

# CALL FOR GRANT APPLICATIONS (AE2025-0532)

INESC TEC is now accepting grant applications to award 1 Research Initiation Grant (BII) within the scope of the ATE funded by IAPMEI with reference 56 Co-financed by Component 5 - Capitalization and Business Innovation, integrated in the Resilience Dimension of the Recovery and Resilience Plan within the scope of the Recovery and Resilience Mechanism (MRR) of the European Union (EU), framed in the Next Generation EU, for the period 2021 - 2026.

#### 1. GRANT DESCRIPTION

Type of grant: Research Initiation Grant (BII)

General scientific area: ENGINEERING

Scientific subarea: Electrical engineering, Computer engineering

Area of Work: Electrical and Computer Engineering

Grant duration: 6 months, starting on 2026-01-01.

Scientific advisor: Pedro Pascoal

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:

Participate in the development of the three-phase AC electric vehicle charger, focusing on the creation and implementation of the energy metering module (energy meter). The work will involve the conception and validation of hardware and software solutions for precise energy measurement and data communication. In this context, the purpose of this Research Initiation Grant (BII) is:

- Understand the operation and architecture of the institution's charging infrastructure.
- Contribute to the development of energy metering modules.
- Explore and implement software solutions for communicating metering data between devices.
- Design, simulate, and validate the hardware necessary for the three-phase energy metering modules.
- Develop the Printed Circuit Boards (PCB), assemble components, and perform bench and integration tests.
- Contribute to the technical documentation and organization of the project.
- Participate in technical team meetings and integration phases with real hardware.

# 3. BRIEF PRESENTATION OF THE WORK PROGRAMME AND TRAINING:

- Contextualization and study of the existing charging infrastructure documentation.
- Setup and configuration of the work environment (HW and SW) for the development work.
- Study of the communication protocol and related libraries.
- Development of software components for data acquisition, calculation, and processing.
- Development of hardware components for simulation and preliminary validation.
- PCB design, board fabrication, and component soldering for the testing prototype.



- Performance of integration, calibration, and functional validation tests.
- Support in technical documentation and general development and integration activities for the three-phase charger project.

# 4. REQUIRED PROFILE:

# Admission requirements:

Training in Electrical and Computer Engineering

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

#### Preference factors:

- Interest in the topic of electric mobility and electric vehicle charging infrastructure.
- Practical knowledge or familiarity with programming languages such as Python and/or C/C++.
- Practical knowledge or familiarity with electronic circuit design, simulations, and PCB layout.
- Interest and/or experience in electrical variable measurement and acquisition systems, data processing, and device integration.
- Ability to analyze and solve problems in technical, laboratory, and multidisciplinary contexts.
- Proactivity, autonomy, and willingness to learn new technologies in a Research & Development (R&D) environment.

#### Minimum requirements:

- Be enrolled in a higher education program in a higher education program in Electrical Engineering, Electronics Engineering, or related fields.
- Ability to use basic computing tools (spreadsheets, documents, web systems).
- Knowledge in programming languages such as Python and/or C/C++.
- Knowledge in electronic circuit design and simulation.
- · Communication and organizational skills.

# 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, 50%), Scientific Publications (PC, 5%), Experience (EX, 25%) and Motivation Letter (CM, 20%).

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: Justino Miguel Rodrigues

Full member: Ricardo Jorge Bessa





Full member: Cleberton Reiz Substitute member: Manuel Matos

**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)
- 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 2025-11-20 to 2025-12-09

**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





