

1 Research Grant Announcement (M/F)

Call open for applications for a research grant within the framework of project AEROGANP – “Creation of a cross-border research and knowledge transfer axis in the aeronautical and space sector in the Galicia-Northern Portugal Euroregion”, co-financed by European Regional Development Fund (ERDF), in the scope of Interreg VI A Spain – Portugal Cooperation Program (POCTEP) 2021-2027, under the following conditions:

Scientific Area: Mechanical Engineering

Admission requirements: Candidates who cumulatively meet the following two requirements may apply for this grant:

Requirement 1:

- Be a student enrolled in a doctoral program in the area of Mechanical Engineering, a requirement to be duly proven at the time of signing the contract.

or

- Holder of an academic degree enrolled in a non-academic degree course integrated in the educational project of a higher education institution, developed in association or cooperation with one or more R&D units, a requirement to be duly proven at the time of signing the contract.

and

Requirement 2:

- Hold a master’s degree in Mechanical Engineering or related field.

If the degree has been awarded by a foreign higher education institution, it must comply with the provisions of the Decree-Law no. 66/2018, of august 16th, and any formalities established there must be fulfilled until the time of signing the contract.

Activity Outline: The objective of this work will be to develop numerical models for the analysis and optimisation of interfaces subject to contact at various scales. The main stages of the work plan:

- Literature review;
- Development of algorithms to characterise behavior;
- Simulation of academic and real problems;
- Documentation of the work carried out;

Legislation and regulations: Law N.º. 40/2004, of 18th August, in its current wording (Statutes of Scientific Research Fellow) and Regulation of Research Grants of University of Porto, in force.

Work place: The work will be developed at the Department of Mechanical Engineering of the Faculty of Engineering of the University of Porto (FEUP), under the scientific supervision of Professor Francisco Manuel Andrade Pires.

Grant duration: Initial duration of **4 months**, with the predicted starting date in **August 2024**, on an exclusive basis, eventually renewable but never exceeding the project duration.

If the contracting procedures do not allow the scholarship to have a minimum duration of 4 consecutive months, in accordance with paragraph 2 of article 10 of the Research Regulation of Research Grants of University of Porto, the grant will not be awarded.

The eventual renewal of the scholarship will be carried out as determined in article 10 of the Regulation of Research Grants of University of Porto.

Stipend: The monthly amount of the grant varies between 1.259,64 euros, according to the the table of values of the Regulation of Research Grants of University of Porto, and 1.659,64 euros, depending on the profile and previous experience of the candidate in the project area. The payment will be made by bank transfer.

Selection procedure:

The curriculum of the candidates (60%) will be evaluated based on the merit of the candidate and the following factors will be weighted:

- a) Academic training (Master in Mechanical Engineering 10 points; Others Masters – 2 points)
- b) Publications in the area of Computational Contact Mechanics 5 points, Publications in other areas – 2 points
- c) Research Experience in the project area – 5 points; in related areas – 3 points; Other areas – 1 point

The curriculum of each candidate will be evaluated in a 1-20 points scale. Candidates with less than 13 points in the curricular evaluation will not be invited for the interview.

In the interview (40%) topics related with the work plan, experience and the candidate's CV will be discussed with the invited candidates.

If none of the candidates achieves a minimum final score of 10 points, the scholarship will not be awarded.

Selection Jury:

President: Full Professor at FEUP, Francisco Manuel Andrade Pires

Effective member: Researcher at INEGI, Igor André Rodrigues Lopes

Effective member: Researcher at INEGI, Miguel Vieira De Carvalho

Supplementary member: Full Professor at FEUP, Pedro Manuel Ponces Rodrigues de Castro Camanho

Supplementary member: Associate Professor at FEUP, Doutor Albertino José Castanho Arteiro

Advertisement of final decision: The results of the evaluation will be released to the candidates by email to the email address indicated in the application process.

Deadline for applications and form of presentation of the applications:

The call is open from **16/07/2024 to 29/07/2024** (until 23h59m, GMT time).

Applications must be formalized by email to fpires@fe.up.pt and to recursoshumanos@fe.up.pt, clearly stating the reference **FEUP-AEROGANP-1** and including the following pdf documents: Motivation letter, Copy of certificates evidencing academic degree (referring the classification of each separated or integrated degree), detailed Curriculum Vitae; and other documents considered relevant by the applicant.

In order to assure that all documents can be read, the preferred saving format is the Portable Document Format (.pdf).