CALL FOR GRANT APPLICATIONS
(AE2025-0177)

INESC TEC is now accepting grant applications to award 1 Research Initiation Grant (BII) within the scope of the AI_RBD funded by National Funds through FCT - Portuguese Foundation for Science and Technology, I.P., project reference UID/50014/2023.

1. GRANT DESCRIPTION

Type of grant: Research Initiation Grant (BII)

General scientific area: ENGINEERING

Scientific subarea: Electrical engineering

Area of Work: Bioengineering, Computer Engineering and Computing, Electrical and Computing, Artificial Intelligence and Data Science and related areas

Grant duration: 10 months, starting on 2025-06-01.

Scientific advisor: Daniela Santos

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 AI-RBD (AI-driven video analysis for REM behavior disorder detection) project aims to develop a system based on artificial intelligence (AI) and computer vision for the automatic detection of specific REM Sleep Behavior Disorder (RBD) behaviors in polysomnography (vPSG) videos.

3. BRIEF PRESENTATION OF THE WORK PROGRAMME AND TRAINING:

The fellow to be hired will contribute to the development of artificial intelligence-based solutions for automated analysis of polysomnography (vPSG) videos in the context of the diagnosis of sleep disorders, in particular REM sleep behavior disorder (RBD). The activities to be performed aim to:
1) Annotation and preparation of data for training and validation of machine learning models, ensuring the quality and coherence of the data sets used.
2) Development and implementation of computer vision algorithms for detecting and analyzing specific RBD behaviors in vPSG videos.
3) Integration and testing of solutions in a simulated clinical environment, ensuring the applicability of the models developed in medical practice.
4) Participation in the analysis of results and in the benchmarking of the system against the manual evaluation of experts, aiming to measure gains in precision and efficiency.
5) Contribution to the scientific dissemination of the project, including writing scientific articles, preparing presentations for conferences and supporting the preparation of technical reports.

4. REQUIRED PROFILE:

Admission requirements:

Student in Bioengineering, Computer Engineering and Computing, Electrical and Computing, Artificial Intelligence and Data Science and related areas

The awarding of the fellowship is dependent on the applicants' enrolment in study cycle or non-award courses of Higher Education Institutions.

Preference factors:

Experience in research projects and writing of scientific papers.

Minimum requirements:

Experience in Computer Vision and machine learning.

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, 40%), Scientific Publications (PC, 10%), Experience (EX, 20%) and Motivation Letter (CM, 30%).

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 (80%) and EI (20%).

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: Daniela Santos
Full member: Tânia Pereira
Full member: Ana Filipa Sequeira
Substitute member: Hélder Filipe Oliveira

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.
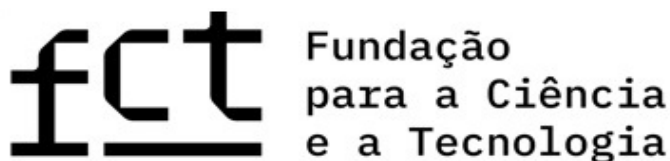
Application period: From 2025-05-02 to 2025-05-15

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