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JOB PORTUGAL

LIP - Laboratório de Instrumentação e Física Experimental de Partículas | Posted on: 18 December 2024

Research Student Fellowship (BI – Master) - ATLAS Group

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18 Dec 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	Master Positions
Country	Portugal
Application Deadline	10 Jan 2025 - 05:00 (Europe/Lisbon)
Type of Contract	Other
Type of Contract Extra Information	Research Fellowship
Job Status	Full-time
Hours Per Week	35
Offer Starting Date	1 Feb 2025
Is the job funded through the EU Research Framework Programme?	NextGenerationEU
Reference Number	Ref. 2024.00227.CERN
Is the Job related to staff position within a Research Infrastructure?	No

Offer Description

LIP opens a call for a Research Student Fellowship (BI Master) for participation in the project “Collaboration in the ATLAS Experiment at CERN: Data Taking and Analysis”, project approved in the framework of the Call for SR&TD Projects: Cooperation between Portugal and CERN, Ref. 2024.00227.CERN, funded by the Investment RE-C06-i06 – “Science Plus Training” - PRR.

Work plan:

This grant is intended to carry out scientific work within the scope of the ATLAS project. The work plan will focus on developing an analysis of generic searches for New Physics in the ATLAS experiment using Anomaly Detection techniques based on Machine Learning algorithms. The grantee will develop the code for selecting real and simulated Monte Carlo (MC) events for production in the Worldwide LHC Computing Grid of the data files to be analysed, configuring the trigger chains and the MC corrections to be used. The implementation of systematic uncertainties in the analysis should be started. In the end, the grantee will use the code developed to produce the data files and will validate the production process through data/MC comparisons.

The scientific supervision of the candidate will be ensured by Prof. Nuno Castro and Dr. Rute Pedro.

Legislation:

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

Duration:

The fellowship has a foreseen duration of 3 months, eventually renewable until a maximum of 8 months. The foreseen starting date is February 1st, 2025.

Applicants should submit: a motivation letter and a curriculum vitae (both in English), Master certificate, including the list of classifications obtained in the different curricular units, and other relevant documents, as a PDF file, by email to vanda@lip.pt and natalia@lip.pt

Reference letters in support of the application may be submitted, but are optional.

Where to apply

E-mail	natalia@lip.pt

Requirements

Research Field	Physics
Education Level	Master Degree or equivalent

Skills/Qualifications

The candidate must hold a Master's degree in Physics, Physics Engineering or a related field. The candidate must also be enrolled in a study cycle leading to the award of an academic degree or in a non-academic degree course in accordance with paragraphs 1 and 2 of article 6 of the LIP and FCT Regulations for Research Grants.

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

Specific Requirements

Preference will be given to candidates that have knowledge in Linux, C/C++, ROOT, Python and Machine/Deep learning libraries (f.i. scikit-learn, keras, tensorflow, pyTorch), and experience in

Particle Physics data analysis, namely from the ATLAS Experiment.

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

Additional Information

Benefits

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

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 fulfil the requirements to join a course granting a higher academic degree (Doctorate) or in a non-academic degree course, as stipulated in the FCT and LIP Regulations for Research Studentships and Fellowships (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 research experience in the required field (50%).

If none of the candidates fulfills the appropriate profile, the scholarship will not be awarded.

Members of the Jury:

Effective

- Prof. Patricia Conde Muíño
- Prof Ricardo Gonçalo
- Dr. Inês Ochoa

Alternate

- Dr. Agostinho Gomes
- Dr. Helena Santos

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

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