

CALL FOR GRANT APPLICATIONS

(AE2026-0306)

INESC TEC is now accepting grant applications to award 1 Research Grant (BI) Multiannual Funding of R&D Units 2025-2029, with the reference UID/50014/2025, Funded by national funds through the Portuguese Foundation for Science and Technology (FCT), I.P.

1. GRANT DESCRIPTION

Type of grant: Research Grant (BI)

General scientific area: COMPUTER SCIENCE,ENGINEERING,MATHEMATICS

Scientific subarea: Computer engineering,Electrical engineering,Informatics,Applied mathematics

Area of Work: Energy Systems – Electrical Grid Operation

Grant duration: 8 months, starting on 2026-12-01, with the possibility of being renewed until the end of the project.

Scientific advisor: Gil Silva Sampaio

Workplace: INESC TEC, Porto, Portugal

Maintenance stipend: € 1090.98 or 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:

- Deepen scientific and technical knowledge in the field of assisted operation of electrical distribution grids, with a particular focus on hypervision, human-machine interaction, and intelligent decision-support systems.
- Study methodologies for the simultaneous monitoring and supervision of multiple grids and subsystems, integrating measurements, estimates, forecasts, alarms, flexibility information, and results produced by different grid analysis tools.
- Develop skills in artificial intelligence and agent-based systems applied to the operation of electrical grids, particularly for the orchestration of analytical functions, interpretation of operational information, and generation of recommendations for grid operators.
- Investigate human-in-the-loop decision-support mechanisms, including the prioritization of information and alarms, explainability of recommendations, representation of confidence levels, and exploration of alternative actions by the operator.
- Develop applied research skills through the implementation, integration, and experimental evaluation of the solutions developed, including the critical analysis of results and their scientific dissemination.

3. BRIEF PRESENTATION OF THE WORK PROGRAMME AND TRAINING:



INESC TEC

Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência

Associação privada sem fins lucrativos declarada de utilidade pública

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- Conduct a literature review and critically analyse the state of the art in hypervision, human-machine interfaces, decision-support systems, human-AI interaction, and AI agents applied to the operation of electrical grids.
- Study the functional and information requirements needed for the operational supervision of distribution grids, considering different sources of information, namely measurements, state estimates, forecasts, alarms, operational limits, flexibility availability, and results from analytical tools.
- Develop and enhance an operational cockpit/interface for representing the state of multiple grids, including the visualization of critical conditions, operational indicators, prioritized alarms, forecasts, operating margins, and potential corrective or preventive actions.
- Implement AI-assisted decision-support mechanisms, using AI agents to combine information from different functions, identify relevant situations, prioritize information, and generate interpretable recommendations for the operator.
- Develop human-in-the-loop interaction mechanisms that allow the operator to assess recommendations, consult their rationale and confidence level, request additional information, and explore alternative actions or what-if scenarios before making a decision.
- Critically analyse the results obtained and contribute to the preparation of technical documentation, reports, and scientific publications related to the work carried out.

4. REQUIRED PROFILE:

Admission requirements:

Bachelor's or Master's degree in Electrical and Computer Engineering, Informatics, Computer Science, Applied Mathematics, or related fields.
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 electrical power systems, particularly transmission and distribution networks.
- Knowledge of Python or another programming language relevant to scientific prototyping and software development.
- Knowledge of SCADA, EMS, DMS systems, or grid operation support platforms.
- Fluency in English (written and spoken).

Minimum requirements:

- Advanced knowledge of a programming language (e.g., Python, C++).
- Basic knowledge of data analysis.

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, 20%), Experience (EX, 20%) and Motivation Letter (CM, 10%).

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: Ricardo Jorge Bessa

Full member: Filipe Joel Soares

Full member: Alexandre Lucas

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 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 2026-10-08 to 2026-11-08

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

