



## CALL FOR APPLICATIONS - January 2023

### Post-doctoral Position

Donostia International Physics Center (DIPC) is currently accepting applications for Post-doctoral positions. This is a unique opportunity for junior researchers with a recent PhD degree in Physics or related fields to join one of DIPC's high-profile research teams. A description of each of the available openings, contact information and deadlines can be found on the following pages.

Although candidates are welcome to contact the project supervisors to know further details about the proposed research activity, please be aware that the application will be evaluated only if it is submitted directly to the email address listed as "application email".

Applications received by the deadline will be evaluated by a Committee designed by the DIPC board on the basis of the following criteria:

- CV of the candidate (40%)
- Adequacy of the candidate's scientific background to the project (40%)
- Reference letters (10%)
- Other: Diversity in gender, race, nationality, etc. (10%)

Evaluation results will be communicated to the candidates soon after. Positions will only be filled if qualified candidates are found.

The DIPC may revoke its decision if the candidate fails to join by the appointed time, in which case the position will be awarded to the candidate with the next highest score, provided it is above 50 (out of 100).

However, the selected candidate may keep the position if, in the opinion of the Selection Committee, the candidate duly justifies the reasons why he or she cannot join before the specified deadline, and as long as the project allows it.

**Ref. 2023/05**  
**Neutrino Physics at the European Spallation Source**

**Supervisor(s):**

*Juan I. Collar (collar@uchicago.edu)*  
*J.J. Gomez-Cadenas (jjgomezcadenas@dipc.org)*

**Duration\*:** 3 years

**Application Deadline:** 21/01/2023

**Application Email:** jobs.research@dipc.org

The upcoming European Spallation Source (ESS) will soon become the most intense pulsed neutrino source suitable for Coherent Elastic Neutrino-Nucleus Scattering (CEvNS) studies. This recently demonstrated mechanism of interaction provides multiple new avenues of experimentation leading to an improved knowledge of neutrino properties. The promise of the ESS in this respect has been recently emphasised (see, for instance, arXiv:1911.00762). Applicants are sought for a postdoctoral Research Associate position to work on the development of next-generation nuclear recoil detectors capable of fulfilling the ESS potential for CEvNS. This activity has been recently funded through three Horizon 2021 actions by the European Research Council, with additional support from other sources. Initial concentration will be on technologies based on cryogenic scintillators, low-threshold semiconductors, and high-pressure noble gas detectors. An additional component of CEvNS experimentation at a European nuclear reactor source is expected. The position will be based at the Donostia International Physics Center sited in Donostia-San Sebastián (Spain), involving progressively significant stays at the ESS (Lund, Sweden) as the facility approaches completion. Some R&D activities may be carried out in the US, with a base at the University of Chicago. The position requires a PhD in experimental particle physics at the time of appointment. The initial term is two years, with possible extension up to five years, upon review. Successful candidates should have experience in neutrino physics and/or other low-background searches, with demonstrated excellence in areas such as data acquisition and data analysis, electronics, cryogenics, radiation detector development, neutronics, Monte Carlo simulations, and engineering aspects.

**Interested candidates should submit a cover letter including a brief statement of interest, curriculum vitae containing a publication list, and the name and contact information of three individuals willing to act as references. The reference of the specific opening to which the candidate is applying should also be stated in the subject line.**

*This project has received funding from the European Research Council (ERC) under the European Union's Horizon ERC 2021 Advanced research and innovation programme, under grant agreement No 101055120\_ESSCEvNS.*



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Established by the European Commission

**\*Openings with a duration of more than one year are for a 1-year contract, renewable based on performance and availability of funding.**