NOTICE OF COMPETITION FOR ONE DOCTORAL RESEARCH GRANT IN THE AREA OF MECHANICAL ENGINEERING – AERO.NEXT PROJECT

Bearing in mind Regulation No. 437/2020 on Research Grants of the Polytechnic Institute of Setúbal, published in the 2nd series of the Official Gazette No. 83, of April 28, it is made public that, by order of 17-03-2025 from the President of the IPS, a competition is open for the award of **one Research Grant (RG) aimed at carrying out R&D activities** for students **enrolled in a PhD program**, in the area of Mechanical Engineering, Aero.Next Portugal – ProAero3D Program, financed through Program of Recovery and Resilience (PRR) with the period for receiving applications from 26-03-2025 to 08-04-2025, in accordance with the following conditions:

1. **Duration of the Scholarship -** The scholarship lasts for 9 months, as long as it does not exceed the final date of execution of the respective project.

2. **Recipients -** The scholarship is intended for candidates with the following profile:
    - Students enrolled in a PhD in Mechanical Engineering;
    - Mastery of the Portuguese language, spoken and written;
    - Mastery of the English language, spoken and written.

3. **Financial component -** According to the Table, contained in Annex I to the FCT Scholarship Regulation, approved by Regulation No. 950/2019, published in the Diário da República, 2nd series of December 16 (updated version), the value of the Scholarship corresponds to **€1 309,64** being paid monthly, by bank transfer.

4. **Workplace-** The work will be carried out, on an exclusive basis, in the Department of Mechanical Engineering of the Escola Superior de Tecnologia de Setúbal, under the scientific guidance of Professor Célio Pina.

5. **Activity plan -** The candidate will perform duties in accordance with the activities listed below:
   - Development, production and testing in a real production environment of production support tools for the aeronautical industry, mainly using additive manufacturing technology;
   - Support in the aeronautical qualification of components produced using polymeric materials by additive manufacturing;
   - A1 - Bibliographical research;
   - A2 - Optimisation of printing parameters and definition of printing profiles;
   - A3 - Production of specimens and mechanical tests;
   - A4 - Design and production, by 3D printing, of elements to support production;
   - A5 - Dimensional control and tool testing in a production environment;
   - A6 - Support in validating the manufacturing process with polymer tools, produced by 3D printing, with clients (FAI);
   - A7 - Support in the aeronautical qualification of parts;
   - A8 - Preparation of scientific reports and publications.

   Some of these actions may take place on the premises of the agenda's partners.

6. **Assessment and ranking criteria:**

   6.1. Degree of alignment of the doctoral study plan with the activities to be carried out as a fellow (GA), general analysis of the Curriculum Vitae (CV) and motivation letter (CM) – (scale of 0-15 values).

   a) Degree of alignment (GA) with the activities to be carried out as a scholarship holder and degree of execution of the curricular part of the doctoral study plan (weighting 0.35) - maximum 15 values

Fully aligned	15 val.
Partially aligned	12 val.
Not aligned	0 val.

b) General analysis of the Curriculum Vitae (CV) (weighting 0.35) - maximum 15 values

Very good	15 val.
Good	13 val.
Satisfies	7,5 val.
Does not satisfy	0 val.

c) General analysis of the Motivation Letter (CM) (weighting 0.30) - maximum 15 points

Very good (presents motivational factors related to the activities to be performed as a scholarship holder duly framed in the role)	15 val.
Good	13 val.
Satisfies	7,5 val.
Does not satisfy	0 val.

6.2. INTERVIEW (scale of 0-5 values)

In the interview, 4 evaluation parameters are defined and their classification results from the following formula: E=MI+TTK+CS+VEF

- Motivation and Interest (MI)
- Theoretical and Technical Knowledge (TTK)
- Critical Sense (CS)
- Verbal Expression and Fluency, including in English (VEF)

Each parameter is valued from 0 points to 1.25 points according to the candidate's demonstration of competence or behavior.

6.3. The classification of each candidate will be calculated by the sum of the values obtained in the CURRICULAR EVALUATION and the SELECTION INTERVIEW.

6.4. The classification of each candidate will be calculated by adding the values obtained in the selection methods specified in the previous point and the ranking of candidates will be expressed on a scale of 0 to 20, rounded to the nearest tenth.

6.5. To be approved, the candidate must achieve a minimum total score of 9.5 and must have obtained at least half of the maximum possible score in the Curricular Assessment component. Except in the situation provided for in point 6.7, the Selection Interview is a compulsory and eliminatory selection method.

6.6. In the event of a tie, the tiebreaker will be the one with the highest score in the Interview component.

6.7. If only one candidate is admitted and they have already obtained at least 9.5 marks in the Curricular Assessment, the selection board may choose to dispense with the Selection Interview component.

6.8. Based on the final ranking list, a recruitment reserve will be set up, which will be used for the possible recruitment of successful candidates in the event that those ranked in positions eligible for recruitment withdraw.

6. Application documents - The application must be accompanied by the following documentation:

- Letter of motivation addressed to the President of the IPS;
- Doctoral study plan;
- Candidacy form;
- Detailed CV;
- Qualification certificates for academic degrees held;
- Proof of student status for the course and degree attended at a Portuguese Higher Education Institution, issued by the respective academic services;
- Proof of residence permit in Portugal (for applicants without Portuguese citizenship).

7. How to submit your application - The application must be made by filling out the standard form, available on the IPS website, at www.ips.pt, in the Central Services/DICI/Research Grants tabs, and sent to Bolsas.investigacao.dgp@ips.pt or through the address, Campus do IPS, Estefanilha, 2910 761 Setúbal, until the application deadline.

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8. **The jury is made up of:**

   President

   Doutor Professor Doutor Célio Gabriel Figueiredo Pina, Professor Coordenador da Escola Superior de Tecnologia do Setúbal/IPS.

   Effective Vowels

   Doutor José Filipe Castanheira Pereira Antunes Simões, Professor Coordenador da Escola Superior de Tecnologia do Setúbal/IPS;

   Doutor Carlos Alberto do Rosário Silva Fortes, Professor Adjunto da Escola Superior de Tecnologia do Setúbal/IPS.

   Substitute Member

   Doutor José Filipe Castanheira Pereira Antunes Simões, Professor Coordenador da Escola Superior de Tecnologia do Setúbal/IPS.

9. **Applicable legislation and regulations -** The scholarship is awarded under Law No. 40/2004 of August 18, in its updated version (Statute of the Scientific Research Fellow) and Regulation of Scholarships and Research of the Foundation for Science and Technology, available for consultation at https://www.fct.pt/apoios/bolsas/regulamento.phtml.pt

Polytechnic Institute of Setúbal.

Assinado por: **ÂNGELA MARIA GOMES TELES DE MATOS CREMON DE LEMOS**
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