

## ANNOUNCEMENT FOR THE OPENING CALL FOR A SCIENTIFIC GRANT

**Title:** *Research Fellowship SmartOs; 1 vacancy*

**Reference:** POCI-01-0247-FEDER-039868\_BI\_03\_2023\_CMEMS

Opening call for the selection of one (1) Research Fellowship, within the scope of the R&D project, of Center for Microelectromechanical Systems (CMEMS-UMinho), “*SmartOs: SMART control of a sTand-alone active Orthotic System*”, POCI-01-0247-FEDER-039868, co-financed by European Regional Development Fund (ERDF) through the Operational Programme Competitiveness and Internationalization (POCI), of PORTUGAL 2020, under the following conditions:

**Scientific Area:** Medical Electronics

**Recipient category:** The research fellowship is intended for:

- candidates with a master’s degree in Biomedical Engineering, Electronics Engineering or similar area enrolled in a PhD program, or enrolled in a non-academic degree course integrated into the educational project of the institution, in the scientific area for which the call is open or related areas. Requirements for granting the fellowship to a master’s degree holder:
  - 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 the academic services of the Higher Education Institution, indicating, respectively, the academic year or its duration (star and term).
  - Enrollment in non-certified courses (without curricular units) will not be considered as proof of enrollment.
- candidates with a bachelor’s degree in Biomedical Engineering, Electronics Engineering or in similar areas and enrolled in a master’s degree course. Requirements for granting the fellowship to a bachelor’s degree holder:
  - The applicants may apply without prior registration in the course for which the fellowship is open. The requirement to enroll in a 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 will be contracted, according to the type of the fellowship, issued by the academic services of the Higher Education Institution, indicating, respectively, the academic year or its duration (star and term).

**Candidates profile:**

- Preference will be given to candidates with a master's degree and only be admitted candidates with a bachelor's degree if there are no candidates with master degree or if the MSc candidates do not have the intended training and/or the professional experience in the scientific area mentioned above. Is required for contractualization, proof of academic qualifications completed at the deadline for applications, including those resulting from academic degree recognition processes;
- Candidates enrolled in non-conferring courses: who have already benefited from a BI for a period of 2 years followed or interpolated, or who exceed this period with this grant, cannot benefit from this scholarship;
- Other requirements: Specialization area in Medical Electronics or Informatics. Clear demonstration of technical-scientific skills in algorithms for human motion analysis; Clear demonstration of technical-scientific skills in analysis and processing of biomechanical and physiological data; relevant experience in collecting human motion data.

**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).

**Work plan and objectives to be achieved:** This workplan aims at the optimization of computational tools for assessing human motion. The workplan will consist in optimizing deep learning neural networks for metabolic cost estimation and their integration into the software architecture of SmartOs, framed into Activity 5. Furthermore, this workplan will include the: (i) support in human motion data collection from healthy and/or pathological subjects; (ii) adaption of existing algorithms of human gait segmentation and spatiotemporal parameters estimation for post-stroke gait. These objectives fall within the scope of Activities 4 and 7. Lastly, the grantee must prepare a scientific article, contributing to the deliverables of Activity 8, as well as a report with the results obtained and technical documentation.

**Hosting unit and scientific supervision:** The work will be performed in the Center for Microelectromechanical Systems (CMEMS-UMinho) | Engineering School of University of Minho, located in the Azurém Campus in Guimarães, under the supervision of Professor Cristina Manuela Peixoto dos Santos.

**Applicable legislation and regulations:** Research Fellowship Holder Statutes, approved by Law n.º 40/2004 of August 18, in its current version published by Decree-Law n.º 123/2019 of August 28; Regulation of Scientific Research Fellowships of the University of Minho (RBIC), published in "Diário da República", 2nd serie, 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 and Regulation of Research Studentships and Fellowships (RBI) of the Foundation for Science and Technology, I.P. - in force.

**Fellowship duration and renewal terms:** The fellowship will have a duration of 03 months, with a provisional starting date in March 2023, no renewable.

**Monthly maintenance allowance amount:** The value stipend (Monthly Maintenance Allowance) is 1144,64 euros, per month, for candidates with master's degree or 875,98 euros, per month, for candidates with bachelor's degree, 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 series, no. 119, through dispatch no. 6524/2020 of 22-06-2020, ratified by ratification declaration no. 447/2021 of 22-06-2021, according to the applicable regulation.

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

**Other benefits:** 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 Committee:**

- President – Doctor Graça Maria Henriques Minas (Associate Professor with Aggregation at the Department of Industrial Electronics of the University of Minho);
- Effective Members – Doctor Luís Miguel Valente Gonçalves (Associate Professor at the Department of Industrial Electronics of the University of Minho) and Doctor Susana Oliveira Catarino (Assistant Researcher at Center for Microelectromechanical Systems of University of Minho);
- Substitute members – Doctor Alexandre Ferreira Silva (Assistant Professor at the Department of Industrial Electronics of the University of Minho) and Doctor Paulo Mateus Mendes (Associate Professor at the Department of Industrial Electronics of the 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.

**Evaluation and selection criteria:** Applicants will be assessed on the basis of the evaluation of their merit (CM), in a scale of 1 to 5 values:

Applicant Merit - AM (100%):

- a) Personal curriculum (considering professional and scientific background), with a weighting of 100%

1. Academic Qualifications (scientific adequacy to the scholarship are valued), with a weighting of 30%;
2. Experience in the characterization techniques to be used, with a weighting of 45%:
  1. relevant experience in algorithms applied for health, 45%;
  2. human motion data analysis and processing, 35%;
  3. experience in human data collection, 10%;
  4. ability to communicate and write in English, 10%.
3. Scientific and Technological Production, with a weighting of 20%: number of articles (SCI) published in the preferred areas indicated above in “Application requirements” (15%); number of articles (SCI) (5%)
4. Motivation letter, with a weighting of 5%: It should describe the scientific relevance for the profile and the goals for its career.

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

$$MC=(a1*0,3)+(a2*0,45)+(a3*0,20)+(a4*0,05)$$

If none of the candidates demonstrate to have a suitable profile for the execution of the work plan, the Jury is entitled to close this call without selecting a candidate.

Positive evaluation is required for the granting of the scholarship.

Documents providing the titularity of academic grades and diplomas, or recognitions obtained in foreign institutions of higher education, may be dispensed during the application period, being substituted by declarations on honor from applicant. The validation of original documents will be made during the hiring phase. The mentioned declarations will refer to facts occurring prior to the application period. In the course of the application period, once the applicant decides to present a declaration on honor as the substitution of degree recognition by a Portuguese higher education institution, for the cases that the recognition of degree has yet in course, the classification attributed to the academic degree won’t be admitted as evidence for the purpose of evaluation of the academic background. In these situations, the jury will assign the minimum classification in such method, according to the defined scale of values. Any data referred in the declaration on honor that is not coincident with the original documentation will not be considered. Only facts contained in the documentation presented by the applicant will be considered for evaluation. In cases where the provided documentation testifying the academic grades obtained by the applicant and diplomas, or corresponding terms established by the law no. 66/2018, from the 16<sup>th</sup> August, do not correspond to the results of the academic record, which will be considered for evaluation in the academic background (referred above in (a)), the human resource service of UMinho will take the decision to suspend the hiring process.

**Disclosure of results:** The provisional results of applications, based in the selection panel minutes, will be send to the applicants by email until 90 working days from the applications deadline.

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 nº. 4 / 2015 of January 7th).

**Complaints and appeal procedure:** The final results will be published as an ordered list (alphabetically, according to the final grade obtained), posted in a visible and public place of the Host Unit, and sent by e-mail to all applicants, attaching for that purpose, the minutes with the jury's deliberations.

The selected candidate should reply in writing the intention to accept the fellowship. In case of non-acceptance, the fellowship will be awarded to the next applicant in the final ranking.

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 addressed to the Pro-Rector for Research and Projects, Professor Sandra Paiva.

**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 May 31<sup>st</sup> 2023.

**Application deadlines and submission of the applications:** This call is open from February 13<sup>th</sup> till February 24<sup>th</sup>, 2023.

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.*

The applications should be sent by e-mail to [secretaria@cmems.uminho.pt](mailto:secretaria@cmems.uminho.pt), referring to the “call for a scientific grant” in the subject field. Applications sent by other means won't be accepted.

The lack of any of the required documents for this application, or shipping to a location other than the one indicated above will imply the application exclusion.

**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.º 119, through dispatch no. 6524/2020 of 22-06-2020, ratified by ratification declaration no. 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. 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.

## Declaration of Honor

### Academic habilitations

(name), applicant to the research fellowship vacancy under the I&D project (title or reference), published in the EURAXESS portal, reference **xxxx**, hereby declares to have a degree on **XXXX** (name of the course), concluded in the University of **XXXX**, on the **XX/XX/XXXX**, with the final grade of **XX**.

I have submit my diploma for recognition in the University of **XXXX**, according to the Decree-Law nº 66/2018 of August 16<sup>th</sup>, concluded In the **XX/XX/XXXX**, with the final grade of **XX**.

I further declare that I undertake to present proof of my diploma recognition obtained under the Portuguese Law, until the date of the conclusion of the fellowship contract, in case of being selected for the vacancy in this competition.

As this is true, this declaration will be dated and signed by me.

(Place), (date).

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(name)

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<sup>1</sup> DGES (Foreign Degrees and Diplomas): <https://www.dges.gov.pt/en/pagina/degree-and-diploma-recognition?plid=1536>; University of Minho: Recognition of foreign degrees and diplomas: <https://www.uminho.pt/EN/education/Pages/recognition-of-foreign-qualifications.aspx>

## Declaration of Honor Requirements Grant Typology

**(name)**, applicant to the research fellowship vacancy under the I&D project (title or reference), published in the Euraxess portal, reference **(fellowship Reference)**, hereby declares that complies with the conditions for the type of scholarship of the referred call, reference above, in accordance with the application requirements, legislation and regulations indicated in the notice.

As this is true, this declaration will be dated and signed by me.

(Place), (date).

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(name)