

CALL FOR GRANT APPLICATIONS (AE2025-0543)

INESC TEC is now accepting grant applications to award 1 Research Grant (BI) within the scope of the Produtech_R3 funded by IAPMEI with reference 60 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 Grant (BI)

General scientific area: ENGINEERING

Scientific subarea: Industrial engineering

Area of Work: Cutting and Packing Problems

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

Scientific advisor: António Galvão Ramos

Workplace: INESC TEC, Porto, 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:

The main objective of this research work is the development of computational decision support tools for container packing problems, focusing on:

- Development of interactive graphical interfaces for visualisation and parameterisation of packing solutions;
- Creation of applications to support the calculation and validation of technical parameters for three-dimensional container loading problems.

3. BRIEF PRESENTATION OF THE WORK PROGRAMME AND TRAINING:

The work plan includes the following main activities:

Phase 1 - Development of Graphical Interfaces

- Design and development of dynamic graphical interfaces for 3D visualisation of packaging solutions;
- Implementation of interactive features for parameterisation and scenario analysis;
- Development of dashboards for monitoring performance indicators.

Phase 2 - Application of Parameter Calculation Support

- Development of computational modules for automatic calculation of technical parameters (dimensions, weights, stability constraints, etc.);
- Implementation of solution validation functionalities in view of practical constraints;
- Creation of a library of reusable functions for analysing the feasibility of packaging patterns.

4. REQUIRED PROFILE:

Admission requirements:

Education in Industrial Engineering, Informatics Engineering, Computer Science or related area.

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 in 3D visualisation (libraries such as Three.js, OpenGL, VTK, or similar);
- Advanced knowledge of optimisation algorithms;
- Previous experience with software development for logistics problems;
- In-depth experience in C++ programming;
- Knowledge of version control tools (Git).

Minimum requirements:

- Proven experience in C++ and/or Python programming;
- Experience in developing graphical interfaces in a business or research environment;
- Knowledge of container loading issues;
- Organisational and task management skills;
- Ability to work in a team and high level of autonomy;
- Advanced knowledge of English (spoken and written).

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, 40%), Scientific Publications (PC, 20%), Experience (EX, 15%) and Motivation Letter (CM, 25%).

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: António Galvão Ramos

Full member: Farzam Salimi

Full member: Pedro Filipe Rocha

Substitute member: Fábio Silva Moreira

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:



INESC TEC

Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência

Associação privada sem fins lucrativos declarada de utilidade pública

Pessoa Coletiva 504 441 361 - CRC Porto

Campus da FEUP

Rua Dr. Roberto Frias

4200 - 465 Porto

Portugal

T +351 222 094 000

F +351 222 094 050

info@inesctec.pt

www.inesctec.pt

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 2025-11-27 to 2025-12-12

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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