

1 Research Initiation Grant (M/F)

Call open for applications for a Research Initiation Grant within the framework of Enhancing the Durability of Composite Systems, financed by Faculty of Engineering of University of Porto, under the following conditions:

Scientific Area: Mechanical Engineering

Admission requirements:

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

Study of the use of smart polymeric composite systems to enhance durability. Moreover, the definition of a methodology to produce the relevant composite structures and to reduce the number of tests to validate for durability purposes. The tasks to be performed are:

Task 1 – State of the art update (month 0 - 6)

Task 2 - Application of biomimicry to the conceptual design of the development of composite systems with reduction of viscoelastic effects (month 0 - 3)

Task 3 –Experimental development (month 3 - 4)

Task 4 – Tests for concept validation (month 4 - 5)

Task 5 – Methodologies to model the long-term mechanical behavior of composite structures (month 3 - 6)

Task 6: Methodology for the development of composite systems with enhanced durability (month 5 - 6)

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 António Torres Marques.

Grant duration: Initial duration of 6 months, with the predicted starting date in May **2024**, on an exclusive basis eventually renewable but never exceeding the project duration.

If the contracting procedures do not allow the scholarship to have the minimum duration of 1 consecutive month, in accordance with paragraph 2 of article 9 of the Regulation of Research Grants of 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 University of Porto. The payment will be made by bank transfer.

Selection procedure:

Curricular evaluation which 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 – 3 points; other areas - 0 points.
2. Average academic record at the time of application: average equal or higher than 16/20 - 5 points; average equal to 14/20 - 3 points; other - 0 points;
3. Laboratory experience named in the admission requirements - up to 5 points; laboratory experience in other areas - 3 points; no laboratory experience - 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 António Torres Marques

Effective member: Professor Albertino José Castanho Arteiro

Effective member: Professor Rui Jorge Sousa Costa de Miranda Gudes

Supplementary member: Professor Carolina Furtado Pereira da Silva

Supplementary member: Professor Paulo Manuel Salgado Tavares de Castro

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 **12/04/2024 to 26/04/2024** (until 23h59m, GMT time).

Applications must be formalized by email to marques@fe.up.pt and to recursoshumanos@fe.up.pt, clearly stating the reference **FEUP- Composite Systems** and including the following pdf documents: Motivation letter, Copy of certificates evidencing academic degree (referring to the course average - for each cycle or integrated cycle - and grades in the course units) detailed Curriculum Vitae, Declaration on honor that the candidate fulfills 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)