Centre for Research in Mathematics and Applications (CIMA)

Scholarship for Research Graduates - 1 vacancy

20 of April of 2022

A call for tenders is open for one Scholarship(s) Reserach Graduates within the scope of the project "A multiple criteria approach to integrate wildfire behavior in forest management planning (MODFIRE)", Ref.ª "PCIF/MOS/0217/2017 financed by national funds through FCT/MCTES, under the following conditions:

Scientific area: Applied Mathematics and Informatics

Admission requirements:

- Degree in Applied Mathematics, Computer Engineering, or equivalent

- Knowledge of Python and C++ programming, of Logic and Constraint Programming to solve combinatorial optimization problems, as a preferential factor

As set forth FCT Research Scholarship Regulation No. 950/2019 of December 16, 2019, article 3 and 6, candidates for "**BI**" (Research Grants) 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:

- Analyse the state of the art in mathematical methods of construction and approximation of the Pareto frontier for multiobjective optimization problems with integer variables using heuristic algorithms and constraint programming algorithms.
- Implement at least two algorithms suitable for application to multi-objective forest management under the MODFIRE project.
- Compare the algorithms experimentally.
- Prepare a final report in which the experience is described.

- Participate in the writing of a scientific paper and present a paper at a scientific conference.

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 Centre for Research in Mathematics and Applications (CIMA) of the University of Évora, under the scientific guidance of the Professor Doctor Vladimir Bushenkov.

Duration of the scholarship: The scholarship will have a duration of 07 months, starting on May of 2022. The scholarship contract may be renewed until the end of the funding project's budget allocation.

Amount of monthly maintenance allowance: The amount of the scholarship corresponds to €875,98, 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 (50%)
- Adequacy of the training to the work plan (weighting: 20%)
- Interview (30%)

Composition of the Selection Jury:

President: Prof. Doutor Vladimir Bushenkov
1º Member: Prof. Doutor Salvador Pinto Abreu
2º Member: Prof. Doutor Vítor Nogueira
1º Alternate: Prof. Doutor Vasco Pedro
2º Alternate: Prof.ª Doutora Manuela Oliveira

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 SMAT/SINF secretariat 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 20 of April to 6 of May of 2022 and the results of the selection will be published by 13 of May of 2022.

Applications must be formalized, obligatorily, by sending an application letter with the following documents: Curriculum Vitae, certificate of qualifications, and other supporting documents 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. Vladimir Bushenkov
Universidade de Évora

E-mail: bushen@uevora.pt