CALL FOR GRANT APPLICATIONS
(AE2025-0540)

INESC TEC is now accepting grant applications to award 1 Research Grant (BI) within the scope of the within the scope of the project EuroCC2 with reference 101101903 Funded by European High-Performance Computing Joint Undertaking (EuroHPC JU), under the Horizon Europe programme, and by National Funds through FCT - Foundation for Science and Technology, I.P.

1. GRANT DESCRIPTION

Type of grant: Research Grant (BI)

General scientific area: COMPUTER SCIENCE

Scientific subarea: Informatics

Area of Work: Computer Science

Grant duration: 3 months, starting on 2026-01-01.

Scientific advisor: Tânia Esteves

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, within the scope of the EuroCC2 project, aims to research and development new functionalities associated with eBPF technology. Specifically, it aims to explore its applicability to new domains, including HPC systems, in order to identify different usage alternatives (e.g., user-space execution). It also intends to design and develop new features that extend and improve the use of eBPF (e.g., more efficient log writing).
Such functionalities will be fundamental to increasing the efficiency and fidelity of eBPF-based tools, enabling the creation of more robust, effective, and widely applicable observability solutions. At the same time, the results obtained will contribute to defining a best-practices guide for the use of eBPF in HPC environments, taking into account different user profiles and permission levels (e.g., system administrators, users, etc.).

3. BRIEF PRESENTATION OF THE WORK PROGRAMME AND TRAINING:

The work plan for this scholarship includes the following main activities:
1. Exploration of the applicability of eBPF and its ecosystem: review and exploration of the use of eBPF in different domains (e.g., GPU), of the various libraries available for its development, and of techniques that enable the application of eBPF to areas that currently lack direct support, including observability in HPC systems.
2. Development of new eBPF functionalities: exploration and development of new extensions that expand the capabilities of eBPF technology, including, for instance, more efficient log writing mechanisms (both in terms of performance and storage space).
3. Experimental evaluation: validation of the developed functionalities through experimental evaluation and comparison with existing solutions.

4. REQUIRED PROFILE:

Admission requirements:

- MSc Degree in 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 different programming languages, including C, Python, Go, and Rust;
- Experience with observability tools.

Minimum requirements:

- Solid Knowledge of operating systems, including kernel structures;
- Practical experience with the eBPF technology;
- Practical experience with different eBPF libraries and understanding of their practical differences (e.g., feature support, ring buffers, polling strategies);
- Experience with slurm.

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: Tânia Esteves
Full member: João Tiago Paulo
Full member: Cláudia Vanessa Brito
Substitute member: Ricardo Gonçalves Macedo

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 2025-11-20 to 2025-12-04

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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