



Pre-Doctoral position at the Institute of Microelectronics of Barcelona, IMB-CNM-CSIC, and the Quantum Computing Technology Group - IFAE

The Institute of Microelectronics of Barcelona (IMB-CNM-CSIC) and the Quantum Computing Technologies (QCT) group of the Institute for High Energy Physics (IFAE) offer *a contract for a co-supervised pre-doctoral position within the project Micro-nano fabrication technologies for mitigation of radiation effects (MINARE)*, recently funded by the MICINN.

Project MINARE, as part of coordinated project IRCQ (Interaction of Cosmic Radiation with Qubits), aims at overcoming detrimental effects on qubit coherence caused by ionizing radiation by exploring on-chip solutions based on new materials and advanced processing. The project includes establishing the production and consolidation of conventional superconducting circuits based on aluminum thin films, while proposing two unconventional strategies for reducing quasiparticle effects or managing internal losses.

Interested candidates are expected to:

- Hold a Degree & Master in **Physics, Materials Science, Nanotechnology, or related area.**
- Be interested in **Experimental techniques, including at least two of the following areas:**
 - Superconducting devices,
 - Thin film materials,
 - Micro/nanoelectronic device fabrication,
 - Microwave quantum coherent control,
 - Cryogenics

The selected candidate will enroll a **Doctoral Program in Physics, Materials Science, Nanotechnology, Quantum, HEP, etc.** in a local university, such as UAB or UB.

Applications and requests for further information should be sent to:

gemma.rius@csic.es and pforndiaz@ifae.es

Applications are preferably received **before December 31st**

Interested researchers should include an **updated CV, academic curriculum record**, and a **letter of intent or motivation**. Accompanying **letter(s) of recommendation** would be welcome.

The appointment will be for **3 years**.

Proposed start of the appointment: **Early 2023**

Closing date: Open until the position is filled

IMB-CNM-CSIC and IFAE are equal opportunity employer committed to diversity in the workplace, and we welcome applications from all qualified candidates. Women are particularly encouraged to apply. Sending CVs to IFAE implies consent to the institute's [legal warning](#). **Publication date: December 15th, 2022**

