

# Job offer

JOB PORTUGAL

LIP - Laboratório de Instrumentação e Física Experimental de Partículas | Posted on: 15 January 2025

## Research Student Fellowship (BI – Master) - Neutrinos Group

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15 Jan 2025

### Job Information

<b>Organisation/Company</b>	LIP - Laboratório de Instrumentação e Física Experimental de Partículas
<b>Department</b>	LISBON
<b>Research Field</b>	Physics
<b>Researcher Profile</b>	First Stage Researcher (R1)
<b>Positions</b>	Master Positions
<b>Country</b>	Portugal
<b>Application Deadline</b>	29 Jan 2025 - 17:00 (Europe/Lisbon)
<b>Type of Contract</b>	Other
<b>Type of Contract Extra Information</b>	Research Fellowship
<b>Job Status</b>	Full-time
<b>Hours Per Week</b>	35
<b>Offer Starting Date</b>	3 Feb 2025
<b>Is the job funded through the EU Research Framework Programme?</b>	Not funded by a EU programme
<b>Reference Number</b>	PTDC/FIS-PAR/2679/2021
<b>Is the Job related to staff position within a</b>	No

## Offer Description

LIP – Laboratory for Instrumentation and Experimental Particle Physics - opens a call for applications for one Master 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. The group is actively involved in the background characterisation of the detector, and several physics analyses.

In particular, the main activity of the candidate is expected to be the analysis of the SNO+ scintillator data with the goal of identify and isolate solar neutrino events with  $E > 2.5$  MeV. The candidate is expected to continue the work started by the SNO+ LIP group, which use machine learning (*ML*) computational algorithms to separate the Cherenkov and scintillation component of the emitted light after interaction in the scintillator. The candidate will have to evaluate the efficiency of the method, apply it to the data and compare the results with the expectations based on Monte Carlo simulations.

The scientific orientation of the candidate will be ensured by Dr. Valentina Lozza

### Legislation:

The fellowship contract will be established according to the Regulations for Research Grants of LIP and FCT and to the Status of Scientific Research Fellow (Law nº 40/2004 de 18 de Agosto, and its successive amendments).

<https://files.diariodarepublica.pt/2s/2019/12/241000000/0009100105.pdf>

<https://web.lip.pt/lfiles/Regulamento-Bolsas-Investigacao-BI-LIP.pdf>

### Duration:

The fellowship has a duration of 6 months, with a foreseen starting date on February 2025, renewable and according to the terms of the LIP/FCT regulations.

Applicants should submit: a cover letter, curriculum vitae and other relevant documents (copy of the diploma), as a PDF file, by email to [vanda@lip.pt](mailto:vanda@lip.pt) and [natalia@lip.pt](mailto:natalia@lip.pt)

## Where to apply

E-mail [natalia@lip.pt](mailto:natalia@lip.pt)

## Requirements

Research Field	Physics
Education Level	Master Degree or equivalent

### Skills/Qualifications

The candidates for the position should have a MSc in Physics or similar. Experience with scientific computing and software, machine learning techniques, 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
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Level	Excellent
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Research Field	Physics
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Years of Research Experience	1 - 4
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## Additional Information

### Benefits

The monthly amount of 1259,64 € is in accordance with the values stipulated in the “FCT Regulation for Research Studentships and Fellowships”:

[https://www.fct.pt/wp-content/uploads/2024/02/Tabela-de-Valores-SMM\\_atualizacao-2024.pdf](https://www.fct.pt/wp-content/uploads/2024/02/Tabela-de-Valores-SMM_atualizacao-2024.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 (PhD) or in a non-academic degree course, as stipulated in the Regulations for Research Grants of LIP. (Article 6).

When contracting, the candidates will need to present a proof of enrollment 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 (<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

### 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. Nuno Barros (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
State/Province	LISBON
City	LISBON
Geofield	



## Contact

City	LISBON
Website	<a href="http://www.lip.pt">http://www.lip.pt</a>
Street	Av. Prof. Gama Pinto, nº 2
Postal Code	1649-003

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