**Research Centre for Mathematics and Applications**

**Research Initiation Scholarship – 1 vacancy**

17 of November of 2021

A call for tenders is open for one Research Initiation Scholarship within the scope of the project CIMA 2020-2023 Multiannual Financing, Ref.ª UIDP/04674/2020, financed by national funds through FCT/MCTES a, under the following conditions:

**Scientific area**: Mathematics

**Admission requirements**: 1st Cycle Students

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. Literature review on the mathematical aspects of the Data Envelopment Analysis (DEA).

2. Collection of relevant data to assess the efficiency of hospitals in Portugal before and during the COVID-19 pandemic using the DEA approach, in which the outputs are related to the population residing in the areas of influence of the hospitals, consultations performed and levels of hospitalization. In turn, inputs concern the number of beds, number of operating rooms, number of doctors, number of nurses, number of diagnostic and therapeutic technicians, number of auxiliary personnel and total expenses.

3. Development of a DEA algorithm and performing data analysis.

4. Preparation and public presentation of a final report on the activities carried out.

**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 research unit CIMA of the University of Évora, under the scientific guidance of the Prof. Doctor Vladimir Bushenkov.

**Duration of the scholarship:** The scholarship will have a duration of 3 months, starting on January 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 €446,12, 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: CV: 40%; Motivation Letter: 40%; Academic experience in Mathematics: 20%

**Composition of the Selection Jury**: President: Feliz Minhós (CIMA-UEVORA); Members: Vladimir Bushenkov (CIMA-UEVORA); Carlos Ramos (CIMA-UEVORA); Substitutes: Fernando Carapau (CIMA-UEVORA); Manuel Branco (CIMA-UEVORA).

**Advertising/notification of results:** The final results of the evaluation will be publicized, through an ordered list  alphabetically posted in a visible and public place Departamento de matemática of University of Évora, 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 november  of 2021 to 3 december of 2021 and the results of the selection will be published by 10 december.

Applications must be formalized, obligatorily, by sending an application letter with the following documents:

- Curriculum vitae

- Certificate of Qualifications

- Letter of interest

- Letter of recommendation

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. Feliz Manuel Barrão Minhós
Departamento de Matemática da Universidade de Évora
e-mail : dircima@uevora.pt