and computing architecture of TCN/ICN2**.**

Requirements:

- **Education:** PhD in physics or electrical/ mechanical engineering
- **Knowledge:** Quantum mechanics,DFT simualtions, programing machine learning tehcniques
- **Professional Experience:** Programing in PYTHON/C languages
- **Personal Competences:** Demonstrated competitive ability in using DFT simulations, and machine learning techniques (optional)

Summary of conditions:

- Full time work (37,5h/week)
- Contract Length: Temporary (1 year)
- Location: Bellaterra (Barcelona)
- Salary will depend on qualifications and demonstrated experience.
- Support to the relocation issues.
- Life Insurance.

Estimated Incorporation date: September 2024

How to apply:
All applications must be made via the ICN2 website https://jobs.icn2.cat/job-openings/638/research-support-technician-artificial-intelligence-applied-to-neuromorphic-computing and include the following:

1. A cover letter.
2. A full CV including contact details.
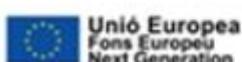3. 2 Reference letters or referee contacts.

Deadline for applications: 31 July 2024

"Plan de Recuperación, Transformación y Resiliencia – Financiado por la Unión Europea – NextGenerationEU»

Financiado por el MCIU con fondos de la Unión Europea-NextGenerationEU(PRTR-C17.I1) y por la Generalitat de Catalunya

Este contrato está financiado por el Mecanismo de Recuperación y Resiliencia de la Unión europea, establecido por el Reglamento (UE) 2020/2094 del Consejo, de 14 de diciembre de 2020, por el que se establece un Instrumento de Recuperación de la Unión Europea para apoyar la recuperación tras la crisis de la COVID-19, y regulado según Reglamento (UE) 2021/241 del Parlamento Europeo y del Consejo de 12 de febrero de 2021 por el que se establece el Mecanismo de Recuperación y Resiliencia, y quedará sometido a la totalidad de la normativa reguladora del Mecanismo de Recuperación y Resiliencia.

Se enmarca en la implementación de los Planes Complementarios de I+D+I con las comunidades autónomas, que forman parte del componente 17 del Plan de Recuperación, Transformación y Resiliencia, denominado "Reforma institucional y fortalecimiento de las capacidades del Sistema Nacional de Ciencia, Tecnología e Innovación", en concreto en el SUBPROYECTO DE I+D "COMUNICACIÓN CUÁNTICA"como parte de actuaciones del programa del mismo nombre, correspondientes a la comunidad autónoma de Cataluña, gestionado a través del Departament de Recerca i Universitats de la Generalitat de Catalunya."

Equal opportunities:
ICN2 is an equal opportunity employer committed to diversity and inclusion of people with disabilities.
ICN2 is following the procedure for contract of people with disabilities according with article 59 of the Royal Decree 1/2015, of 30 of October.