

DRAFT ANNOUNCEMENT FOR THE AWARD OF A RESEARCH FELLOWSHIP

Title: Research Fellowship; 1 vacancy

Reference: 04/ECUM/CFUM/2025 - CORTE-2DM

A call for applications is now open for the attribution of 1 grant within the scope of the R&D project “Charge-to-Orbital Transduction Engineering in Two-Dimensional Materials”/ Physics Center of the Universities of Minho and Porto, reference 2023.11755.PEX, financed by national funds through Foundation for Science and Technology (FCT, IP),), under the following conditions:

Scientific Area: Physics and Physical Engineering

Recipient category: Research grant (BI) a intended for R&D activities by students enrolled in an integrated master's degree.

Requirement for granting the fellowship:

- The applicants may apply without prior registration in the course for which the fellowship is open. The requirement to enroll in a degree course academic course will be verified on the date of contracting the fellowship;
- Only fellowships whose selected applicants present a valid proof of enrollment in a degree course academic will be contracted, according to the type of the fellowship, indicating, respectively, the academic year or its duration (star and term).

Profile:

The following are eligible to apply for this competition:

- Nationals or citizens of other member states of the European Union;
- Citizens of third countries;
- Stateless persons;
- Citizens with political refugee status

Candidate admissibility requirements:

- a) Bachelor's degree in Physics or Physical Engineering, with prior experience in the theoretical physics of condensed matter.
- b) At the contractualization stage, it is required to be enrolled in a master's program.
- c) Preferential factors: Preference will be given to those with prior experience in quantum transport calculations and optical properties in low-dimensional systems.

Admissibility requirements:

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

- The candidate's curriculum vitae;
- Certificates of the academic degrees obtained or, if applicable, the candidate's declaration of honor that he/she has completed the degrees required in the notice by 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, the candidate's declaration of honor

Applicants eligibility: Applicants must comply with the eligibility conditions laid down in article 9 of the Research Grants Regulation of the Portuguese Foundation for Science and Technology (2019).

Workplan and objectives to be achieved:

1. Investigation of the spectrum of two-dimensional materials such as graphene and transition metal dichalcogenides.
2. Investigation of the orbital magnetic moment and the orbital Hall effect in these systems.
3. Investigation of the exciton spectrum in monolayers of transition metal dichalcogenides.
4. Investigation of the effect of excitons on the frequency-dependent orbital Hall effect in these systems.

A solid understanding of the physics of out-of-equilibrium orbital angular momentum in 2D materials is expected, along with the production of a written report and the publication of one scientific article.

Applicable legislation and regulations: Research Fellowship Holder Statutes, approved by Law n° 40/2004 of August 18, in its current version published by Decree-Law n° 123/2019 of August 28; Regulation of Scientific Research Fellowships of the University of Minho (RBIC), published in “Diário da República”, 2nd serie, n° 119, through dispatch n° 6524/2020 of 22-06-2020, ratified by ratification declaration n° 447/2021 of 22-06-2021 and Regulation of Research Studentships and Fellowships (RBI) of the Foundation for Science and Technology, I.P. - in force.

Host/Contracting institution and scientific supervision: The workplan will be carried out at the Physics Center of the Universities of Minho and Porto, in the School of Sciences at the University of Minho, under the scientific supervision of Professor Nuno Miguel Machado Reis Peres (University of Minho).

Fellowship duration: The grant will take place for a period of 12 months, with a provisional starting date on May of 2025. The fellowship grant may eventually be renewed, depending on the project status and applicable legislation.

Amount of the research grant: The value stipend (Monthly Maintenance Allowance) is 1.040,98 euros/per month, in accordance with the stipends values published by the Foundation for Science and Technology (FCT I.P.) in the country (Annex I – Monthly Stipends Values for the maintenance allowances of the [FCT Regulation for](#)

[Research Studentships and Fellowships](#)) and Annex II of the Regulation of Scientific Research Fellowships of the University of Minho (RBIC), published in “Diário da República”, 2nd serie, n° 119, through dispatch n° 6524/2020 of 22-06-2020, ratified by ratification declaration n° 447/2021 of 22-06-2021, according to the applicable regulation.

Payment is made on the 23st of each month, through bank transfer to the Bank Identification Number of the fellow identified in the contractualization process.

Other components of the research grant: (define the other components of the research grants, in accordance with the n° 5 of the article 18° of the FCT Regulation for Research Studentships and Fellowships, n° 950/2019 of 16-12-2019 or article 21° of the Regulation of Research Fellowships of the University of Minho (RBIC), accordingly with the regulations applicable).

Other benefits: Reimbursement of Voluntary Social Security (Social Security contributions), corresponding to the 1st level of discounts and personal accident insurance.

Exclusivity regime: The grantee will perform the activities under exclusivity, as foreseen in article 5° of the Research Fellow Statutes and applicable regulations.

Selection panel:

President of the Jury: Nuno Miguel Machado Reis Peres, Full Professor in the Department of Physics at the School of Sciences, University of Minho.

Effective Members: Tatiana Gabriela Rappoport, Principal Researcher at the Physics Center of the University of Minho, and Antonio Tavares da Costa Junior, Associate Professor in the Department of Physics at the School of Sciences, University of Minho.

Substitute Members: Dr. Yuliy Bludov, Researcher in the Department of Physics at the School of Sciences, University of Minho, and Mikhail Igorevich Vasilevskiy, Full Professor in the Department of Physics at the School of Sciences, University of Minho.

The first effective member will substitute the President of the selection panel in case of impediment, being nominate the first substitute member in the place of the first effective member.

Criteria and procedures for applications assessment and selection: The applications assessment will focus on the candidate's Merit, following evaluation criteria, valued on a scale of 1 to 5 values (or another scale):

Applicant Merit - AM (100%):

- a) Academic path (considering the classifications of academic degrees), with a weighting of 50%;
- b) Personal curriculum (considering professional and scientific background), with a weighting of 40%
- c) Motivation letter, with a weighting of 10%.

The final classification of the applicant's merit with the achieved through the following formula:

$$MC=(a*0,5)+(b*0,4)+(c*0,1)$$

The academic degrees and diplomas documents, or their respective recognition when awarded by foreign higher education institutions are not mandatory in the application phase, being replaced by a declaration of honor of the candidate with the contents of academic results. The documents of academic qualification or respective recognition

will be required in the contracting phase and must attest facts that occurred on a date prior to the application. In situations of divergence between the information contained in the declaration and the documentation submitted for contracting the grant, only the information contained in the latter will be considered. If 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 August 16, do not correspond to the classifications awarded in the evaluation of the academic path, which can change the candidate's ranking, the fellowship won't be contracted.

Notes: Applicants 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 selection panel will assign "0" in the grade of the graduation and/or master course. Candidates will be evaluated on the remaining parameters.

Disclosure of results: The evaluation results project, based in the selection panel minutes, will be sent to the applicants by email, in accordance with article 12 of the FCT's RBI (FCT funding) | article 13 of UMinho's RBIC (other funding subject to UMinho regulations).

If case of unfavourable results, the candidates have a period of 10 working days to comment, if desired, in a prior hearing to interested parties, pursuant to articles 121 and 122 of the Code of Administrative Procedure (DL n° 4 / 2015 of January 7th).

Complaint and appeal procedures: The final 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 host unit, as well as by email to all applicants, enclosing for that purpose, the minutes of the jury deliberations.

The selected candidate must inform its willingness to accept the grant, in writing. In case of rejection, the fellowship will be awarded to the next candidate in the ordered list of applicants.

The final decision can be contested within 15 working days, by sending to the President of the jury the corresponding claim. Interested parties may also submit an optional hierarchical appeal, addressed to the Pro-Rector with delegated competences in this area.

Constitution of a selection reserve list: The applicants ranked in the next positions on the ordered list will be included in a selection reserve list, which can be used until 30/11/2025

Application deadline and submission: The call for applications is open for a period of 10 working days from the date of publication on the Euraxess portal.

Applications must be formalized by sending an application letter with the following documents: curriculum vitae; qualifications certificate or declaration of the applicant; motivation letter; statement proving that meets the conditions for the grant typology, according to the application requirements; other documents important to the evaluation process).

Applications must be sent by email to bolsas@ecum.uminho.pt, indicating the reference of the call for applications in Subject **04/ECUM/CFUM/2025 - CORTE-2DM**. Applications submitted by other means will not be accepted.

Fellowship contractualization: The fellowship will be attributed by signing a fellowship contract between the University of Minho and the fellow, accordingly with the contract minute (annex IV of the Regulation of Research Fellowships of the University of Minho (RBIC), published in *Diário da República, 2nd Série, n° 119*, through dispatch n° 6524/2020 of 22-06-2020, ratified by ratification declaration n° 447/2021 of 22-06-2021, as indicated in 2.4

of the FCT document: “[Rules for Granting and Management of Grants within the scope of R&D projects, including infrastructure projects, the multi-annual financing program for R&D units and other FCT financing instruments \(Version 2021\)](#)”.

The contract may only be concluded after all the documentation required is collected, which must take place within a maximum period of 6 months [including evidences of the academic degrees or diplomas and enrolment in degree courses or non-conferring courses, depending on the type of scholarship].

Once all the documentation has been received, the contracting entity has a period of 60 working days to conclude the scholarship contract (in the case of scholarship contracts under UMinho's RBIC, the deadline is 15 working days, under the terms of n^o2 of Article 15^o). Once received, the fellow must return the contract duly signed within 15 working days.

The activities under the fellowship contract can only began after proper authorization by the contracting entity.

Term and cancellation of fellowship contracts: Without prejudice to the other causes provided the fellowship regulations (FCT and UMinho) and in the Statute of the Research Fellow, the fellowship ends with the completion of the work plan, as well as with the expiration date for which it was granted or renewed.

At the end of the fellowship, the grantee is obliged to present a 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 scholarship.

The **final report** must be prepared in accordance with Annex I of the Scientific Research Fellowships Regulation of the University of Minho (RBIC), published in *Diário da República, 2nd Série, n^o 119*, through dispatch n^o 6524/2020 of 22-06-2020, ratified by ratification declaration n^o 447/2021 of 22-06-2021.

Note: The information above required should be submitted in the Euraxess Portal, in the fields reserved for those purposes.

Declaration of Honor

Academic qualifications

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 on my honor that I have completed the academic degree of (academic degree), qualifying for the type of scholarship in the 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.

As this is true, I hereby date and sign this declaration.

(Place), (date).

(full name)

NOTE: The declaration may only attest to facts that occurred prior to the application.

In the event of a discrepancy between the information contained in the declaration and the documentation submitted for the purpose of contracting the scholarship, 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 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. call for proposals), declare on my honor that (I have not received any research grants to date / I have received the following research grants) under the Research Grant Holder Statute.

As this is true, I hereby date and sign this declaration.

(Place), (date).

(full name)