

2 Research Initiation Grant (M/F)

Call open for applications for two Research Initiation Grant within the framework of the project Modelling the Behaviour of Heterogeneous Materials at Different Scales, financed by the Faculty of Engineering of Porto University, under the following conditions:

Scientific Area: Mechanical Engineering

Admission requirements:

- Be a student enrolled in a higher technical professional course, a bachelor's degree, an integrated master's degree or a master's in the area of Mechanical Engineering, a requirement to be duly proven at the time of signing the contract.

Or

- Be a holder of an academic degree (bachelor's degree) enrolled in a non-academic degree course integrated into 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.

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.

Note: The Research Initiation Grant cannot be awarded to those who have already benefited from a research scholarship awarded under the terms of the EBI, according to no. 3 of article 9º of the Research Grants from University of Porto - Regulation No. 184/2021, of 03 March.

Activity Outline: The objective of this work will be the development of models and their respective computational implementation through the Finite Element Method to predict the behavior of Multi-Material Structures under impact and fatigue loadings. The main steps of the work plan:

- Study of the behavior of Multi-Material Structures;
- Generation of Multi-Material Structures Models;
- Simulation of Multi-Material Structures;
- Writing of the Report on the Work Developed;

Legislation and regulations: Law Nº. 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 Pires.

Grant duration: The initial duration is 6 months, with the predicted starting date in May 2024, on an exclusive basis. It will eventually be renewable but never exceed the project duration.

If the contracting procedures do not allow the scholarship to have a minimum duration of 1 consecutive month, in accordance with paragraph 2 of article 9 of the Regulation of Research Grants of the University of Porto, the grant will not be awarded.

Stipend: The grant stipend amounts to 601,12€ according to the table of values of the Regulation of Research Grants of the University of Porto. The payment will be made by bank transfer.

Selection procedure:

Curricular evaluation will focus on the merit of the candidate, and the following criteria will be valued:

1. Academic training in the area of Mechanical Engineering - 5 points; related areas – 2 points; other areas - 0 points.
2. Academic training classification (at the time of the application): average equal or higher than 15/20 - 5 points; average equal or higher to 13/20 - 2 points; other - 0 points;
3. Knowledge of numerical modelling (up to 5 points); related areas – 2 points; other areas - 0 points.

The two best ranked candidates, according to the above criteria, will be called for an interview. This will have an additional score of up to 5 points.

If the minimum score of 10 points is not reached by any of the candidates, the scholarship may not be awarded.

Selection Jury:

President: Professor Francisco Manuel Andrade Pires, FEUP

Effective member: Doctor Igor André Rodrigues Lopes, INEGI

Effective member: Doctor Miguel Miguel Vieira De Carvalho, INEGI

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

Supplementary member: Professor Albertino José Castanho Arteiro, FEUP

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 **19-04-2024 to 06-05-2024** (until 23h59m, GMT time).

Applications must be formalized by email to fpres@fe.up.pt and to recursoshumanos@fe.up.pt, clearly stating the reference **FEUP-MultiescalalIII** and including the following pdf documents: Motivation letter, Copy of certificates evidencing academic degree detailed Curriculum Vitae, Declaration on honor that the candidate fulfils the requirement contained in the no. 3 of article 9 of

the Regulation for Research Grants of the University of Porto (model below) and other documents considered relevant by the applicant.

Declaration on honour

I, (identification of the scholarship holder), holder of the Citizen Card / Visa / Residence Permit no. valid until _____, declare under honour, to be in the conditions of no. 3 of article 9º of the Research Grants from University of Porto - Regulation No. 184/2021, of 03 March.

Oporto, __/__/__

Signature

(scholarship holder)