



CALL FOR APPLICATIONS - January 2023

Distinguished Researcher Position

Donostia International Physics Center (DIPC) is currently accepting applications for Distinguished Researcher positions. 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 (45%)
- Adequacy of the candidate’s scientific background to the project (45%)
- 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. 2023/01
Development and construction of the XeESS detector.

Supervisor(s):

Juan José Gómez Cadenas (jjgomezcadenas@dipc.org)
Francesc Monrabal Capilla (francesc.monrabal@dipc.org)

Duration*: 1 year

Application Deadline: 21/01/2023

Application Email: jobs.research@dipc.org

The European Spallation Source (ESS), presently well on its way to completion, will soon provide the most intense neutron beams for multi-disciplinary science. Fortuitously, it will also generate the largest pulsed neutrino flux suitable for the detection of Coherent Elastic Neutrino-Nucleus Scattering (CEvNS), which has been proposed as a new tool for the study of fundamental neutrino properties. This project also has opened, for the first time in history, a window of opportunity for miniaturisation of neutrino detectors, which is the first essential step for enabling development of applications.

The CoESS international collaboration, coordinated by Ikerbasque Professor Juan José Gómez Cadenas, will be contributing to this initiative by applying three different technologies for making high-statistics measurements of coherent neutrino scattering at the ESS.

The development and construction of a high-pressure Xe Time Projection Chamber (the XeESS detector) is a significant scientific and technological milestone to the CoESS collaboration. This activity is being coordinated by Ikerbasque Research Associate Francesc Monrabal and will entirely take place at Donostia International Physics Center (DIPC), where a new dedicated laboratory is currently being set up.

We are currently looking for a Senior Scientist who will help to carry out the intense program of activities which is required to complete in order to achieve these ambitious goals. He/she will join a growing team of world-class professionals, and is expected to contribute to the training and supervision of the post-docs, technicians and students.

Candidates must demonstrate previous experience in one or several of the following topics:

- Development of gas detectors for neutrino research;
- Development of high pressure gas circuits;
- Development optical acquisition systems based on PMT and SiPMT;
- Development of fast electronics for acquisition systems based on DAC.
- Knowledge about coherent neutrino-nucleus scattering processes;
- Experience in analysis of data from detectors, simulation of detectors and neutrino physics and correlation between data and simulations;

Additionally, the candidates must demonstrate previous experience on supervision of young scientists and laboratory staff.

Interested candidates should submit an updated CV and a brief statement of interest to the application email listed above. The reference of the specific opening to which the candidate is applying should also be stated in the subject line.

For a more detailed technical introduction to the project, please see our publication:
Coherent elastic neutrino-nucleus scattering at the European Spallation Source. J. High Energ. Phys.
doi:10.1007/JHEP02(2020)123

For more information about DIPC, please visit: <http://dipc.ehu.eus>

Interested candidates should submit an updated CV and a brief statement of interest to the application email listed above. Reference letters are welcome but not indispensable. 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 Basque Government's grant program "ESS".



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