

English version

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Home page

## For Organisations

- ▶ [Post research opportunities](#)
- ▶ [Find the ideal candidate](#)
- ▶ [List of registered organisations](#)

## For Researchers

- ▶ [Post your CV](#)
- ▶ [Find research opportunities](#)
- ▶ [Practical information](#)
- ▶ [Foreign Researchers Guide](#)
- ▶ [Useful links](#)

## Portuguese Mobility Centres

- ▶ [List and locate Portuguese Mobility Centres](#) .

## Research Landscape

- ▶ [Portuguese research landscape](#)  
Find out how research is organised in Portugal.
- ▶ [Portuguese research policy](#)  
Find out about research policy in Portugal.
- ▶ [Women in science](#)  
Find out about the situation of women scientists.

## Post Research Opportunities

Unique identifier: 37620de7-106a-4711-a2d8-91073a9312de

## English

### 1. Descrição do cargo/posição/bolsa

#### 1. Job description

**Job:**

TENDER PROCEDURE FOR DOCTORATE

**Job/Fellowship Reference:** TENDER PROCEDURE FOR DOCTORATE**Main research field:** Physics**Sub research field:****Job summary:**

The Laboratory of instrumentation and Experimental Particle Physics (LIP) is opening an international selection tender for one vacancy of doctorate to perform research in the scientific area of Experimental Particle Physics and Instrumentation.

**Job description:**

ANNOUNCEMENT FOR THE OPENING OF AN INTERNATIONAL SELECTION TENDER PROCEDURE FOR DOCTORATE HIRING.

1. The Laboratory of instrumentation and Experimental Particle Physics (LIP) is opening an international selection tender for one vacancy of doctorate to perform research in the scientific area of Experimental Particle Physics and Instrumentation. This vacancy was attributed to LIP through the FCT institutional support to the scientific employment (2018 call). The candidate will be hired under a non-fixed term work contract, pursuant to the dispositions of article 6 (paragraph 1 (b) and paragraph 3), articles 7 and 23 of the Decree-Law no. 57/2016 of 29th August, updated by the Law no. 57/2017, of 19th July and to the Labour Code, approved by Law no. 7/2009 of 12th February.

2. Application requirements: The candidates for the position should have a PhD in physics, physics engineering or a closely related field. Previous participation in R&D projects involving neutron detectors and resistive plate chambers (RPCs) is mandatory. Good command of English language is required.

## 3. Work plan:

The selected candidate will lead a project on R&D of neutron detectors based on resistive plate chambers (RPCs) that aims at developing a new type of 3D position-sensitive detector for thermal neutrons with accurate timing, using 10B neutron converters. Following previous proof-of-the-concept studies, the project foresees a full characterization and optimization of such detector, to reach a count rate capability of at least 105 Hz/cm<sup>2</sup> and a sensitivity to gamma rays below 10<sup>-5</sup>. The 10B-RPC technology is among the strongest candidates to reach the above performance, coping with the needs of future large scale neutron science facilities, homeland security and industry. Upon being tested with laboratory neutron and gamma sources, and fitted with an optimized read-out electrode pattern, the prototype will be characterized on a pulsed neutron beam, to establish operation parameters such as position and timing resolution, detection efficiency, maximum counting rate and gamma sensitivity. If successful, the construction of a detector for large-scale neutron science facilities is foreseen.

## 4. Applicable Legislation

- Decree-Law no. 57/2016 of 29th August, which approved the doctorate hiring regime destined to stimulate scientific and technological employment for all knowledge areas (RJEC), updated by the Law nº 57/2017, of 19th July.

- Labour Code approved by Law no. 7/2009 of 12th February.

- Regulatory Decree nº 11-A/2017, of 29th December.

5. Pursuant to article 13 of RJEC, the tender selection panel shall be formed by Professors Rui Ferreira Marques (FCTUC and LIP), the President, Ignácio Duran Escribano (USC, Spain) and Paulo Fonte (ISEC-IPC and LIP).

6. Workplace shall be at the LIP node in Coimbra, Departamento de Física, Universidade de Coimbra, Portugal.

7. Monthly remuneration to be paid is the one defined by article 15 (1) of the Law nº 57/2017, of 19th July, corresponding to the position 1 of the level "Assistant Researcher" of the Research Career, i.e. 3.191,82 Euros.

8. Any national, foreign or stateless candidates who hold a doctorate degree in Physics or related scientific area and a scientific and professional curriculum whose profile is suited for the activity to be performed can submit their applications. In the event the doctorate degree was awarded by a foreign higher education institution, the degree must comply with the provisions of Decree-Law no. 341/2007 of 12th October.

9. General tender admission requirements are specified in the previous section.

10. Pursuant to article 5 of RJEC, selection is to be made based on the evaluation of the scientific and curricular career of the candidates whose application is considered admissible.

11. Scientific and curricular career evaluation focuses on the last five years taking into account the relevance and quality of:

- a) scientific and technological production deemed most relevant by the candidate;
- b) research activities, experimental and applied work deemed most impactful by the candidate;
- c) knowledge extension and dissemination activities, namely under the scope of the promotion of culture and scientific practices, deemed most relevant by the candidate;

The five-year period mentioned above can be extended by the panel, if requested by the candidate, whenever the suspension of scientific activities is reasoned by socially protected grounds, like paternity leave, long-term serious illness, and other legal situations of unavailability to work.

12 . Evaluation criteria are the following:

Evaluation of the CV of the candidates, namely their scientific merit and research capabilities as demonstrated by the diffusion of the scientific results achieved and by the participation in research projects in scientific fields relevant for the proposed work program.

Each member of the panel will value the criteria for each candidate, taking into account the requirements of the duties to be performed, the adequacy of previous experience, his/her relationship to the relevant areas and sub-areas.

The selection method will consider: candidate's curriculum vitae and its relevance to the needs of the research project (80%) and recommendation letters (20%).

13 . The panel shall deliberate by means of roll-call vote justified under adopted and disclosed selection criteria, with no abstentions allowed.

14 . Minutes of panel meetings shall be executed and shall include a summary of all occurrences of said meeting, as well as of all votes casted by the members and respective reasoning, and shall be provided to candidates whenever required.

15. After selection criteria application, the panel shall prepare a sorted list of approved candidates and respective classification.

16. Panel's final decision shall be validated by the leader of the institution, who is also in charge of deciding about the hiring. LIP reserves the right to not fill the vacancy open in the present call if no suitable candidate is found.

17 . Application formalization shall be made by sending:

- a) Application letter addressed to the President of LIP including announcement identification, full name, parents' names, ID card or Citizen Card number and date, or civil identification number, taxpayer ID number, date and place of birth, marital status, occupation, residence and contact address, including email address and telephone;
- b) Motivation letter;
- c) Detailed Curriculum Vitae;
- d) Certificate or diploma - copy. Recognition of foreign diploma should also be delivered, if applicable;
- e) Two recommendation letters.
- f) Other documentation relevant for the evaluation of qualifications in a related scientific area.

Candidates shall submit their application files and supporting documentation, in a digital form, in PDF format, via email to [bolsas@coimbra.lip.pt](mailto:bolsas@coimbra.lip.pt). The call is open up to October 31, 2019, 17:00

(Lisbon time).

18. All candidates who formalise their applications in an improper way or fail to prove the requirements imposed by this tender are excluded from admission. In case of doubt, the panel is entitled to request any candidate to present further documentation supporting his/her statements.

19. False statements provided by the candidates shall be punished by law.

20. Both admitted and excluded candidate list and final classification list shall be published in the website of LIP: <http://www.lip.pt> and all candidates shall be notified by email with delivery receipt.

21. Preliminary Hearing and Final Decision Deadline: Pursuant to article 121 of the Administrative Procedure Code, after notified, all candidates have 10 working days to respond. Panel's final decisions are pronounced within a period of 90 days, from application deadline.

22. This tender is exclusively destined to fill the vacancy and can be terminated at any time until approval of final candidate list, expiring with the respective occupation of said vacancy.

23. 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.

24. The panel has initially approved the announcement in a meeting held on January 7, 2019, and its present (corrected) version on October 15, 2019.

25. Pursuant to Decree-Law no. 29/2001 of 3 February, disabled candidates shall be preferred in a situation of equal classification, and said preference supersedes any legal preferences. Candidates must declare, on their honour, their respective disability degree, type of disability and communication/expression means to be used during selection period on their application form, under the regulations above.

**Vacant posts: 1**

**Type of contract:** Information not available

**Job country:** Portugal

**Job city:** Coimbra

**Job company/institute:** LIP-Coimbra

**Application deadline:** 31 Outubro 2019

*(The Application's deadline must be confirmed on the Job Description)*

[↑ Top of page](#)

**2. Dados de contactos da organização**  
**2. Organization contact data**

**Organization/institute:** Laboratório de Instrumentação e Física Experimental de Partículas - LIP - Delegação de Coimbra

**Address:**  
Universidade de Coimbra  
Coimbra - 3004-516 Coimbra  
Portugal

**Email:** [seclip@coimbra.lip.pt](mailto:seclip@coimbra.lip.pt)

**Website:** *not available*

[↑ Top of page](#)

**3. Habilitações académicas**  
**3. Required education Level**

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<b>Degree:</b>	PhD
<b>Degree field:</b>	Physics

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[↑ Top of page](#)

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#### **4. Línguas exigidas**

#### **4. Required languages**

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<b>Language:</b>	English
<b>Priority:</b>	High
<b>Reading:</b>	n/a
<b>Writing:</b>	n/a
<b>Comprehension:</b>	n/a
<b>Conversation:</b>	n/a

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[↑ Top of page](#)

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#### **5. Experiência exigida em investigação**

#### **5. Required research experience**

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[↑ Top of page](#)