

1 Research Grant Announcement (M/F)

Call open for applications for a research grant within the framework of the Base Funding - UIDB/04234/2020 of the Research Centre in Real-Time and Embedded Computing Systems – CISTER - funded by national funds through the FCT/MCTES (PIDDAC), under the following conditions:

Scientific Area: Electrical and Computer Engineering

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

Requirement 1:

- To be a student enrolled in a master degree or integrated master or in an integrated master's program who has already completed the 180 credits corresponding to the first six curricular semesters, in the area of Electrical and Computer Engineering, requirement to be proven at the time of signing the contract.

Or

Requirement 2:

- Hold a bachelor's degree in Electrical and Computer Engineering.

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.

And

- To be 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, requirement to be proven at the time of signing the contract.

Note: In the case of degree holders who are enrolled in non-academic degree courses, the scholarship can only be awarded to those who do not exceed, with this scholarship contract, including possible renewals, an accumulated period of two years in that typology of the scholarship, followed or interpolated.

Activity Outline: Study of Machine Learning algorithms for the detection of anomalous traffic patten in data networks; gathering of dataset with malicious IoT traffic; implementation of an online detector of malicious IoT traffic. .

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 Fundação para a Ciência e a

Tecnologia, in force (<https://www.fct.pt/apoios/bolsas/regulamento.phtml.pt>) and Regulation of Research Grants of University of Porto.

Work place: The work will be developed at the CISTER research unit within the Department of Electrical and Computer Engineering of the Faculty of Engineering of the University of Porto (FEUP), possibly involving work in other infrastructures of the unit, under the scientific supervision of Professor Luis Almeida.

Grant duration: Initial duration of **6 months**, with the predicted starting date in **May 2022**, on an exclusive basis, not renewable, but never exceeding the project duration.

If the recruitment procedures do not allow the grant to last for a minimum of 3 consecutive months, in accordance with paragraph 3 of article 6 of the Research Grant Regulations of the Foundation for Science and Technology, I.P. , the scholarship will not be awarded.

Stipend: The grant stipend amounts to 875,98€ according to the table of values of the grants awarded directly by FCT, I.P. in the Country (<https://www.fct.pt/apoios/bolsas/valores>).

The payment will be made by bank transfer.

Selection procedure:

The curricular evaluation of the candidates will be evaluated based on the merit of the candidate and the following factors will be assessed:

- a) Knowledge of TCP/IP networks and capture and analysis of the respective traffic (maximum 5 points)
- b) Experience in using Machine Learning techniques to process traffic on IP networks (up to 1 year - maximum 3 points, more than 1 year - maximum 5 points)
- c) English language, to be verified through a motivation letter (up to 5 points)

The four best ranked candidates in the curricular evaluation, will be interviewed (up to 5 points) In the interview topics related with the work plan, experience, motivation and candidate's CV will be discussed).

The final score results from the sum of the curricular evaluation and the interview.

Selection Jury:

President: Professor Luís Miguel Pinho de Almeida

Member: Professor Mário Jorge Rodrigues de Sousa

Member: Professor Pedro Alexandre Guimarães Lobo Ferreira Souto

Substitute Member: Professor Ana Cristina Costa Aguiar

Substitute Member: Professor Ricardo Santos Morla

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 **09-05-2022 to 20-05-2022** (until 23h59m, GMT time).

Applications must be formalized by email to lda@fe.up.pt and to recursoshumanos@fe.up.pt, clearly stating the reference **FEUP-CISTER_2** and including the following pdf documents: Motivation letter, detailed Curriculum Vitae, Copy of certificates evidencing academic degree, Declaration on honor that the candidate fulfills the requirement contained in article 6 of the Regulation for Research Grants of the Foundation for Science and Technology, I.P. (model below, in case of student 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) 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. 5 of article 6º of the Research Grants from FCT, IP - Regulation No. 950/2019, of 16 December.

Oporto, __/__/__

Signature

(scholarship holder)