08/04/2022

Research Student Fellowship (BI – Master) - Neutrinos

Where to apply

Application Deadline: 22/04/2022 17:00 - Europe/London

Contact Details

Where to send your application.

COMPANY
LIP - Laboratório de Instrumentação e Física Experimental de Partículas

E-MAIL
ofelia@lip.pt

Hiring/Funding Organisation/Institute

ORGANISATION/COMPANY
LIP - Laboratório de Instrumentação e Física Experimental de Partículas

DEPARTMENT
LISBON

ORGANISATION TYPE
Research Laboratory

COUNTRY
Portugal

CITY
LISBON

POSTAL CODE
1649-003

STREET

WEBSITE
http://www.lip.pt

Av. Prof. Gama Pinto, nº 2

E-MAIL
natalia@lip.pt

ORGANISATION/COMPANY
LIP - Laboratório de Instrumentação e Física Experimental de Partículas

RESEARCH FIELD
Physics › Applied physics

RESEARCHER PROFILE
First Stage Researcher (R1)

APPLICATION DEADLINE
22/04/2022 17:00 - Europe/London

LOCATION
Portugal › LISBON

TYPE OF CONTRACT
Temporary

JOB STATUS
Full-time

HOURS PER WEEK
35

OFFER STARTING DATE
02/05/2022

REFERENCE NUMBER
PTDC/FIS-PAR/2679/2021 (Neutrinos)

OFFER DESCRIPTION

LIP opens a call for selection of fellows for one Research Student Fellowships (BI Master) for participation in the project Neutrinoless double beta decay search with the SNO+ experiment" Ref. PTDC/FIS-PAR/2679/2021, funded by FCT/MCTES with national funds through the State Budget (OE).

Work plan:

The work plan is integrated in the search for rare processes at the SNO+ being carried out at LIP. The successful candidate will initiate research in the framework of the SNO+ experiment at the SNOLAB. The group is actively involved in the background characterization of the detector, the measurement of the anti-neutrino interactions, the search of the neutrino less double-beta decay, the measurement of the solar neutrino fluxes and the detector calibration. The successful candidate will work on the development of a binned likelihood fit to extract the double-beta decay half-life of 130Te and the impact of non-gaussian tails in the region of interest for the neutrinoless double-beta decay. The candidate will use Monte Carlo simulations based on the current best knowledge of the scintillator optics and prepare the set of tools necessary to perform the analysis with Te-loaded SNO+ data. Furthermore, the candidate will evaluate the systematics and their impact in the sensitivity studies by using the current best knowledge of the scintillator optics and

its radioactive purity.

Legislation:

A fellowship contract will be established according to the “Regulations for Research Grants of the Foundation for Science and Technology” (https://dre.pt/application/conteudo/127238533) and to the Status of Scientific Research Fellow (Law nº 40/2004, August 18th, and its successive amendments).

Duration:

The fellowship has a duration of 6 months, not renewable and the foreseen starting date is May 2, 2022.

Applicants should submit: a cover letter, curriculum vitae , degree certificate and other relevant documents, as a PDF file, by email to natalia@lip.pt and ofelia@lip.pt

More Information

ADDITIONAL INFORMATION

Benefits

The monthly amount of a 1 144,64 € is in accordance with the values stipulated in the “FCT Regulation for Research Studentships and Fellowships”:

https://www.fct.pt/apoios/bolsas/docs/Tabela_de_Valores_SMM_2022.pdf
This amount will be paid on a monthly basis through a bank transfer to the grant holder's bank account.

Other components, such as installation or travel support, if applicable, will be paid according to the same rules.

Eligibility criteria

The candidates for the position should have a MSc in Physics or similar.
Applicants should fulfil the requirements to join a course granting a higher academic degree (PhD) or in a non-academic degree course, as stipulated in the “Regulations for Research Grants of the Foundation for Science and Technology” (Article 6).
At the starting date of the grant, the candidate should present a proof of enrollment in the course granting, or not, a higher academic degree.
In the event of the degree was awarded by a foreign higher education institution, the degree must comply with the provisions of the Decree-Law nº. 66/2018, of 16 august (https://www.dges.gov.pt/en/pagina/degree-and-diploma-recognition?plid=1536). The selected candidate must provide the recognition of the degree when signing the contract.

Selection process

Shortlisted candidates may be invited for an interview, which may be made by videoconference. The shortlisted candidates may also be asked to provide two references that will be contacted by the Jury. The selection criteria will be the candidate's CV and its relevance to the need of the research project (40%), the candidate's experience in relevant domains (30%), and the interview (30%).

Effective Members of the Jury:

Dr. José Maneira (LIP)

Dr. Nuno Barros (LIP)

Dr. Sofia Andringa (LIP)

Prof. Patricia Conde Muiño (LIP, IST)

Dr. Alexandre Lindote (LIP)

Additional comments

Advertising / notification of results:
The results of the evaluation will be communicated by email; in case of disagreement, the candidates have a period of 10 working days to contest the decision, as provided for in the Code of Administrative Procedure in a preliminary hearing. At the end of this period, the arguments presented will be analysed by the jury committee, who will simultaneously communicate the final decision to all the candidates who submitted allegations. The final results of the shortlisted applicants will be communicated by e-mail. In case of disagreement, the candidates have a period of 15 working days to contest the decision.

Web site for additional job details

https://www.lip.pt/?section=about&page=recruitment
REQUIREMENTS

Required Research Experiences

RESEARCH FIELD
Physics

YEARS OF RESEARCH EXPERIENCE
1 - 4

Offer Requirements

REQUIRED EDUCATION LEVEL
Physics: Master Degree or equivalent

REQUIRED LANGUAGES
ENGLISH: Excellent

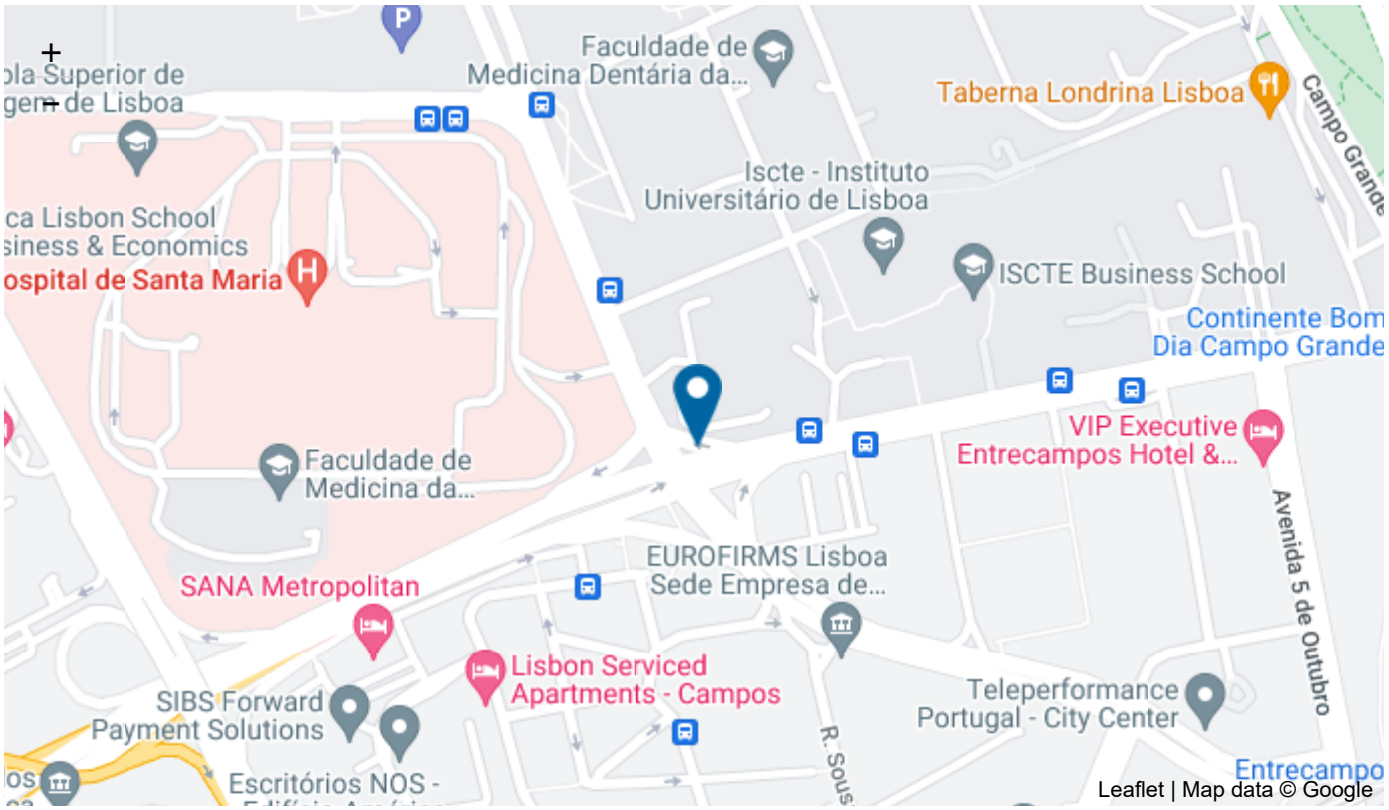
Skills/Qualifications

The candidates for the position should have a MSc in Physics or similar. Experience with scientific computing and software, liquid scintillator based detectors and neutrino interactions is valued. Knowledge of particle interaction with matter and radioactive decays is highly recommended. The successful candidate will perform scientific work in an internationally competitive environment.

Specific Requirements

Preferential factors: Advanced experience with C++ and python languages. Experience in the neutrinoless double-beta decay field.
The candidate should provide a clear demonstration of the ability to carry out a research program.

Map Information



Job Work Location Personal Assistance locations

WORK LOCATION(S)

1 position(s) available at
LIP - Laboratório de
Instrumentação e Física
Experimental de Partículas
Portugal
LISBON
1649-003
Av. Prof. Gama Pinto, nº 2
EURAXESS offer ID: 770017

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