

EURAXESS

Call for Applications for a Doctoral Scholarship – Space Applications

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Apply

17 Oct 2023

Job Information

Organisation/Company	LIP - Laboratório de Instrumentação e Física Experimental de Partículas
Department	LISBON
Research Field	Physics » Other
Researcher Profile	First Stage Researcher (R1)
Country	Portugal
Application Deadline	31 Oct 2023 - 17:00 (Europe/Lisbon)
Type of Contract	Temporary
Job Status	Full-time
Hours Per Week	35

Offer Starting Date	1 Dec 2023
Is the job funded through the EU Research Framework Programme?	Not funded by an EU programme
Reference Number	Funding R&D Units – LIP/50007_SpaceRad group
Is the Job related to staff position within a Research Infrastructure?	No

Offer Description

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

Work plan and Supervision:

The work will be carried out with the SpaceRad LIP group, which is based in Lisbon. The SpaceRad LIP group research and development activities have been centred since 2003 on the study of Space radiation environment and of its effects. The group collaborates with the i-Astro LIP Group, based in Coimbra, which develops instrumentation for astrophysics experiments in space, and with the LIP Lisbon and Coimbra based groups developing detectors and instruments for health applications, in particular in what concerns the measurement and prediction of radiologic quantities and the understanding of biologic effects of radiation.

The SpaceRad group operates also in collaborations with several international partners that such as the European Space Agency (ESA), the Paul Scherrer Institute (PSI), the Max Planck Institute for Solar System Physics, the University of Turku, and the University of Leicester.

The SpaceRad group has been working in the development and in the data analysis of *type 4* space radiation monitors since 2005. These are detectors capable of measuring the charged particle fluxes in space, complying with ESA specifications for particular missions. Among these detectors, is the BepiColombo Environment Radiation Monitor (BERM), currently in cruise to Mercury; the RADIation hard Electron Monitor (RADEM) aboard the JUpiter ICy moons Explorer (JUICE), and the MultiFunctional Spectrometer (MFS) that flew aboard the AlphaSat in Geostationary orbit. The SpaceRad group also works on the modelling of the space radiation environment and of its effects, with special focus on Mars, towards human space flight.

The work plan consists on the calibration and data exploitation of BERM (in the context of the BARD project, for “Expert support to BERM & RADEM units on board BepiColombo and JUICE spacecraft”, between LIP and ESA), with the objective of characterising the inner solar system radiation environment, including the study of Solar Particle Events, also establishing guidelines and requirements for future charged particle spectrometers to be used in Space, with improved performances in the measurement of the Heliophysics radiation environment, and also in support of reliable radiation hazard mitigation strategies for Human Space Flight.

The scientific supervision of the candidate will be ensured by Prof. Patrícia Gonçalves and Dr. Marco Pinto.

Applications:

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.

Requirements

Research Field	Physics » Other
Education Level	Bachelor Degree or equivalent
Research Field	Physics » Other
Education Level	Master Degree or equivalent

Skills/Qualifications

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 (Python, C++) and knowledge of analysis tools (Geant4 ROOT, etc...). Knowledge of the space radiation environment and radiation monitors will be considered an asset.

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

Specific 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. For further information: <http://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).

Languages	ENGLISH
Level	Excellent
Research Field	Physics » Other

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 FCT Regulations.

https://www.fct.pt/wp-content/uploads/2023/02/Tabela-de-Valores-SMM_2023.pdf

Eligibility criteria

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;
- 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;
- 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;
- 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>

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.

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 x A1) + (0.3 x A2) + (0.5 x 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. Pedro Assis, LIP and Instituto Superior Técnico (Chair)
- Prof. Rui Curado da Silva, LIP and Universidade de Coimbra;
- Dra. Luísa Arruda, LIP

Alternate Members:

- Prof. Jorge Sampaio, LIP and Faculty of Sciences of Lisbon University
- Dr. Ruben Conceição, LIP

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.

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 (PDQI).

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 1

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

Country Portugal

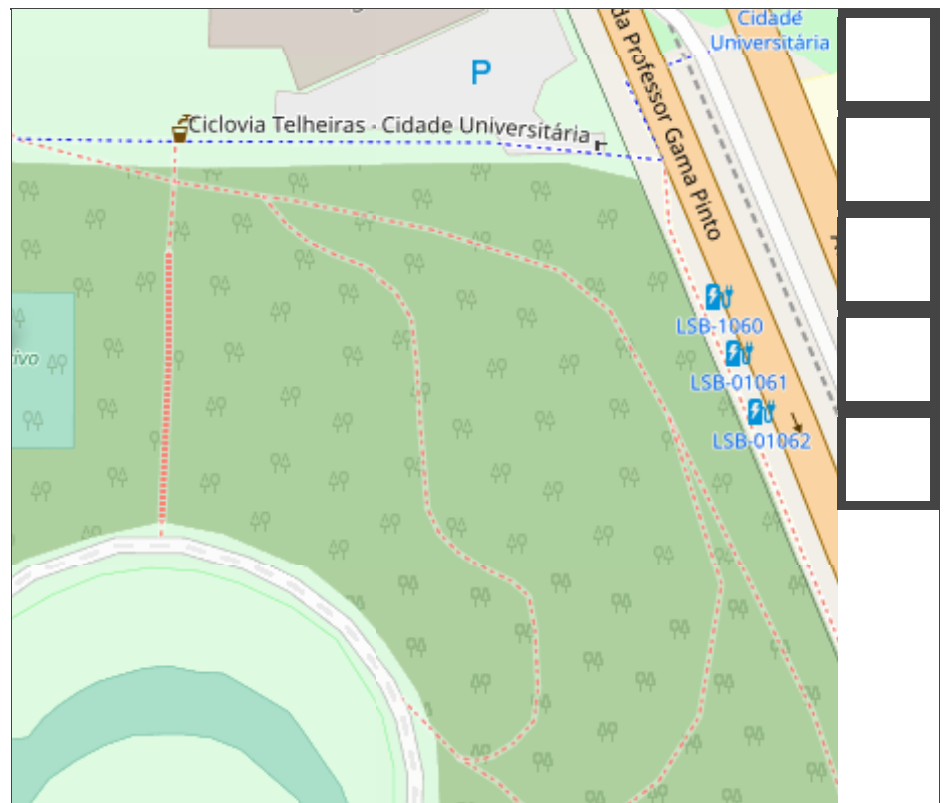
State/Province Lisbon

City Lisbon

Postal Code 1649-003

Street Av. Prof. Gama Pinto, nº 2

Geofield



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Where to apply

E-mail natalia@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