



Institute of Earth Sciences, ICT

Master scholarship, 1 vacancy

15 of July of 2022

A call for tenders is open one Master Scholarship(s) within the scope of the project Veículo Inovador Reutilizável para Investigação e Alavancagem de Tecnologia Orbital (VIRIATO), POCI-01-0247-FEDER-046100 e LISBOA-01-0247-FEDER-04610, GD/34723/2019, financed by national funds through “FEDER” and by Portugal 2020 através do Programa Operacional Competitividade e Internacionalização e do Programa Operacional Regional de Lisboa under the following conditions:

Scientific area: Mechanical Engineering, area of intelligent systems

Admission requirements:

1) MSc in Mechanical Engineering; 2) Advanced training in intelligent systems; 3) Knowledge of electronic control instrumentation; 4) Knowledge in designing electronic systems for signal acquisition; 5) Knowledge of mechanical simulation by finite elements; 6) Experience in instrumentation and signal acquisition in the laboratory; 7) Knowledge of fractional order controllers.

As set forth FCT Research Scholarship Regulation No. 950/2019 of December 16, 2019, article 3 and 6, candidates for “BI” must comply as a rule condition for the award of the scholarship, the effective inclusion in study cycles leading to the attribution of academic degrees or in courses not leading to an academic degree. Courses that do not confer an academic degree correspond to the courses provided for in subparagraph e) of paragraph 3 of article 4 of Decree-Law No. 74/2006 of 24 March and must be developed in a higher education institution in association with at least one R&D unit, including a course plan in one or several research areas of the unit.

Work plan:

- 1) Review of the state of the art in the scope of multi-channel instrumentation system solutions for launchers (orbital vehicles);
- 2) Survey of system requirements for the launcher: within the scope of environmental operating conditions (operating temperatures, vibrations); within the scope of technical needs (interfaces, parameters to be monitored, acquisition rates, storage needs); within the scope of data transmission protocols (processing needs, final data format);
- 3) Definition of system requirements for the launcher;
- 4) Design of the Launcher Status Acquisition and Monitoring System;
- 5) Simulation and implementation of the System;

- 6) Definition of test plans;
- 7) Conducting functional tests;
- 8) System qualification;
- 9) Testing in the launcher's operating environment.

Applicable legislation and regulations: The granting of the Research Scholarship will be carried out upon the signing of a contract between the University of Évora and the scholarship holder, as set in the template https://www.fct.pt/apoios/Minuta_Contrato_Bolsa.docx, pursuant to the Research Scholarship Statute (Law No. 40/2004 of August 18 and Decree-Law No. 123/2019 of August 28) and in accordance with the legislation and Regulation of Research Grants of the Foundation for Science and Technology, IP in force, regulation nº950/2019 of December 16, 2019: <https://www.fct.pt/apoios/bolsas/regulamento.phtml.pt> and other applicable rules.

Place of work: The work will be developed at the ICT, Institute of Earth Sciences of the University of Évora, under the scientific guidance of Dr. Rui Melício, Dr. Paulo Gordo and Dr. Duarte Valério. The candidate will have to travel frequently to the CENTRA Laboratories, Faculty of Sciences, University of Lisbon, IDMEC, Instituto Superior Técnico and Instituto Superior de Engenharia de Lisboa.

Duration of the scholarship: The scholarship will have a duration of 6 six months, starting on August of 2022. The scholarship contract may be renewed up to until the end of the funding project's budget allocation.

Amount of monthly maintenance allowance: The amount of the scholarship corresponds to €1 144,64 according to the table of scholarships awarded directly by FCT, I.P. in Portugal (<http://fct.pt/apoios/bolsas/valores>), payments being made monthly, by check or bank transfer.

Selection methods: The selection methods to be used will be the following: The selection methods to be used will be based on the following parameters:

Curriculum evaluation (85%) and the selection interview (15%).

The selection interview will be held in the event of a tie between the first 2 candidates, with the respective valuation.

If there is no tie the evaluation criteria are: Curriculum evaluation (100%)

Composition of the Selection Jury:

President: Prof. Dr. Rui Melício (ICT, University of Évora)

1st Member - Prof. Dr. Paulo Gordo (CENTRA, Center for Astrophysics and Gravitation, University of Lisbon)

2nd Member - Prof. Dr. Duarte Valério (IDMEC, Instituto Superior Técnico, Universidade de Lisboa)

1st Alternate - Prof. Dr. Paulo Garcia (CENTRA, Center for Astrophysics and Gravitation, University of Lisbon)

2nd Alternate - Prof. Dr. José Figueiredo (CENTRA, Center for Astrophysics and Gravitation, University of Lisbon)

Advertising/notification of results: The final results of the evaluation will be publicized, through an ordered list by final grade obtained posted in a visible and public place (ICT, Colégio Luis António Verney, Rua Romão Ramalho, nº59, Évora 7000-671), being the candidate (a) approved notified through email.

To ensure the right of prior hearing of interested parties, the Final Classification project will be announced by any written means to all interested parties.

After communicating the provisional list of the results of the evaluation, candidates have a period of 10 working days to express their opinion in a preliminary hearing of interested parties.

Application deadline and submission of applications: The tender is open from 18 to 29 of July of 2022 and the results of the selection will be published by 5 of August of 2022.

Applications must be formalized by sending a letter of application accompanied by the following documents: Curriculum Vitae, qualifications certificate and other supporting documents deemed relevant, via email to Professor Rui Melício, ruimelicio@uevora.pt with the subject "Candidatura Bolsa de Doutoramento Projeto Viriato".

For the purposes of application, the evidence may be replaced by a declaration of honor signed by the candidate, but the failure to demonstrate that evidence, in the contracting phase, possession of the required degree on the deadline for application or the non-presentation of proof of enrollment in the study cycle or non-degree course, for scholarships with this component, imply the cancellation of the candidate's application.

Academic degrees obtained in foreign countries require registration by a Portuguese Institution in accordance with Decree-Law no. 66/2018, of August 16 and Ordinance No. 33/2019, of January 25th.

The presentation of the certificate is mandatory for the signing of the contract. More information can be obtained at: <https://www.dges.gov.pt/pt/pagina/recognition?plid=374>

Applications must be sent by email to:

subject: "Candidatura Bolsa de Doutoramento Projeto Viriato".

Prof. Rui Melício, Institute of Earth Sciences, University of Évora

email: ruimelicio@uevora.pt