CALL FOR GRANT APPLICATIONS
(AE2026-0008)

INESC TEC is now accepting grant applications to award 1 Research Grant (BI) within the scope of the project CDMS, with reference 17409 (COMPETE2030-FEDER-01193000) 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: COMPUTER SCIENCE

Scientific subarea: Computer Systems

Area of Work: Distributed Systems

Grant duration: 6 months, starting on 2026-02-16, with the possibility of being renewed until the end of the project.

Scientific advisor: Ricardo Gonçalves Macedo

Workplace: INESC TEC, Braga , Portugal

Maintenance stipend: € 1309.64, 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:

This grant is part of the “Claim Denial Management Solution” project, which aims to develop an innovative platform to manage and optimize reimbursement claims with health insurers. The solution will be based on advanced hyper automation and generative artificial intelligence techniques, focusing on efficiency in terms of performance, energy consumption, and accuracy.
Deep learning model training, especially in LLMs, faces critical challenges that compromise the optimal use of GPUs. A frequent bottleneck is the use of remote storage systems, whether in cloud environments or in advanced computing. When this occurs, the remote system becomes overwhelmed with I/O requests, resulting in performance losses and variability. The main goal of this grant is to develop a set of techniques and mechanisms to improve the performance and variability of remote storage systems when subjected to environments with a high number of users. In particular, we aim to explore how to manage, in a scalable and flexible way, the load of requests submitted by hundreds or thousands of concurrent users.

3. BRIEF PRESENTATION OF THE WORK PROGRAMME AND TRAINING:

Responsibilities under the grant:
- Implementation of an orchestrator for storage systems, capable of controlling and adapting I/O workflow between applications and remote storage systems present in distributed infrastructures (e.g., advanced computing);
- Integration and evaluation in large-scale, high-performance experimental environments (i.e., supercomputers).
- Experimental evaluation of the controller with different synthetic and realistic workloads.

4. REQUIRED PROFILE:

Admission requirements:

- Enrolled in the doctoral program of informatics or informatics 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:

- Experience with designing and implementing orchestrators for large-scale storage systems in HPC clusters.

Minimum requirements:

- Solid knowledge of storage systems and distributed systems.
- Experience in researching SDS orchestrators.
- Solid knowledge of I/O management in distributed infrastructures.
- Knowledge and experience with high-performance computing environments, including scripting, experimental evaluations, collection and analysis of performance, resource usage, and energy consumption metrics.

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, 70%), Scientific Publications (PC, 10%), Experience (EX, 10%) 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 Gonçalves Macedo
Full member: João Tiago Paulo
Full member: Tânia Esteves
Substitute member: Cláudia Vanessa Brito

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 2026-01-15 to 2026-01-28

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