

Call for Applications for PhD Research Grants

The Centro de Investigação da Terra e do Espaço da Universidade de Coimbra (CITEUC) hereby opens this Call for Applications for 1 (one) research grants, hereinafter called PhD Research Grants, in the field(s) of Exact Sciences, Physics, Astronomy, Astrophysics, in compliance with the provisions of the FCT Regulations for Research Grants and Fellowships (RBI) and the Research Fellowship Holder Statute (EBI).

The scholarships will be financed by the Foundation for Science and Technology (Fundação para a Ciência e Tecnologia) (FCT) under the Collaboration Agreement of the Multiannual Financing Plan for Doctoral Research Grants, signed between FCT and the R&D Research Unit Centro de Investigação da Terra e do Espaço da Universidade de Coimbra, CITEUC - UIDP/00611/2020 .

1. SUBMISSION OF APPLICATIONS

The Call for Applications is open from 8th march 2022 on 15th april 2022.

Applications and all the supporting documents described in this Call must be submitted by email to **fernandobfigueiredo@gmail.com**, with the subject line 'bolsa de PhD asteroides' .

Each applicant can only submit one application, under penalty of cancellation of all the applications submitted.

Please note that false declarations or acts of plagiarism from the applicants will lead to the exclusion of the application notwithstanding the need to take other corrective or punitive disciplinary measures.

2. TYPE AND DURATION OF THE SCHOLARSHIPS

The PhD scholarships are intended to finance research activities carried out by the doctoral candidate that will lead to the attainment of the academic degree of doctor in Portuguese Universities.

The research activities leading to the attainment of the academic degree of doctor will take place at Faculdade de Ciências da Universidade do Porto (institution partner of CITEUC), which will be the candidates' host institution(s), notwithstanding that the research work may be carried out in collaboration with more than one institution.

The research activities leading to the attainment of the academic degree of doctor of the selected applicants must be framed within the activity plan and strategy of CITEUC, and must be carried out within the following Doctoral Programmes:

The work programme may be entirely or partially carried out on a national institution (national or blended scholarships, respectively).

As a rule, PhD scholarships are annual, renewable for up to the maximum of four years (48 months), and cannot be granted for a period less than three consecutive months.

In the case of a blended scholarship, i.e., carried out both in Portugal and abroad, the research period at the foreign institution cannot exceed 24 months.

3. RECIPIENTS OF THE SCHOLARSHIPS

PhD scholarships are intended for candidates who are enrolled or who comply with the requirements to enroll in a Doctoral Programme, who wish to carry out research activities as part of this degree in CITEUC, or at another associated host institution.

4. ADMISSION REQUIREMENTS

4.1 Admission requirements for applicants

The following candidates may apply to this Call:

- National (Portuguese) citizens or citizens from other member states of the European Union;
- Third-country nationals;
- Stateless individuals;
- Citizens with political refugee status.

To apply for a PhD scholarship, applicants must comply with the following requirements:

- Be graduated or have a master's degree in the areas of Physics, Astronomy, Earth and Space Sciences, or in areas considered to be related;
- Not holding a Doctor's degree
- Reside permanently and habitually in Portugal at the beginning of the work plan at a foreign institution, in cases in which the work plan includes a research period at foreign institutions (blended scholarships); this requirement is applicable to both national and foreign citizens.
- Has not benefited previously from a PhD scholarship or a PhD Industry scholarship directly funded by FCT, regardless of its duration.

4.2 Application requirements

The following documents are mandatory, under penalty of exclusion from the Call:

- Elements of identity card/citizen card/passport;
- Curriculum vitae of the candidate;
- Certificates of qualification of the academic degrees held, necessarily specifying the final classification and, if possible, the classifications obtained in all subjects taken, or, alternatively, a declaration of honor by the candidate on how he/she completed the graduate or Master degree by the end of the application deadline;
- Record of recognition of academic degrees awarded by foreign higher education institutions and record of the conversion of the respective final classification to the Portuguese classification scale, or, alternatively, a declaration of honor by the candidate on how he/she obtained the recognition foreign degree equivalent to that of a graduate or master by the end of the application period;
- Motivation letter;
- Letters of Recommendation (two);
- Work plan, including scheduling of research stages (max. 3 A4 pages, times new roman 12, 1.5 spacing);
- Write the application and all documents associated with it, including the motivation and recommendation letters, in Portuguese or in English.

Regarding the aforementioned admission requirements, the following should be noted:

In the case of academic degrees awarded by foreign higher education institutions, and to guarantee the principle of equal treatment among applicants with national and foreign academic degrees, the applicant must submit proof of recognition of such degrees and the conversion of the respective final average grade to the Portuguese grading scale.

The recognition of foreign academic degrees and diplomas and the conversion of the respective final average grade to the Portuguese grading scale, can be issued by a Portuguese public higher education institution, or by the Directorate-General for Higher Education (Direção Geral do Ensino Superior, DGES: only in the case of automatic recognition). Candidates should consult the DGES portal for more information at <https://www.dges.gov.pt/en>.

Only applicants who have completed the cycle of studies leading to a Bachelor's or Master's degree until the application deadline will be admitted. Applicants who have not yet received their degree certificate/diploma must submit a declaration of honour stating that they will conclude the Bachelor's or Master's degree by the end of the application period. Granting the scholarship will depend on the presentation of proof of the academic qualifications required at the contracting stage.

5. WORK PLAN AND SCIENTIFIC SUPERVISION OF THE SCHOLARSHIPS

The thesis aims to develop and test methodologies for the physical characterization of asteroids and space materials using reflectance and polarimetry spectroscopy techniques. It is also intended to evaluate the potential of these methodologies in the context of characterizing and tracking space debris, new satellites or space vehicles for civil use. The candidate must, when submitting the application, present an outline of a work plan that includes the objectives to be achieved.

The thesis will be supervised by:

- **Professor Teresa Monteiro Seixas**, Department of Physics and Astronomy, Faculty of Sciences, University of Porto, CITEUC;
- **Professor Manuel António Salgueiro da Silva**, Department of Physics and Astronomy, Faculty of Sciences, University of Porto, CITEUC;
- **Doctor Fernando Pinheiro**, CITEUC.

6. EVALUATION CRITERIA AND BONUSES

6.1 Evaluation Criteria

The evaluation will be based on the merit of the candidate, the motivation letter, the work plan and the recommendation letters.

All admitted applications will be ranked according to the weighted average of the score obtained on a scale of 1 to 20 points in each of the following evaluation criteria:

- Criterion A - merit of the candidate, with a weight of 40%;
 - Sub-criterion A1 - academic background and grades obtained, with a weight of 20%;
 - Sub-criterion A2 - curricular path, with a weight of 20%;
- Criterion B – merit of the motivation letter, with a weight of 15%;
- Criterion C - merit of the work plan, with a weight of 25%;
- Criterion D - letters of recommendation, with a weight of 5%;
- Criterion E - Interview, in person or by videoconference, conducted in English with a weight of 15%.

In order to decide the granting of a PhD scholarship, applicants will be ranked according to the weighted average of the score obtained in each of the 5 criteria, according to the following formula:

$$\text{Final classification} = (0.40 \times A) + (0.15 \times B) + (0.25 \times C) + (0.05 \times D) + (0.15 \times E)$$

For tiebreaking purposes, the final ranking list will be based on the scores assigned to each of the evaluation criteria in the following order: criterion A, criterion C, criterion B, criterion E, criterion D.

Important note for candidates holding a degree issued by foreign higher education institutions:

- In the case of academic degrees awarded by foreign higher education institutions, and to guarantee the principle of equal treatment among applicants with national and foreign academic degrees, the applicants must submit proof of recognition of such degrees and the conversion of the respective final average grade to the Portuguese grading scale under the terms of the applicable legislation.
- Applicants with recognized foreign academic degrees who do not submit a proof of conversion of the final average grade to the Portuguese grading scale will be evaluated with the minimum grade of 10 points in criterion A.
- In any case, scholarship contracts with applicants whose diplomas have been issued by foreign institutions will only be concluded upon presentation of proof of recognition of academic degrees and conversion of the final average grade, as indicated above.

Applicants whose application is scored with a final grade lower than 10 are not eligible for scholarship award.

6.2 Bonuses

7. EVALUATION

The evaluation panel is composed of the following members:

- **Doctor Fernando B. Figueiredo**, Department of Mathematics, Faculty of Science and Technology, University of Coimbra, CITEUC: coordinator of the jury;
- **Professor João Manuel Fernandes**, Department of Mathematics, Faculty of Science and Technology, University of Coimbra, CITEUC: full member;
- **Professor Maria Alexandra País**, Department of Physics, Faculty of Science and Technology, University of Coimbra, CITEUC: full member;
- **Professor Caroline dos Santos da Silva**, Department of Physics and Astronomy, Faculty

- of Sciences, University of Porto: alternate member;
- **Doctor David Alegre Vaz**, CITEUC: alternate member.

The evaluation panel will assess applications based on the evaluation criteria described in this Call for Applications, considering the components of evaluation.

All panel members, including the coordinator, will make a commitment to respect the responsibilities of the evaluation process, such as the duties of impartiality, the declaration of any potential conflicts of interest, and confidentiality. At all times during the evaluation process, confidentiality is fully protected and ensured in order to guarantee the independence of all opinions produced.

For each application, a final evaluation form will be produced by the panel, in which the arguments that led to the scores attributed to each of the evaluation criteria and sub-criteria will be presented in a clear, coherent and consistent manner.

Minutes of the meetings of the evaluation panel will be taken under the responsibility of all its members.

The minutes and their attachments must include the following information:

- Name and affiliation of all members of the evaluation panel;
- Identification of all excluded applications and respective reasons ;
- Methodology employed by the panel for particular cases;
- Final Evaluation Sheets for each application;
- Provisional list of the scoring and ranking of the candidates, in descending order of the final grade, of all applications evaluated by the panel;
- Conflict of Interest (COI) statements from all members of the panel;
- Delegations of voting and decision powers by reason of justified absence.

8. DISCLOSURE OF THE RESULTS

Evaluation results will be communicated by email to the address provided by the candidates in the application form.

9. DEADLINES AND PROCEDURES FOR PRELIMINARY HEARING, COMPLAINTS AND APPEALS

Once the provisional ranked list of the evaluation results has been communicated, applicants may

request a preliminary hearing with the interested parties, under the terms of Articles no. 121 and following of the Code of Administrative Procedures (CPA).

The final decision will be announced after the analysis of applicants' arguments presented in the preliminary hearing. Following the final decision, the applicant can file a formal complaint within 15 working days or, alternatively, file an appeal within 30 working days, counting after the communication of the final results.

Applicants who choose to file a complaint should address their request to the member of the FCT Board of the Directors with the delegated competence. Applicants who choose to file an appeal must address their request to the FCT Board of Directors.

10. REQUIREMENTS TO AWARD THE SCHOLARSHIPS

The research scholarship contracts are signed directly with FCT.

The following documents are mandatory, upon conditional awarding of the scholarship for the purposes of contract preparation:

- a) Copy of the document(s) of personal identification, tax number and, if applicable, social security;¹
- b) Copy of the academic degree certificates held by the applicant;
- c) Recognition of the academic degrees obtained abroad and conversion of the final grade to the Portuguese grading scale, if applicable;
- d) Document proving acceptance and enrolment in a Doctoral Programme;
- e) Statement from the supervisor(s) declaring their acceptance to coordinate and supervise the work plan, as established in Article no. 5-A of the Statute for Research Fellowships (template will be made available by FCT);
- f) Institutional document supporting the applicant, issued by the institution where the work plan will be carried out, guaranteeing the necessary conditions to its successful development, as well as the fulfilment of the duties established in Article no. 13 of the Research Fellowship Holder Statute (template will be made available by FCT);
- g) Updated document proving the exclusive dedication regime (template will be made available by FCT);
- h) Work Plan.

¹ Instead of providing these documents, the candidate may opt to present them in person at the financing body, which will store the data contained in them that are relevant for the validity and execution of the contract, including the civil, tax and social security identification numbers, as well as the validity of the respective documents.

The granting of the scholarship is still dependent on:

- The fulfilment of all the requirements listed in this Call for Applications;
- The results of the scientific evaluation;
- The absence of unjustified non-compliance of the fellowship holder during previous directly or indirectly funded FCT fellowships;
- The FCT's available budget.

The lack of any of the necessary documents to complete the contracting procedure implies the expiration of the scholarship granting and conclusion of the process; applicants have up to 6 months after the disclosure of the provisional granting to present all of the documents listed.

11. FUNDING

Scholarship payment will start after the signed contract is returned to FCT, which should happen within 15 working days after its delivery.

The scholarships granted in this call will be financed by FCT using the State Budget fund and, whenever eligible, using the European Social Fund (ESF), under the PORTUGAL2020 programme, in particular the Programa Operacional Regional do Norte (NORTE 2020), Programa Operacional Regional do Centro (Centro 2020) e do Programa Operacional Regional do Alentejo (Alentejo 2020), according to the legal requirements of the regulatory provisions applicable for this purpose.

12. SCHOLARSHIP COMPONENTS

A monthly maintenance allowance is granted to the fellows in accordance with the table in Annex I of the RBI.

The scholarship may also include additional allowances, according to RBI's Article no. 18 and the values indicated in its Annex II.

All the scholarship holders have a personal accident insurance related to the research activities, which FCT will support.

All scholarship holders who are not beneficiaries of any social protection regime have the right to register for social security through the voluntary social insurance regime, under the terms of the Contributory Scheme of the Social Security System. FCT will ensure the charges resulting from contributions under the terms and the limits provided in Article no. 10 of the EBI.

13. PAYMENT OF THE SCHOLARSHIP

Payments due to the scholarship holder are made by bank transfer to the bank account indicated. The monthly maintenance allowance is paid on the first working day of each month. Registration, enrolment and tuition fees are paid directly by FCT to the national institution where the scholarship holder has enrolled or is registered in a 3rd Cycle of Studies/PhD Programme.

14. TERMS AND CONDITIONS OF PhD SCHOLARSHIP RENEWAL

The renewal of the scholarship always depends upon the applicant's request, within 60 working days prior to the renewal start date, which must include the following documents:

- a) Declaration(s) issued by the supervisor(s) and by the host institution(s) attesting the work plan development and the evaluation of the respective activities;
- b) Updated document proving compliance with the exclusive dedication regime;
- c) Declaration proving enrolment renewal in the study cycle leading to the doctoral degree.

15. INFORMATION AND PUBLICITY OF THE GRANTED FUNDING

All the R&D activities carried out by the grantee, directly or indirectly financed by the scholarship, namely, papers, publications and scientific creations, as well as the thesis, must include the reference to FCT and the European Social Fund (ESF) financing through, namely, following operational programs: Programa Operacional Regional do Norte (NORTE 2020), Programa Operacional Regional do Centro (Centro 2020) and Programa Operacional Regional do Alentejo (Alentejo 2020). Therefore, the FCT, MCTES, ESF, EU logos must be included in the documents referring to these actions, according to the graphic rules of each operational programme.

The disclosure of research results funded according to the RBI provisions must comply with the open access guidelines, publications and other research results in accordance with FCT rules.

For all the scholarships, in particular in case of European funded actions, namely the ESF, may be performed monitoring and controlling actions by national or European entities according to the applicable legislation.

Grantees must therefore collaborate and provide all the required information, including answering to surveys and evaluation studies in this area, even though the scholarship might have already ceased.

16. NON-DISCRIMINATION AND EQUAL ACCESS POLICY

FCT promotes a policy of non-discrimination and equal access, thus no applicant may be privileged, benefited, damaged or deprived of any right or exempted from any duty, due to ancestry, age,

gender, sexual orientation, marital status, family status, economic status, education, origin or social condition, genetic heritage, reduced work capacity, disability, chronic disease, nationality, ethnicity or race, territory of origin, language, religion, political or ideological beliefs or trade union affiliation.

17. APPLICABLE LEGISLATION AND REGULATIONS

The present call is governed by the FCT Regulations for Research Fellowships approved by the Regulation no. 950/2019 (published in the Series II of the DR, of 16th December), by the Research Fellowship Holder Statute (approved by Law no. 40/2004, of 18th of August, in its current version), and by other applicable national and European legislation.