



Institute of Earth Sciences

Research Scholarship for Master (one vacancy)

October 21, 2021

A call for tenders is open for one Research Scholarship for Master within the scope of the project MOSIPO - *Otimização do processo de pintura automóvel pelo desenvolvimento de modelos de simulação numéricos CFD e ANN e de um modelo de gestão integrado*, com referência POCI-01-0247-FEDER-072621, financed by P2020 Program, Sistema de Incentivos à Investigação e Desenvolvimento Tecnológico (SI I&DT), under the following conditions:

Scientific area: Mechanical Engineering – Thermofluids and Energy

Admission requirements:

1. Master's degree in the field of Mechanical Engineering – Thermofluids, in the field of Energy or in related fields;
2. Experience in modeling and simulation of thermal equipment and systems;
3. Domain of high-level programming languages, with preference for Matlab/Simulink and Modelica/OpenModelica languages;
4. Knowledge of English, spoken and written.

As set forth FCT Research Scholarship Regulation No. 950/2019 of December 16, 2019, article 3 and 6, candidates 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. Development and testing of models for the equipment (air heaters, heat exchangers, fans, etc.) in the peripheral network of the car paint oven under study;
2. Development and implementation of a global simulation model of the peripheral network;
3. Integration in the global simulation model of a VOC incinerator replacement model and an interface with the oven operating parameters;
4. Validation of the global simulation model in an industrial context;

5. Simulation and evaluation of the performance of the network of peripherals for different operating conditions and identification of opportunities to improve energy efficiency;
6. Writing of progress reports and technical reports.

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 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 Institute of Earth Sciences of the University of Évora, under the scientific guidance of the Professor Paulo Canhoto.

Duration of the scholarship: The scholarship will have a duration of 12 months, starting on December of 2021. The scholarship contract may be renewed up to the end of the funding project's budget allocation.

Amount of monthly maintenance allowance: The amount of the scholarship corresponds to €1104.64, 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: curriculum evaluation and interview, expressed on a scale of 0 to 20 values, with the valuation: Curriculum evaluation – 70%; Interview – 30%.

Composition of the Selection Jury:

President: Prof. Doutor Paulo Canhoto

1th Effective Member: Prof.a Doutora Isabel Malico

2nd Effective Member: Prof. Doutor Rui Salgado

1th Alternate Member: Prof. Doutor Eugénio Garção

2nd Alternate Member: Prof. Doutor Gonçalo Silva

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 Institute of Earth Sciences of the University of Évora, being the candidate 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 October 27 to November 11 of 2021 and the results of the selection will be published by November 16 of 2021.

Applications must be formalized, obligatorily, by sending an application letter with the following documents: Curriculum Vitae, certificate of qualifications and other supporting documents or certificates considered relevant.

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:

Prof. Paulo Canhoto
Institute of Earth Sciences of the University of Évora
email: canhoto@uevora.pt



Cofinanciado por:



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