

CALL FOR GRANT APPLICATIONS (AE2025-0469)

INESC TEC is now accepting grant applications to award 1 Research Initiation Grant (BII) on the scope of the project WeFetal

1. GRANT DESCRIPTION

Type of grant: Research Initiation Grant (BII)

General scientific area: COMPUTER SCIENCE

Scientific subarea: Computer Systems

Area of Work: WeFetal3.0: improvement of a new digital health system for clinical studies in pregnant women

Grant duration: 8 months 17 days, starting on 2025-11-14.

Scientific advisor: Duarte Filipe Dias

Workplace: INESC TEC, Porto, Portugal

Maintenance stipend: € 651.12, [according to the table of monthly maintenance stipend for FCT grants](#), paid via bank transfer. Grant holders may be awarded potential supplements, according to a quarterly evaluation process (Articles 19, 21 and 22 of the [Regulations for Grants of INESC TEC](#) and Annex II), up to a maximum limit of 50% of the monthly maintenance stipend.

INESC TEC supports costs with registration, enrolment or tuition fees, during the grant duration, under the terms established in the internal document: "[Payment of Tuition fees to grant holders](#)".

The grant holder will benefit from health insurance, supported by INESC TEC.

2. OBJECTIVES:

The scholarship aims to improve the real-time performance and usability of the WeFetal system for upcoming clinical studies. The student will:

- Understand the system architecture and components.
- Optimize algorithms for robust, real-time fetal movement detection.
- Enhance the interface for intuitive visualization and interaction.
- Integrate and validate algorithms and interface in clinical settings.
- Collaborate with the team, participate and support clinical studies, and produce documentation for validation and scalability.

3. BRIEF PRESENTATION OF THE WORK PROGRAMME AND TRAINING:

WeFetal is a patented wearable system developed at INESC TEC to enable objective, real-time monitoring of fetal movements using a textile pregnancy belt with multiple inertial sensors and a digital health platform. After extensive R&D and early trials, the system now integrates six abdominal sensors and one reference sensor, ensuring reliable detection, localization, and visualization of fetal activity.

Supported by the BIP PROOF 2025/2026 award, upcoming clinical studies will include more than 30 pregnant women. This scholarship focuses on refining the digital health interface and optimizing real-time algorithms to deliver accurate and user-friendly feedback for both clinicians and mothers. The work will involve algorithmic improvements, interface enhancements, and usability testing, contributing to the development of an innovative medical technology at the intersection of engineering, healthcare, and digital innovation.

4. REQUIRED PROFILE:

Admission requirements:

Bachelor's or Master's student in Biomedical Engineering, Computer Engineering or similar
The awarding of the fellowship is dependent on the applicants' enrolment in study cycle or non-award courses of Higher Education Institutions.

Preference factors:

Knowledge of healthcare and signal processing techniques. Experience developing user-friendly interfaces and prior experience in biomedical data collection.

Minimum requirements:

Knowledge of Python programming, as well as the development of algorithms focused on biomedical signal processing.

5. EVALUATION OF APPLICATIONS AND SELECTION PROCESS:

Selection criteria and corresponding valuation: the first phase comprises the Academic Evaluation (AC), based on the criteria referred to in Article 12 of the [Regulations for Grants of INESC TEC](#), while the second phase comprehends the Individual Interview (EI). All factors are evaluated on a scale of 0 to 100, taking into account the applicants' merit, suitability and conformity with the preference factors.

The weight of the AC factors are as follows: Academic Qualifications (FA, 45%), Scientific Publications (PC, 5%), Experience (EX, 25%) and Motivation Letter (CM, 25%).

Candidates who score less than 50 points in the AC average will be considered excluded on absolute merit. The top five candidates approved on absolute merit will be qualified for the individual interview. The Final Grade (CF) is obtained by the weighted average of AC (50%) and EI (50%).

DISABILITY INCENTIVE

Candidates who present a degree of disability equal to or greater than 90% will benefit from an incentive (20) in the score of the CV Assessment.

Candidates who present a degree of disability equal to or greater than 60% and less than 90% will also benefit from an incentive (10) in the score of the CV Assessment.

Said score may, in these cases, exceed 100 points.

Candidates must demonstrate the degree of disability during the application, namely through the submission of the Multi-Purpose Medical Certificate of Disability, issued in accordance with Decree-Law no. 202/96, of October 23 - currently in effect.

Candidates must declare, in the application form, the type of disability used throughout the selection process, in order to proceed with the required adaptations.

The Selection Jury is composed of the following members:

President of the Jury: João Paulo Cunha
Full member: Susana Cristina Rodrigues
Full member: Duarte Carvalho
Substitute member:

Release of results and prior hearing: the results of the selection process, as well as the terms and procedures for prior hearing, will be released to the applicants by email, under the terms referred to in Article 13 of the Regulations for Studentships and Fellowships of INESC TEC.

6. FORMALISATION OF APPLICATIONS:

Application Documents:

1. Motivation letter;
2. Curriculum Vitae (must include the list of previous fellowships, their type, beginning and end dates, funding entities and host institutions);
3. Certificate or diploma degree;
4. Proof of enrollment in a degree awarding study cycle or in a non degree awarding Higher Education program.
 - The proof of enrollment may be presented just during the grant hiring stage.

5. Signed declaration stating not having benefited from any other research fellowship (Article 5, no. 5)
6. Documental evidence to support the country of residence, residence permit or other legally equivalent document, in cases where the applicant is a foreigner or non-resident in Portugal - valid until the beginning of the grant.
7. Other supporting documents relevant to the final assessment.

Failure to deliver the required documents within the 90-day period after the date of the notice of the conditional awarding of the grant implies its cancellation.

Application period: From 2025-10-16 to 2025-10-29

Submission of applications: the application will be formalised by submitting the form available in the *Work With Us* section of INESC TEC website.

7. BINDING LEGISLATION AND REGULATION

The hiring process shall comply with the current legislation regarding the Research Grant Holder Statute, approved by Law no. 40/2004 of August 18, in its current wording, as well as by the [Regulations for Grants of INESC TEC](#) and for [FCT Grants Regulation in force](#).

For more information, please check the [Regulations for Grants of INESC TEC](#) and relevant annexes at www.inesctec.pt/bolsas