ANNOUNCEMENT FOR THE AWARD OF A RESEARCH FELLOWSHIP

Title: Research Fellowship; 1 vacancy

Reference: CALG/KPI/BI-2026-02

A call for applications is now open for the attribution of one (1) research grant within the scope of the R&D project "KPI4HOMLean - Hospital Operations Management: a Lean Healthcare Indicators Framework" project nº 16480, reference COMPETE2030-FEDER-00765100, cofinanced by FEDER through Innovation and Digital Transition Thematic Programme (COMPETE 2030) of Portugal 2030, under the terms of the Call MPr-2023-12 (SACCCT - Projetos de IC&DT), managed by The Foundation for Science and Technology, under the following conditions:

Scientific Area: Industrial and Systems Engineering

Recipient category: The open position is for candidates holding a **Bachelor's degree** who, at the time of hiring, can prove enrollment in one of the following courses:

- Master's in the following fields: Industrial Engineering and Management, Engineering and Data Science, Informatics Engineering, Information Systems Engineering and Management.

- Non-degree granting course.

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 (start 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, at the time of application, a Bachelor's degree in Industrial Engineering and Management, Data Engineering and Science, Computer Engineering, Information Systems Engineering and Management, or related fields.

Priority will be given to candidates with consolidated knowledge of:

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- Python programming
- programming for the Android environment

Workplan and objectives to be achieved: The work plan will focus on the following:

- Develop and apply Python routines for process mining and simulation of hospital operations, using libraries such as pm4py and SimPy.
- Process and analyse healthcare data collected through smart wristbands (smartwatches), ensuring data quality and integration with other data sources.
- Contribute to the development of a full-stack platform supporting a digital twin of hospital operations.
- Use artificial intelligence models to predict events and operational indicators in a hospital setting.

This research context and methodological approach is appropriate for consolidating the scholarship recipient's scientific training within the scope of the degree-granting course 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 Corrected and republished through rectification 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 carried out at the ALGORITMI Centre, School of Engineering, University of Minho, located at the Azurém Campus, Guimarães, under the scientific supervision and the coordination of Rui Manuel Sá Pereira Lima, Associate Professor with Habilitation, Department of Production and Systems, School of Engineering, University of Minho.

Fellowship duration: The fellowship will last for 6 months, with a provisional starting date in **January 2027**. The fellowship may be renewed up to the maximum limit allowed by the project and/or applicable legislation.

Amount of the research grant: The amount of the grant corresponds to 1090,98 €/ month, according to the table of FCT grants in the country (https://www.fct.pt/wp-content/uploads/2026/03/Tabela-de-Valores-SMM-2026.pdf) and the table of values of the Scientific Research Scholarships of the University of Minho, updated annually by decision of the Management Board.

Payment is made by the 23rd of each month, by bank transfer to the bank account identified by the fellow during the contracting process.

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:

President: Rui Manuel Sá Pereira Lima, PhD, Associate Professor with Habilitation, Department of Production and Systems, School of Engineering, University of Minho.

Effective member: Rui Manuel Alves da Silva e Sousa, PhD, Associate Professor, Department of Production and Systems, School of Engineering, University of Minho.

Effective member: Ângela Maria Esteves da Silva, PhD, Assistant Professor, Department of Production and Systems, School of Engineering, University of Minho.

Substitute member: Nélson Bruno Martins Marques da Costa, PhD, Assistant Professor with Habilitation, Department of Production and Systems, School of Engineering, University of Minho.

Substitute member: José Dinis de Araújo Carvalho, PhD, Associate Professor with Habilitation, Department of Production and Systems, School of 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 applications assessment will focus on the candidate's Merit, following evaluation criteria, valued on a scale of 0 to 20 values:

A. Merit of the Candidate - MC (100%)

A.1: Academic path, with a weighting of **50%**;

A.1.1: Grades of academic degree, with a weighting of 50%;

A.1.2: Area of training of the course, with a weighting of 50%;

A.2: Personal curriculum, with a weighting of **40%;**

A.2.1: Knowledge of Python programming, with a weighting of 50%;

A.2.2: Knowledge of programming for the Android environment, with a weighting of 50%.

A.3: Motivation letter, with a weighting of **10%**.

The degree field will be evaluated according to the table established in the criteria definition minutes, previously drawn up.

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

$$MC = (A.1 \times 0.50) + (A.2 \times 0.40) + (A.3 \times 0.10)$$

Where:

$$A.1 = (A.1.1 \times 0.50) + (A.1.2 \times 0.50)$$

$$A.2 = (A.2.1 \times 0.50) + (A.2.2 \times 0.50)$$

If the selection panel is unable to reach a decision using method A (MC), it may conduct an interview. In that case, MC will have a weighting of 50%, and candidates ranked in the first 3 positions who obtain a minimum MC score of 9.5 will be admitted to the interview stage. The panel will assess the following subcriteria:

B. Interview – ENT (50%):

B.1: Interpersonal skills: with a weighting of 30%;

B.2: Demonstrated knowledge in the field of the call, particularly programming, with a weighting of 40%;

B.3: Motivation, with a weighting of 10%;

B.4: Communication skills, with a weighting of 20%.

The Interview classification (ENT) will be obtained by applying the following formula:

$$ENT = (B.1 \times 0.30) + (B.2 \times 0.40) + (B.3 \times 0.10) + (B.4 \times 0.20)$$

Final classification formula: The final ranking of candidates who complete the procedure will be expressed on a scale from 0 to 20 values and will result from the weighted arithmetic average of the quantitative classifications obtained in each selection method, according to the following formula:

$$FC = (MC \times 0.50) + (ENT \times 0.50)$$

Candidates who obtain a valuation lower than 9,50 values in any of the selection methods are considered excluded from the final valuation.

The jury reserves the right not to award the research grant if candidates with the appropriate profile are not presented to the competition.

Documents proving academic degrees and diplomas, or their recognition where awarded by foreign higher education institutions, may be waived at the application stage and replaced by the candidate's declaration of honour, with verification taking place at the fellowship contracting stage. This declaration must attest to facts that

occurred before the application. In the event of a discrepancy between the declaration and the documentation submitted for contracting, only the latter will be considered. If the documents proving the academic degree or diploma, or its recognition under Decree-Law No. 66/2018 of August 16, do not correspond to the scores awarded when assessing the academic record and could consequently alter the candidate's ranking, the fellowship contract will not be concluded.

The degree recognition must include the respective conversion of the final classification obtained in the foreign qualification, to the Portuguese classification scale. Candidates who do not comply with these terms, when there is a selection method in which the final grade of the course is indicated as an evaluation criterion, the jury will assign a classification of 0 (zero) values in that component.

In the application stage, when a declaration of honor is presented in replacement of degree recognition by a Portuguese higher education institution, and the degree recognition process has not yet been completed, the indication of the final grade of the academic degree will not be admitted as evidence for evaluation, when there is a selection method in which the final course grade is indicated as an evaluation criterion. Thus, in this situation, or when presenting only a certificate of qualifications from a foreign institution, the jury will assign a classification of 0 (zero) values in the aforementioned selection method.

Application deadline and submission: The call for applications is open from November 23rd till December 9th, 2026.

Applications must be submitted by email to **recrutamento@algoritmi.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) Candidate's updated curriculum vitae;

b) Certificates of the academic degrees obtained or, where applicable, the candidate's declaration of honour confirming completion of the degrees required in the call (requirements and selection criteria) by the application deadline.

c) Motivation letter.

d) Other documents that the candidate considers relevant.

Form of publication/notification of results: The results of the evaluation are published in a single list 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.

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.

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 Fellowships (2021) 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 FCT, I.P. Research Fellowship Regulations and in the Research Fellow Statute, the fellowship will cease upon completion of the contracted work plan or 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).

_____

(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).

_____

(full name)

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