

ANNOUNCEMENT FOR THE AWARD OF A RESEARCH FELLOWSHIP

Research Scholarship for Masters enrolled in a non-degree course - 1 vacancy

Call reference: 09/ECUM/CFUM/2025 -CF-UM-UP

A call is open for the award of a Master's scholarship within the scope of ongoing research activities, in the Strategic Research Line n° 3: "Functional and smart materials and surfaces for advanced applications", of the R&D project UID/04650: Physics Center of the Universities of Minho and Porto (CF-UM-UP), through the measure Strategic Projects promoted by R&D Units and Associated Laboratories, funded by national funds through the Foundation for Science and Technology (FCT) by State Budget, under the following conditions:

Scientific Area: Physics, Engineering Physics, Materials Engineering

Category of recipients: Masters Enrolled in a Non-Degree Course

Scholarship Requirements:

- Candidates may apply without prior registration in the course for which the scholarship is open. The requirement of enrollment in a non-degree course will be verified on the date of contracting the scholarship.
- Only scholarships whose selected candidates present valid proof of enrollment in the non-degree course, according to the type of scholarship in competition, will be contracted, respectively with the indication of the current academic year or its duration (beginning and end).

Profile:

The following may apply for this call:

- National citizens or citizens of other Member States of the European Union;
- Third-country nationals;
- Stateless persons;
- Citizens benefiting from political refugee status.

Candidate Admissibility Requirements:

- a) academic qualifications in scientific areas; possible experience in research;*
- b) not to benefit from a non-degree-conferring research grant for an accumulated period of 2 consecutive or interpolated years;*
- c) requirements in the contracting phase, proof of academic qualifications completed by the deadline for applications, including those resulting from academic degree recognition processes*

Application eligibility requirements:

It is indispensable, under penalty of not being admitted to the Competition, to attach the following documents to the application:

- Curriculum vitae of the candidate;
- Certificates of qualification of the academic degrees obtained or, if applicable, the candidate's declaration of honour that he/she has completed the degrees required in the notice by the end of the application deadline;
- For degrees obtained abroad, the record of recognition of the academic degrees and record of the conversion of the respective final classification to the Portuguese classification scale must be presented, or, alternatively, a declaration of honour by the candidate.

Eligibility of candidates: Candidates must meet the eligibility conditions provided for in article 9 of the FCT I.P Research Grants Regulation (2019).

Work plan and objectives to be achieved:

Binary oxide heterostructures for ionic computation.

This project consists of the development of a new ion computing device, called an electrochemical ionic synapse (EIS). An EIS consists of three main functional layers: reservoir, electrolyte, and channel. In this sense, devices based on $\text{CeO}_2/\text{HfO}_2$ heterostructures will be manufactured and optimized with a view to their implementation as EIS. The manufacturing conditions as well as heat treatment will be optimized to optimize the memory properties.

Objectives:

1. Production of $\text{CeO}_2/\text{HfO}_2$ heterostructures through the laser ablation technique.
2. Structural characterization by X-ray diffraction (XRD).
3. Morphological characterization of the samples produced.
4. Electrical and ferroelectric characterization.

Applicable legislation and regulations: Research Grant Holder Statute (EBI), approved by Law No. 40/2004 of 18 August, in the current wording published by Decree-Law No. 123/2019 of 28 August; Regulation of Research Grants of the University of Minho, published in Diário da República, 2nd series, No. 119, Order No. 6524/2020 of 22-06-2020, rectified through Declaration of Rectification No. 447/2021 of 22-06-2021 and Regulation of Research Grants, No. 950/2019 of 16-12-2019, of the Foundation for Science and Technology, I.P. - in force.

Host/contracting entity and scientific supervision: The work plan will be developed at the Physics Center of the University of Minho, School of Sciences, located in Gualtar, Braga, under the scientific guidance of Professor Mário António Caixeiro Castro Pereira.

Duration of the scholarship(s): The scholarship will last for six months, starting in April 2025. The scholarship is not renewable.

Value of the monthly maintenance allowance: The amount of the SMM corresponds to € 1,309.64/month, according to the table of values of the FCT, I.P. grants in the country (Annex I – Table of monthly maintenance allowances of the Regulation of Research Grants of FCT I.P.) and Annex II of the Regulation of Research Grants of the University of Minho, published in Diário da República, 2nd series, No. 119, Order No. 6524/2020 of 22-06-2020, rectified by Declaration of Rectification No. 447/2021 of 22-06-2021, according to the applicable regulation.

Payment is made by the 23rd of each month, by transfer to the NIB of the scholarship holder indicated in the contracting process.

Other benefits: Reimbursement of Voluntary Social Security, corresponding to the 1st Bracket of the contribution base (*for scholarships with a duration equal to or greater than 6 months*) and Personal Accident Insurance.

Exclusivity regime: The performance of functions as a grant holder is exercised on an exclusive basis, under the terms provided for in article 5 of the Research Grant Holder Statute and applicable research grant regulations.

Composition of the Selection Jury

President: Maria de Fátima Guimarães Cerqueira, Assistant Professor in the Department of Physics, School of Sciences, University of Minho.

Effective members: Stanislav Lazarov Ferdov, Assistant Researcher at the Physics Center, School of Sciences, University of Minho, and Cláudia de Jesus Ribeiro Lopes, Assistant Researcher at the Department of Physics, School of Sciences, University of Minho.

Substitutes members: Luís Manuel Fernandes Rebouta, Associate Professor in the Department of Physics, School of Sciences, University of Minho, and Maria José Bastos Pires Lima, Senior Researcher at the Physics Center, School of Sciences, University of Minho.

In case of impediment of the President of the Jury, he will be replaced by the first effective member, and the alternate member will be appointed to replace the effective member.

Evaluation and selection criteria and procedures: The evaluation of applications will focus on the candidate's merit, applying the following evaluation criteria, valued on a scale of 1 to 5 (or other scale):

Candidate's merit - MC (100%):

- a) Academic path (which reflects the grades of the academic degrees), with a weighting of 50%
- b) Personal curriculum (which reflects the scientific and professional path), with a weighting of 40%
- c) Motivation letter, with a weighting of 10%.

The final classification of the candidate's merit will be obtained by applying the following formula:

$$MC=(a*0.5) +(b*0.4) +(c*0.1)$$

Documents proving the ownership of academic degrees and diplomas, or their recognition when they have been awarded by foreign higher education institutions, may be waived at the application stage, being replaced by a

declaration of honour by the candidate, and this condition will only be verified at the stage of contracting the scholarship. This declaration must attest to facts that occurred on a date prior to the application. In situations of divergence between the information contained in the declaration and the documentation delivered for the purpose of contracting a scholarship, only the information contained in the latter will be considered. If it is found that the documents proving the ownership of the academic degree and diploma, or the respective recognition under the terms of Decree-Law No. 66/2018, of 16 August, do not correspond to the classifications awarded in the evaluation of the academic path and may, consequently, change the candidate's ranking, the contracting of the scholarship will not be effective.

Note: Candidates with degrees obtained abroad must present proof of recognition of qualifications in Portugal and conversion of the final classification obtained in them to the Portuguese classification scale or declaration under the terms indicated in the previous point. Candidates who do not comply with one of these provisions, the jury will assign a classification of "0" in the grade of the bachelor's and/or master's course. Candidates will be evaluated on the remaining parameters.

Dissemination of results: The draft results of the evaluation, based on minutes, will be sent to the candidates by e-mail, under the terms of article 12 of the FCT RBI (FCT funding) | article 13 UMinho RBIC (other funding subject to the UMinho regulation).

If the result is unfavorable to the granting of the requested scholarship, the candidates have a period of 10 working days to make their opinion, if they wish, in a prior hearing to the interested parties, under the terms of articles 121 and 122 of the Code of Administrative Procedure (DL No. 4/2015 of January 7).

(The exemption from the hearing of the interested parties must be justified under the terms of article 124 of the CPA)

Complaint and appeal procedures: The results of the evaluation will be published through an ordered list (*alphabetically, by final grade obtained*), posted in a visible and public place of the Reception Unit, as well as by email to all candidates, attaching, for this purpose, the minutes with the jury's deliberations.

The selected candidate must express in writing the intention to accept the scholarship. In case of non-acceptance, the scholarship will be awarded to the candidate in order of final ranking.

A complaint may be lodged against the final decision, within 15 working days, addressed to the President of the Jury. Interested parties may also submit an optional hierarchical appeal, under the terms of paragraph 2 of article 15 of the UBIC of UMinho, addressed to the Pro-Rector with delegation of powers in this area.

Constitution of the selection reserve list: Candidates ranked in the following positions on the final ranking list of the competition are included in the selection reserve list, which can be used until 31/09/2025.

Application deadline and form of submission of applications: The call is open within 10 working days, counted from the date of publication of the notice on the Euraxess portal

Applications must be formalized by sending an application letter accompanied by the following documents: *curriculum vitae; certificate of qualifications or declaration of the candidate; motivation letter; declaration proving that the conditions for the type of scholarship are met, in accordance with the application requirements; other documents that are relevant to the evaluation process*).

Applications must be sent by email to bolsas@ecum.uminho.pt, indicating the reference of the call in Subject **09/ECUM/CFUM/2025 -CF-UM-UP**. Applications sent by other means will not be accepted.

Contracting of the scholarship: The granting of the scholarship is carried out through the signing of a contract between the University of Minho and the scholarship holder, in accordance with the draft contract (annex IV of the Regulation of Scientific Research Scholarships of the University of Minho – order no. 6524/2020 of 22-06-2020, rectified through declaration of rectification no. 447/2021 of 22-06-2021) in its updated version in accordance with point 2.4 of the "[Rules for the Attribution and Management of Grants within the scope of R&D Projects, including infrastructure projects, the multiannual funding program of R&D units and other FCT funding instruments \(Version 2021\)](#)".

The contract can only be concluded after receipt of all the required documentation depending on the type of scholarship, which must occur within a maximum period of 6 months, including proof of ownership of academic degrees or diplomas and enrollment in study cycles or non-degree courses, depending on the type of scholarship

After receiving all the documentation, the contracting entity has a period of 60 working days to conclude the scholarship contract [in scholarship contracts under UMinho's RBIC, the deadline is 15 working days, under the terms of paragraph 2 of article 15]. Once received by the scholarship holder, he must return the contract duly signed within 15 working days.

Grant contracts can only start after due authorization from the contracting entity.

Termination and cancellation of grant contracts: Without prejudice to the other causes provided for in the applicable grant regulations (FCT and UMinho) and in the Research Grant Holder Statute, the grant terminates with the conclusion of the contracted work plan, as well as with the end of the period for which it was awarded or renewed.

At the end of the fellowship, the grant holder is obliged to present the Final Report of the work carried out, in accordance with the objectives and evaluation criteria defined with the scientific advisor, within 30 days after the end of the fellowship.

The **final report** must be prepared in accordance with Annex I of the Regulation of Scientific Research Grants of the University of Minho – order no. 6524/2020 of 22-06-2020, rectified through declaration of rectification no. 447/2021 of 22-06-2021

Declaration of Honor Education

I, (full name), candidate for the vacancy for the award of a (type of scholarship), within the scope of the project (name or reference of the project), published on the Euraxess portal, with the reference (ref. notice), declare under oath that I have completed the academic degree of (academic degree), qualifying for the type of scholarship in competition, namely the course (designation), by the (University conferring the degree), on the date XX/XX/XXXX, with a final average of XXXXX values on the YY scale.

As it is not possible for me to present proof of qualifications until the end of the competition, I declare that I undertake to present the aforementioned certificate at the conclusion of the scholarship contract, in the event that I am selected for the vacancy in the competition.

Because it is true, this statement will be dated and signed by me.

(Local), (data).

(full name)

NOTE: The declaration can only attest to facts that occurred before the application.

In case of discrepancy between the information contained in the declaration and the documentation submitted for the purpose of contracting the fellowship, only the information contained in the latter will be taken into account.

Declaration of Honor

I, (full name), bearer of identification document number (XXXX), candidate for the vacancy for a research grant (type of grant), within the scope of the project (name or reference of the project), published on the Euraxess portal, with the reference (ref. notice), declare under oath that (I do not enjoy any research grant so far/ enjoy the following research grants) under the Research Grant Holder Status.

Because it is true, this statement will be dated and signed by me.

(Local), (data).

(full name)