



Laboratório de Instrumentação e Física Experimental de Partículas

ANNOUNCEMENT – Doctoral Scholarship

EURAXESS (Job Offer id:)

1 - Title

Call for Applications for a Doctoral Scholarship

2 - Offer description

LIP opens a call for applications for a Doctoral Scholarship in the domain of experimental particle physics and applications.

The grant will be funded by the Foundation for Science and Technology (FCT) under the Collaboration Agreement "*Financiamento do Plano Plurianual de Bolsas de Investigação para Estudantes de Doutoramento*", signed between the FCT and LIP, R&D Unity No. 50007.

PhD studentships will be granted to applicants that fulfil the requirements to join a study cycle towards a PhD degree, and wish to develop research work in particle physics or related domains at a Portuguese University, hosted by LIP, without prejudice to the work being carried out in collaboration with more than one institution. The research activities must be integrated in LIP's activity plan and strategy.

Working Program and Supervision:

The work plan will be carried out in the framework of the activities of the LIP group in the CMS experiment, one of the outstanding research groups in High Energy Physics in Portugal. The LIP-CMS group is involved with a leading role in data analysis (Top, B, quarkonium, heavy ions, SUSY, exclusive production, and Higgs) and in the HL-LHC detector upgrades for Phase2 (ECAL, MTD, PPS). At LIP, we operate a Tier-2 computer center, provide resources for data analysis both locally and as a part of the CMS computing grid.

The successful candidate will participate in the development of high-performance timing detectors for the CMS forward proton spectrometer, PPS. The successful candidate will also participate in the data analysis of the full dataset available with the goal of fully exploiting the discovery opportunities offered by the LHC in the search for New Physics. The activity is centered on Run2 data and preparation for a leading contribution in the LHC Run3 data analyses.

The scientific orientation of the candidate will be ensured by Dr. Jonathan Hollar.

Admissibility Requirements:

Under the conditions set out in Article 9 and Paragraph 1 of Article 14 of FCT Regulations for Studentships and Fellowships, are eligible as applicants:

- Portuguese citizens, or citizens of other European Union member states;
- third-country citizens;
- stateless persons;



- o beneficiaries of refugee status.

To apply for a PhD studentship it is necessary:

- o To hold a bachelor's or master's degree in the scientific areas defined in the call announcement or in related areas;
- o Not to have benefited from a PhD or a PhD in industry studentship directly funded by FCT, regardless of its duration;
- o To be a citizen permanently and usually living in Portugal, in case the work plan of the requested studentship proceeds, entirely or partially, in foreign institutions (in case of both in Portugal and abroad or exclusively abroad studentships); this requirement is applicable to both national and foreign citizens;
- o Not to hold a doctoral degree.

Duration:

The duration of the grant is annual, renewable up to a maximum of four years and may not be awarded for periods of less than three consecutive months.

Applicable Legislation:

All missing aspects from this Call will follow the FCT Regulations for Studentships and Fellowships available at: <https://dre.pt/application/conteudo/127238533>

and the Research Fellowship Holder Statute available at: <https://dre.pt/application/conteudo/124256707>

3 - Researcher Profiles

The candidates should provide a clear demonstration of the ability to carry out a research program and skills for experimental work.

4 - Research fields

Main research field: Experimental Particle Physics

5 - Type of Contract

Doctoral Scholarship

6 - Application Deadline / Timezone

The call will be open from 10th to 25th November 2022, 17:00 (Lisbon time).

7 - Envisaged Job Starting Date

January 2022



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8 - Is the job funded through a EU Research Framework Programme?

All the R&D activities carried out by the grantee, directly or indirectly financed by the studentship, namely, communications, publications and scientific creations, as well as thesis, must include the reference to FCT and, when applicable, the European Social Fund (ESF) financing. In particular, these references should mention the following operational programmes Programa Operacional Regional do Norte (NORTE 2020), Programa Operacional Regional do Centro (Centro 2020) and Programa Operacional Regional do Alentejo (Alentejo 2020), or additional funding schemes that might be approved. Insignia of FCT, ESF and EU must therefore be included in the documents referring to these actions, according to the graphic rules of each operational programme.

9 - Reference Number

Financiamento de Unidades de I&D – LIP/50007_CMS group

10 - How to Apply?

The candidates formalize their application by sending the following documents (**mandatory**) by email to natalia@lip.pt:

- **One CV file** in pdf format (indicating contacts, full address, ID card/passport number)
- **One Motivation Letter file** in pdf format;
- **One PDF file containing certificates of all the academic degrees obtained**, with the final average grade and marks in all subjects
- **One PDF file containing the academic degree recognition** and conversion of the final grade to the Portuguese grading scale or the presentation of the **recognition/equivalence**, registered by a public higher education institution.
- **Two reference letters**

HIRING INFO & WORK LOCATION

11 – Organisation or R&D Unit responsible for the hiring

Organisation/Company: LIP - Laboratório de Instrumentação e Física Experimental de Partículas
Organisation Type : Research Laboratory
Department: Lisbon
Country: Portugal
Address: Av. Prof. Gama Pinto, 2, 1649-003 Lisboa
Website: <https://www.lip.pt/>
Contact Person Email: natalia@lip.pt
Phone: +351 210 493 611

12 - Number of positions available / Work Location:

Vacant posts: 1
Company/Institute: LIP - Lisboa
Country: Portugal
Street: Av. Prof. Gama Pinto, nº 2 , 1649-003 Lisboa, Portugal



REQUIREMENTS

13 - Main Research Field / Level

Physics or related areas

14 - Skills/Qualifications/ Specific Requirements/Required Languages

Requirements:

Only candidates who have completed the cycle of studies leading to a Bachelor's or Master's degree by the end of the application period will be admitted.

Programming skills (C++, Python) knowledge of analysis tools (ROOT, etc.). Experience in the execution of experimental particle physics experiments will be valued.

Fluent in English

15 - Required Research Experience

The candidate should provide a clear demonstration of the ability to carry out a research program.

ADDITIONAL INFO

16 - Website for additional job details

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

17 - Benefits

The selected applicant will be awarded monthly stipends and supplementary support, which may include tuition fees, relocation costs, travel awards and health insurance, whenever applicable, as detailed in the FCT Regulations.

18 - Eligibility criteria

Requirements:

Only candidates who have completed the cycle of studies leading to a Bachelor's or Master's degree by the end of the application period will be admitted. In order to comply with the foreseen applicable Portuguese legislation regarding the recognition of foreign qualifications, all the rights inherent to academic degrees granted by foreign higher education institutions is duly recognised to the holders of these degrees. This recognition is subject to the presentation of **the academic degrees recognition and conversion of the final grade to the Portuguese grading scale**, requested to the Dean of a public Portuguese University, the Head of a Public Polytechnic Institute or the Director-General for Higher Education; or by the presentation of the **recognition/equivalence**, registered by a public higher education institution.

Candidates who do not yet have their degree certificate may present a declaration of honor, stating that they have completed the necessary qualifications for the purposes of the call by the end of the application deadline. The granting of the scholarship will depend on the presentation of all the documents. For candidates with diplomas



issued by foreign institutions the academic degrees recognition and conversion of the final grade to the Portuguese grading scale or the presentation of the recognition/equivalence will be required for the granting of the scholarship. The presentation of the degree certificates in the application form is determinant for evaluation purposes, namely to calculate the score of A1, a sub-criterion of the Merit of the Applicant. In case of academic degrees obtained abroad, only degrees with the respective records of recognition/equivalence and conversion to the Portuguese grading scale will be considered to calculate the score of A1 sub-criterion (minimum grade = 0 if no recognition).

19 - Selection process

Evaluation takes into account two criteria:

Criterion A - Merit of the Applicant

The criterion A, which has a 50% relative weight to the final score, is evaluated based on two sub-criteria:

A1. Academic career, with a relative weight of 20% in the Merit of the Applicant.

The academic career sub-criterion is calculated according to the final classification stated in the academic degree certificate, submitted in the application form, according to Table 1: i) Graduate + Master / Integrated Master; ii) Graduate degree only; or iii) Master degree only. (See Table 1 and Table 2 available in the PT version of the call)

Although it is not mandatory to submit degree certificates for the admission to the call, **documental evidence of the classifications obtained in the academic degrees is mandatory for the evaluation of the sub-criterion A1.**

In case no valid academic degree certificate is submitted, the sub-criterion A1 will be scored zero (A1 = 0).

To apply the scoring system presented in Table 1, it is mandatory to submit the following documents in the application form:

- a) Academic degree certificates, indicating the final grade and, if possible, the final classification of the disciplines completed. Applicants with post-Bologna education shall present both 1st and 2nd study cycles academic degree certificates or an integrated master certificate, while applicants with pre-Bologna education should present the graduate and/or master degree certificates. It should be noted that a certificate of curricular units does not substitute the submission of a degree certificate including the degree's final grade required to the sub-criterion A1 calculation.
- b) In case of foreign academic degrees it is mandatory to submit the recognition of such degrees and the conversion of the respective final grade to the Portuguese grading scale, to guarantee the principle of equal treatment to applicants with national and foreign academic degrees.

A2. Personal curriculum (reflecting the scientific, professional and academic career, when applicable, and the applicant's motivation to proceed with this study cycle) with a relative weight of 30% in the Merit of the Applicant.

Criterion B – Adequacy of the candidate's experience to the working program with a relative weight of 50%

Final classification = $(0.2 \times A1) + (0.3 \times A2) + (0.5 \times B)$

For purposes of tiebreak, the final ranking list will be based on the scores assigned to each of the evaluation criteria in the following order: criterion B, criterion A.



All applications will be graded from 0 (zero) to 100 (maximum) in each of the two evaluation criteria.

Applicants whose application is scored with a final grade lower than 60 points will not be eligible for studentship granting.

Members of the Jury:

- Prof. João Varela, LIP and IST (Panel Chair)
- Dr. Michele Gallinaro, LIP and IST;
- Dr. Nuno Leonoardo, LIP and IST;
- Prof. João Seixas, IST.

Disclosure of results :

The results of the evaluation will be communicated to the applicants by email, and the conclusion of the process will be published on the LIP website. In case of a negative decision, applicants dispose of a period of 10 days in which to oppose the decision in a preliminary hearing, as stated in articles 121 and following of the Code of Administrative Procedure. The panel's final decision will be taken after analysis of the applicant's arguments and the candidates notified. In case of disagreement, the candidates have a period of 15 working days to contest the decision. A final appeal may also be lodged with the highest body of the funding entity (FCT) within a period of 30 working days after the announcement of the jury's final classification.

20 - Additional comments

Funding:

The scholarship contracts will be signed with FCT. The attribution of grants is conditional on the presentation of all required documentation and on the admission of the candidate by the Institution granting the academic degree, as well as subject to the availability of FCT funds. The lack of any of the necessary documents to complete the contracting procedure implies the expiration of the studentship granting and conclusion of the process; applicants have up to 6 months after the disclosure of the provisional granting to present all of the listed documents.

Equality and non-discrimination Policy:

We are committed to promoting equality and preventing discrimination, and welcome applications of all qualified candidates irrespective of their age, disability, gender, marital status, pregnancy, maternity, gender identity, race, colour, nationality, ethnicity or national origin, sexual orientation, religion or belief, social background or culture or trade union membership.