

CALL FOR GRANT APPLICATIONS

(AE2026-0293)

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: ENGINEERING, MATHEMATICS, COMPUTER SCIENCE

Scientific subarea: Electrical engineering, Applied mathematics, Computer engineering

Area of Work: Power Systems

Grant duration: 6 months, starting on 2026-12-01, with the possibility of being renewed until the end of the project.

Scientific advisor: Ignacio Gil

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:

- 1) Review and adapt the RECEP methodology to distribution networks. Select benchmark grids, prepare operating scenarios and AC power-flow reference results, and define model inputs, outputs and evaluation metrics.
- 2) Extend the physics-oriented GridFM learning tasks, including power-balance and voltage-related objectives, towards the prediction of voltages, branch flows/loadings, distribution factors and technical violations. Validate the predictions against a conventional AC power-flow solver.
- 3) Couple the RECEP methodology with Monte Carlo scenario generation, including sequential simulation when chronology matters. Use GridFM for fast scenario assessment and estimate nodal hosting capacity under an admissible probability-of-violation threshold.
- 4) Integrate and validate the different components in a prototype, assessing prediction accuracy, violation detection, hosting-capacity error and computational speed-up. Consolidate the code, results and technical documentation.

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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The fellowship aims to develop and validate a probabilistic methodology for hosting-capacity assessment in distribution grids, taking the RECEP approach as a baseline and extending it with Monte Carlo scenario generation and Grid Foundation Models (GridFM). The goal is to accelerate nodal hosting-capacity assessment while preserving AC power-flow consistency and explicitly accounting for uncertainty.

The main objectives of the Fellowship are:

- 1) Adapt and validate the RECEP methodology for distribution grids, including the preparation of benchmark networks, operating scenarios and AC power-flow reference results, as well as the definition of metrics for probabilistic nodal hosting-capacity assessment.
- 2) Develop and integrate new GridFM learning objectives/loss functions, building on the existing power-balance and voltage-related tasks, to learn and predict voltages, branch flows/loadings, distribution factors and technical violations, and use the model as a fast surrogate within the hosting-capacity assessment process.

4. REQUIRED PROFILE:

Admission requirements:

Previous academic background in electrical engineering, energy engineering, applied mathematics, computer science/informatics 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:

- Academic background or experience in electric power systems, network analysis and power flow
- Experience or academic background in machine learning, Graph Neural Networks (GNN)/Grid Foundation Models and/or probabilistic methods and Monte Carlo simulation
- Programming knowledge in Python

Minimum requirements:

Previous academic background in electrical engineering, energy engineering, applied mathematics, computer science/informatics or similar

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 (70%) and EI (30%).

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: Ignacio Gil
Full member: Ricardo Jorge Bessa
Full member: Tiago André Soares
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 2026-10-01 to 2026-10-22

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

