

Ph.D. position in experimental particle physics

The experimental neutrino group at the *Instituto de Física Corpuscular* (IFIC) invites applications for a position to pursue a PhD in experimental particle physics. IFIC (<http://ific.uv.es>) is a joint centre of the Spanish Research Council (CSIC) and the Universitat de València devoted to research in particle, astroparticle and nuclear physics.

The neutrino group at IFIC participates in the DUNE and NEXT experiments. The DUNE experiment will be one of the major scientific developments of the next decades and is currently in a construction phase. The group is currently involved in the R&D of the photon detection system of the far detector. Moreover, the unique DUNE experimental setup combining a high energy proton beam, a near and far detector enlarges the physics program beyond neutrino physics. The group is also involved in beyond standard model physics studies, in particular, searches for dark sectors in the MeV-GeV mass range which can explain experimental anomalies such as the anomalous muon magnetic moment. The successful candidate will study the DUNE capabilities for dark sector physics exploiting also the synergies with current accelerator-based experiments.

The candidate will have the opportunity to have a broad formation developing hardware and analysis skills. He/she will learn state-of-the-art data analysis techniques, including machine learning and advanced statistical analysis, as well as software and computing skills that are essential in order to achieve the goals of the position. In addition, the successful candidate will have the opportunity to analyse existing data of a dark sector accelerator-based experiment in which the group is also partially involved. The dissemination of the physics results via oral presentations to prestigious international conferences and seminal publications to journals is also expected.

The position will be funded by the regional government (Generalitat Valenciana) in the framework of the Plan GenT, and it is expected to start in Spring 2021 and have a duration of 4 years. Candidates must have a Masters degree by the date of appointment. They are expected to have a strong commitment to research in particle physics and data analysis, be capable of personal initiative and be willing to be involved in one of the largest scientific experiments in the world. Prior experience in the field of high energy physics, data analysis and software skills (C++, Python, etc.) is not required, but will be valued positively.

Interested candidates are requested to send their application, including a motivation letter, CV, academic transcripts, and the contact information of two persons who could provide letters of reference, to Dr Justo Martín-Albo and Dr Laura Molina.

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Review of applications will start as soon as the first applications are received and continue until the position is filled.