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Job offer



PORTUGAL

<u>LIP - Laboratório de Instrumentação e Física Experimental de Partículas</u>

Posted on: 8 November 2024

Call for Applications for a Doctoral Scholarship - ATLAS Group

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8 Nov 2024

Job Information

Organisation/Company LIP - Laboratório de Instrumentação e Física Experimental de Partículas

Department LISBON

Research Field **Physics**

Researcher Profile First Stage Researcher (R1)

Positions PhD Positions

Country Portugal

Application Deadline 25 Nov 2024 - 17:00 (Europe/Lisbon)

Type of Contract Temporary

Job Status Full-time

Hours Per Week 35

Offer Starting Date 1 Dec 2024

Is the job funded through the EU Research

Framework Programme?

Not funded by a EU programme

Reference Number Research Grant - PhD - ATLAS Group

Is the Job related to staff position within a

Research Infrastructure?

No

Offer Description

LIP - Laboratory of Instrumentation and Experimental Particle Physics opens a competition for the award of a research grant, hereinafter referred to as Research Grant for PhDs abroad, in the area of Experimental Particle Physics and its applications, under the LIP Research Grants Regulation and the Research Fellow Statute (EBI).

The scholarship will be financed by funds to be transferred from the Foundation for Science and Technology (FCT) within the framework of the existing institutional cooperation between LIP and FCT and with a view to strengthening Portugal's qualifications in the field of particle physics.

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 and CERN. The research activities must be integrated in LIP and CERN's activity plans and strategies.

Work plan and Supervision:

The work program will focus on research into anomalous interactions between the Higgs boson and the W bosons, as well as an important contribution to the TileCal hadronic calorimeter calibration system. In particular, the successful candidate will assume responsibilities for the TileCal cesium calibration system that include operating the cesium calibration system regularly, maintaining and developing the calibration software, calculating calibration constants, and monitoring performance of the system to ensure the necessary accuracy of this system. Additionally, the candidate will contribute to data collection with data quality shifts and/or in the control room. In terms of physics analysis, the candidate will develop an analysis focused on measuring the interaction of the Higgs boson and the W bosons, with the aim of searching for anomalous couplings. The study will be carried out in the associated production channel of the Higgs with a W boson, when the Higgs decays to b quarks and the W to leptons.

The candidate's work will be supervised by Prof. Patricia Conde Muíño (IST, LIP) and Dr. Henric Wilkens (CERN).

The work program will take place entirely at CERN, with periods of stay at LIP.

The candidates formalize their application by sending the following documents 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.

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.

Where to apply

E-mail natalia@lip.pt

Requirements

Research Field Physics

Education Level Bachelor Degree or equivalent

Research Field Physics

Education Level Master Degree or equivalent

Skills/Qualifications

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

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.

Knowledge of experimental particle physics relevant to the development of the work plan is valued, in particular data analysis in the ATLAS experiment and the TileCal hadronic calorimeter, as well as knowledge of software tools typically used in experimental particle physics (C++, python, Athena, RootFit, RooStats).

Specific Requirements

Admissibility requirements:

- Portuguese citizens, or citizens of other European Union member states;
- · third-country citizens;
- · stateless persons;
- beneficiaries of refugee status.

To apply for a PhD studentship it is necessary:

- To hold a bachelor's or master's degree in the scientific areas defined in the call announcement or in related areas;
- Not to have benefited from a PhD or a PhD in industry studentship directly funded by FCT, regardless of its duration;
- · Not to hold a doctoral degree.

Considering paragraph 3 of article 9 of the LIP Research Grants Regulation and the need to make the recruitment base more flexible and to enhance international partnerships in which LIP is actively involved, this competition may include candidates who do not permanently and habitually live in Portugal.

Languages ENGLISH

Level Excellent

Research Field Physics

Years of Research Experience 1 - 4

Additional Information

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 LIP and FCT Regulations.

https://www.fct.pt/wp-content/uploads/2024/02/Tabela-de-Valores-SMM atu...

Eligibility criteria

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. For further information: https://www.dges.gov.pt.

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).

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:

- 1. 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.
- 2. 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.

Disability Bonuses

Applicants that state a degree of disability equal to or above 90% shall have a bonus of 20% on criterion A – Merit of the Applicant.

Applicants that state a degree of disability equal to or above 60% and under 90%, shall have a bonus of 10% in this criterion.

The degree of disability should be duly proven by submitting, in the application form, the document **Atestado Médico de Incapacidade Multiuso (AMIM)**, issued according to the Decree-Law no. 202/96, of 23 of October, in its current version.

Members of the Jury:

- Prof. Patricia Gonçalves, LIP and IST (Panel Chair)
- Prof. Mário Pimenta, LIP and IST;
- Prof. Agostinho Gomes, LIP;
- Dra. Rute Pedro, LIP.

Additional comments

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 within a period of 30 working days after the announcement of the jury's final classification.

Funding:

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.

The scholarship awarded by FCT under this contract will be financed by funds from the Portuguese State Budget and, when applicable, by funds from the European Social Fund through the Operational Program.

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.

Website for additional job details

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

Work Location(s)

Number of offers available

Company/Institute LIP - Laboratório de Instrumentação e Física Experimental de Partículas

Country Portugal

State/Province LISBON

City LISBON

Geofield

Contact

City LISBON

Website http://www.lip.pt Street Av. Prof. Gama Pinto, nº 2

Postal Code 1649-003

E-Mail natalia@lip.pt

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