



# **Research Student Fellowship (BI – Bachelor)**



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#### 20 Dec 2023

## **Job Information**

Organisation/Company	LIP - Laboratório de Instrumentação e Física Experimental de Partículas
Department	LISBON
Research Field	Physics
Researcher Profile	First Stage Researcher (R1)
Country	Portugal
Application Deadline	4 Jan 2024 - 17:00 (Europe/Lisbon)
Type of Contract	Temporary
Job Status	Full-time

Hours Per Week	35
Offer Starting Date	5 Jan 2024
Is the job funded through the EU Research Framework Programme?	Not funded by an EU programme
Is the Job related to staff position within a Research Infrastructure?	No

### **Offer Description**

LIP – Laboratory for Instrumentation and Experimental Particle Physics - opens a call for applications for one Research Student Fellowship 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).

#### Working program and Supervision:

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 SNOLAB. The group is actively involved in the background characterization of the detector, and several physics analyses.

In particular, the candidate is expected to actively participate in the ongoing activities in the context of the physics event reconstruction with the specific aim of separating the Cherenkov and scintillation component for identification of solar neutrino events. Specifically, the candidate is expected to use machine learning (*ML*) computational algorithms to identify underlying patterns that will allow the discrimination of such events in the context of the SNO+ experiment, initially by using MonteCarlo simulations and then applied to the acquired SNO+ data.

The scientific orientation of the candidate will be ensured by Dr. Nuno Barros

#### Legislation

The fellowship contract will be established according to the "Regulations for Research Grants of the Foundation for Science and Technology" (<u>https://dre.pt/application/conteudo/127238533</u>) and to the Status of Scientific Research Fellow (Law

no 40/2004, August 18th, and its successive amendments).

#### Duration:

The fellowship has a maximum duration of 6 months, with a foreseen starting date on January 2024, eventually renewable.

#### Submisson:

Applicants should submit: a cover letter, curriculum vitae and other relevant documents, as a PDF file, by email to <u>ofelia@lip.pt ou natalia@lip.pt</u>

### Requirements

**Research Field** 

Physics

#### Skills/Qualifications

**Requirements:** The candidates for the position should have a BSc 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. Knowledge of English language is mandatory

#### **Specific Requirements**

Preferential factors: Experience with C++ and python language.

Languages	ENGLISH
Level	Excellent
Research Field	Physics
Years of Research Experience	1 - 4

### **Additional Information**

#### Benefits

The monthly amount of 930,98 € is in accordance with the values stipulated in the "FCT Regulation for Research Studentships and Fellowships":

https://www.fct.pt/wp-content/uploads/2023/02/Tabela-de-Valores-SMM\_2023.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

Applicants should fulfill the requirements to join a course granting a higher academic degree (Master) or in a non- academic degree course, as stipulated in the "Regulations for Research Grants of the Foundation for Science and Technology" (Article 6).

When contracting, the candidates will need to present a proof of enrolment in the course, in the conditions above described.

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 (<u>https://www.dges.gov.pt/en/pagina/degree</u>- and-diploma-recognition?plid=1536). The selected candidate must provide the recognition of the degree when signing the contract.

#### Selection process

#### Evaluation:

The members of the jury will take into consideration the CV (50%) and the required field adequation (50%). If none of the candidates fulfills the appropriate profile, the scholarships will not be awarded

#### Effective Members of the Jury:

- Dr. José Maneira (LIP)
- Dr. Sofia Andringa (LIP)
- Dr. Valentina Lozza (LIP)

#### 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.

#### Additional comments

**Non-discrimination and equal access policy:** LIP actively promotes a nondiscrimination and equal access policy, wherefore no candidate can be privileged, benefited, impaired or deprived of any rights whatsoever, or be exempt of any duties based on their ancestry, age, sex, sexual preference, marital status, family and economic conditions, instruction, origin or social conditions, genetic heritage, reduced work capacity, disability, chronic illness, nationality, ethnic origin or race, origin territory, language, religion, political or ideological convictions and union membership.

 Website for additional job details
 https://www.lip.pt/?section=about&page=recruitment

### Work Location(s)

Number of offers available	1
Company/Institute	LIP - Laboratório de Instrumentação e Física Experimental de Partículas
Country	Portugal
City	Lisbon
Postal Code	1649-003
Street	Av.Prof. Gama Pinto, 2
Geofield	

# Where to apply

E-mail

ofelia@lip.pt

## Contact

City	LISBON
Website	http://www.lip.pt
Street	Av. Prof. Gama Pinto, nº 2
Postal Code	1649-003
E-Mail	natalia@lip.pt ofelia@lip.pt