ANNOUNCEMENT FOR THE AWARD OF A RESEARCH FELLOWSHIP

Title: Master's Research Grant - Photofarm (1 vacancy)

Reference: PHOTOFARM - 02719000 - BI – 03/2026 CMEMS (1)

A call for applications is now open for the attribution of one (1) research grant within the scope of the I&D project **"Photofarm - Photonic Systems for Agriculture: towards healthy soils and smart and sustainable agriculture"**, operation code NORTE2030-FEDER-02719000, Notice NORTE2030-2024-84 SACCCT - Support System for the Creation of Scientific and Technological Knowledge - Integrated IC&DT Projects, financed by the **Northern Regional Coordination and Development Commission | CCDR-N** through the Northern Regional Operational Program 2021-2027 | NORTE2030, under the following conditions:

Scientific Area: Mechanical Engineering.

Recipient category: The scholarship is intended for Masters students in Mechanical Engineering, Materials Engineering, Biomedical Engineering, or related fields.

Identify the type(s) of scholarship to be awarded:

a) **Degree courses:** The research grant (BI) is intended for I&D activities carried out by students enrolled in a doctoral program..
b) **Non-conferring degrees courses:** They can also be used for R&D activities by masters students enrolled in non-degree-granting courses integrated into the pedagogical project of a higher education institution.

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 or non-academic degree 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 or non-academic degree course will be contracted, according to the type of the fellowship, issued by a Higher Education Institution, indicating, respectively, the academic year or its duration (star and term).

Applicants' eligibility: Candidates who meet the conditions set out in Article 9 of the Research Grant Regulations, No. 950/2019, of 16-12-2019, of FCT I.P. are eligible.

Nationals or citizens of other European Union member states, third-country nationals, stateless persons, and citizens with political refugee status are eligible to apply for this competition.

Candidate eligibility requirements:

Candidates must hold a Master's degree in Mechanical Engineering, Materials Engineering, Biomedical Engineering, or related fields at the time of application. Proof of completed academic qualifications within the application period is required for hiring, including those resulting from academic degree recognition processes;

Preferred Requirements: clear demonstration of skills in the use of ultrasound vibrations, electrical stimuli, materials analysis and characterization; experience in 3D printing of metal powders using SLM.

Workplan and objectives to be achieved:

The work plan consists of the following phases/tasks:

a) Design of components for ultrasonic and electrical stimulation of plants, including the use of stainless steel, titanium, and copper;

b) Calibration of the vibration and electrical stimulation system in different media, soil, and humidity;

c) Analysis of the effect of vibration and electrical stimulation on plant development and characterization of materials, interfaces, grains, and plants.

The objectives to be achieved are: design and development of vibration and electrical devices, calibration of the same for various media, analysis of the effect of the stimuli on plants; writing an execution report; writing scientific articles.

Note: The work plan should aim at consolidating the scientific training of the research fellow in the framework of the course conferring a degree or academic diploma.

Applicable legislation and regulations: Research Fellow Statute (EBI), approved by Law nº. 40/2004 of August 18, in its current wording and FCT Research Fellowship Regulation, approved by Regulation nº 950/2019, published in the Diário da República, 2nd series, of December 16, 2019, in its current wording, and Scientific Research Fellowship Regulation (RBIC) of the University of Minho, approved by order nº 4998/2025, published in the Diário da República, 2nd series, nº 81, of April 28, 2025 Amended and republished through amendment statement no. 634/2025/2, published in the Official Gazette, 2nd series, no. 132, of July 11.

Host/Contracting institution and scientific supervision: The work plan will be developed at the Center for Electromechanical Microsystems (CMEMS) of the University of Minho, located on the Azurém Campus, Guimarães, or Vale S. Cosme, Famalicão, under the scientific guidance of Professor Filipe Samuel Correia Pereira da Silva, and coordinated by Professor Luís Miguel Valente Gonçalves.

Fellowship duration: The scholarship will have a duration of 12 months, with a planned start date in January 2027. The scholarship may eventually be renewed up to the maximum limit permitted by the project and/or applicable legislation.

Amount of the research grant: The scholarship amount corresponds to €1,359.64/month, according to the FCT scholarship value table in Portugal (http://www.fct.pt/apoios/bolsas/valores) and the University of Minho's Scientific Research Scholarship value table, updated annually by decision of the Management Board.

Payment is made by the 23rd of each month, via transfer to the scholarship holder's bank account number indicated in the contracting process.

Other components of the research grant: Define other components of the scholarships, as provided for in Article 18º of the FCT Research Scholarship Regulations (RBI).

Other benefits: Reimbursement of Voluntary Social Insurance, if the candidate chooses to receive it, corresponding to the 1st level of discounts (for research grants with a total duration 6 months or higher) and personal accident insurance.

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

Selection panel: The selection panel is constituted by the following members:

a) Chairman of the Examining Board: Professor Filipe Samuel Correia Pereira Silva, PhD, Full Professor, Department of Mechanical Engineering, University of Minho;

b) Full Member: Dr. Margarida Maria Macedo Francesko Fernandes, Assistant Researcher, Center for Electromechanical Microsystems (CMEMS-UMinho), University of Minho;

c) Full Member: Dr. Sara Cristina Soares Madeira, Senior Researcher, Center for Electromechanical Microsystems (CMEMS-UMinho), University of Minho;

d) Alternate Member: Dr. Óscar Samuel Novais de Carvalho, Associate Professor, Department of Mechanical Engineering, University of Minho;

e) Alternate Member: Dr. Nuno Miguel Magalhães Dourado, Associate Professor, Department of Mechanical Engineering, 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 evaluation of applications will focus on the candidate's merit, applying the following evaluation criteria, valued on a scale of 1 to 5 points:

Candidate Merit - MC (100%):

a) Education (reflecting academic degree classifications), with a weighting of 45%;

b) Academic and professional curriculum (reflecting their scientific and professional trajectory), with a weighting of 45%;

c) Letter of motivation, with a weight of 10%.

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

MC = (a*0.45) + (b*0.45) + (c*0.10)

A positive evaluation is required for the granting of the scholarship.

Application deadline and submission: The competition is open for a period of 10 working days, counting from the date of publication of the notice on the Euraxess portal.

Applications must be submitted by email to fsamuel@dem.uminho.pt, indicating the reference number of the competition in the subject line. Only applications submitted within the established deadline and accompanied by the following documents will be accepted:

a) Updated curriculum vitae of the candidate;

b) Certificates of qualification for the academic degrees obtained or, if applicable, a declaration of honor from the candidate stating that they completed the degrees required in the call for applications by the end of the application period (not applicable to research initiation scholarships).

For degrees obtained abroad, the registration of recognition of the academic degrees and the registration of the conversion of the respective final classification to the Portuguese classification scale must be presented, or, alternatively, a declaration of honor from the candidate.

This declaration must attest to facts that occurred prior to the application. In situations of 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 considered. If it is found that the documents proving

the academic degree and diploma, or their respective recognition under Decree-Law No. 66/2018, of August 16, do not correspond to the classifications assigned in the evaluation of the academic path and may, consequently, alter the candidate's ranking, the scholarship contract will not be finalized;

c) Letter of motivation.

Form of publication/notification of results: The results of the evaluation are published in a single list (in alphabetical order or by final score obtained), posted in a visible and public place in the host unit, as well as by email to all candidates, attaching, for this purpose, the minutes of the jury's deliberations, within a maximum period of 90 working days from the deadline for submission of applications.

Candidates are informed, at a preliminary hearing, in accordance with Articles 121 and 122 of the Administrative Procedure Code, of the likely outcome of the final decision, and may comment within 10 working days of this notification.

The waiver of the hearing for interested parties must be justified in accordance with Article 124 of the CPA.

An appeal may be lodged against the final decision within 15 working days, or an appeal may be lodged with the highest executive body of the funding entity within 30 days, both after the respective notification (Article 12(n°6) of the FCT Research Grant Regulations).

Within 10 working days of notification of the grant award, the applicant must declare their acceptance in writing. In case of non-acceptance, the next highest ranked applicant will be notified immediately.

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 28/02/2027.

Fellowship contractualization: The scholarship is awarded through the signing of a contract between the University of Minho and the scholarship recipient, in accordance with point 2.4 of the Rules for the Award and Management of Scholarships https://www.fct.pt/wpcontent/uploads/2022/03/Normas_de_Atribuicao_de_Bolsas_2021.pdf and the draft contract in Annex II of the University of Minho's Scientific Research Scholarship Regulations.

The contract can only be signed after receipt of all the documentation required for the type of scholarship, which must occur within a maximum period of 6 months, including proof of academic degrees or diplomas, as well as enrollment in non-degree study cycles or courses, as applicable.

Once all the documentation has been received, the contracting entity has 60 working days to sign the scholarship contract. Once received by the scholarship holder, the contract must be returned, duly signed, within 15 working days.

Term and cancellation of fellowship contracts: Without prejudice to the other grounds laid down in the University of Minho's Scientific Research Scholarship Regulation and in the Research Fellow Statute, the scholarship will cease on completion of the contracted work plan, as well as on expiry of the period for which it was granted or renewed.

The **final report** must be submitted to the scientific advisor, in accordance with the defined objectives and evaluation criteria, no later than 60 working days after the end of the scholarship and must be drawn up in accordance with Annex I of the Regulations of the University of Minho.

Non-discrimination and equal access policy: Universidade do Minho actively promotes a policy of non-discrimination and equal access, so that no candidate may be privileged, benefited, harmed or deprived of any right or exempt from any duty due, namely, to ancestry, age, sex, sexual orientation, marital status, family status, economic situation, education, social origin or condition, genetic heritage, reduced working capacity, disability, chronic illness, nationality, ethnic origin or race, territory of origin, language, religion, political or ideological convictions and trade union membership.

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).

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(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.

University	Financing Entity	Project	Type of Grant	Duration	Start	Term

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

(Place), (date).

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(full name)