CALL FOR GRANT APPLICATIONS

(AE2026-0129)

INESC TEC is now accepting grant applications to award 1 Research Grant (BI) within the scope of the project SMARTCUTv2, with reference 20684 (COMPETE2030-FEDER-02102500) Co-funded by ERDF - European Regional Development Fund through the Innovation and Digital Transition Thematic Programme (COMPETE 2030) within the scope of Portugal 2030.

1. GRANT DESCRIPTION

Type of grant: Research Grant (BI)

General scientific area: ENGINEERING

Scientific subarea: Electrical engineering

Area of Work: Perception and manipulation systems for forest automation

Grant duration: 10 months 30 days, starting on 2026-07-01, with the possibility of being renewed until the end of the project.

Scientific advisor: Filipe Neves Santos

Workplace: INESC TEC, Porto, Portugal

Maintenance stipend: € 1359.64, **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:

Research and develop advanced perception systems for forest automation, integrating sensors such as LiDAR, RGB-D cameras, and machine vision.

Study and implement sensor fusion algorithms for detection, segmentation, and characterization of vegetation and forest structures.

Develop planning and control methods for manipulation in unstructured forest environments.

Create datasets and artificial intelligence pipelines to support perception and decision-making in forestry tasks such as selective thinning and harvesting.

3. BRIEF PRESENTATION OF THE WORK PROGRAMME AND TRAINING:

As part of the SMARTCUT.v2 project, INESC TEC aims to develop automation solutions for operations in forest environments, including vegetation detection and handling.

The work will focus on developing robust perception systems capable of operating in complex and variable natural

environments, combining data from multiple sensors (3D LiDAR, RGB-D cameras, and monocular vision) with deep learning techniques.

The handling component will also be explored, including motion planning and actuator control for tasks such as selective vegetation thinning and harvesting of non-timber organic matter.

The activities will be developed in a laboratory environment and in real forest scenarios, in collaboration with partner entities from the forestry sector and the project consortium.

4. REQUIRED PROFILE:

Admission requirements:

Master's degree in Electrical Engineering with a focus on Robotics and Automation.
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 robotic perception systems, computer vision, and sensor fusion.

Knowledge of deep learning applied to segmentation/detection in natural environments.

Experience in robotic manipulation in unstructured environments.

Previous experience in forestry or agricultural robotics.

Knowledge of ROS/ROS2 and sensor integration (LiDAR, RGB-D, cameras).

Minimum requirements:
Master's degree in Electrical Engineering with a focus on Robotics and Automation.
Enrollment in a doctoral program.

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, 45%) and Motivation Letter (CM, 5%).
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: Daniel Queirós Silva
Full member: Filipe Neves Santos
Full member: Luís Carlos Santos
Substitute member: André Silva Aguiar

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 the infringement of the grant holder's duties (article 14, no. 4)
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 2026-05-14 to 2026-05-27

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

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