**Centro de Investigação em Matemática e Aplicações**

BIPD 1 (Postdoctoral scholarship) -1 position

09 of August of 2022

A call for tenders is open for 1 Scholarship BIPD (Postdoctoral scholarship) within the scope of the project  Financiamento Plurianual 2020-2023 do CIMA , with reference UIDB/04674/2020, financed by national funds through FCT/MCTES, under the following conditions:

**Scientific area**: Mathematics, Boundary Value Problems

**Admission requirements**:

PhD in a Mathematics field.

Regarding the "BIPD" (postdoctoral scholarship), in terms of the requirements to be verified for their attribution (article 7 of the FCT Research Grant Regulation no. 950/2019) the need for a doctoral degree to have been obtained in the 3 years prior to the date of submission of the application to the scholarship and, in terms of its execution, the fact that it can only be renewed for a maximum period of 3 years.

**Work plan**:

Objectives

1.Study the existence of a solution for Fractional Differential Problems (FDP) with integral conditions on the boundary.

2.Sufficient conditions for the solvability of FDP with multi-point type data.

3.Study the uniqueness of the solution for FDP with impulses given by functions with several variables.

4.Solvability of functional FDPs involving p-Laplacian.

5.Multiplicity results for singular FDP .

6.Sufficient conditions for the existence of bounded solutions for FDPs on the half real line.

Details of the working plan:

1. Existence of a solution for Fractional Differential Problems (FDP) with integral conditions on the boundary
2. Sufficient conditions for the solvability of FDP with multi-point type data.
3. Uniqueness of the solution for FDP with impulses given by functions with several variables.
4. Solvability of functional FDPs involving p-Laplacian.
5. Multiplicity results for singular FDP
6. Existence of bounded solutions for FDPs on the half real line.

**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 Centro de Investigação em Matemática e Aplicações of the University of Évora, under the scientific guidance of the Professor Feliz Manuel Barrão Minhós .

**Duration of the scholarship:** The scholarship will have a duration of 6 months, starting on 15th October 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 1 686,00 €, 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 curriculum evaluation and an interview,  with the respective valuation of

- curriculum evaluation : 60 %
- interview : 40%

**Composition of the Selection Jury**:

Feliz Manuel Barrão Minhós (President)

**Effective members:**

 Vladimir Alekseevitch Bushenkov

Carlos Correia Ramos

**Alternate members:**

José Luís da Silva

Luís Manuel Ferreira da 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 of the Department of Mathematics of 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 17/08/2022 to 05/09/2022 and the results of the selection will be published by 15/09/2022.

Applications must be formalized, obligatorily, by sending an application letter with the following documents: *Curriculum Vitae, certificate of qualifications, reference or recommendation letters 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. Feliz Manuel Barrão Minhós

Centro de Investigação em Matemática e Aplicações

Department of Mathematics of the University of Évora

email: fminhos@uevora.pt