

## **Announcement of the Call for Awarding of a Doctoral Research Fellowship**

The ICT - Institute of Earth Sciences, UIDP/04683/2020, through its promoting institution the Universidade de Évora (UE), announces a call for the award of 1 (one) research grant, hereinafter referred to as PhD Research Grant, or simply as "Grant", in the areas of **Earth, Atmosphere and Environmental Sciences**, under the FCT Research Grants Regulations (RBI) and the Research Grant Holder Statute (EBI).

The grant will be funded by the Fundação para a Ciência e Tecnologia (FCT) under the scope of the Collaboration Protocol for the Funding of the Pluriannual Research Grant Plan for PhD Students, signed between FCT and the R&D Unit of the Instituto de Ciências da Terra, UIDP/04683/2020.

### **1. SUBMISSION OF APPLICATIONS**

The call is open from **22 November 2022 until 23h59 (Lisbon time) of 22 February 2023**.

Applications and supporting documents for the application foreseen in this Call for Applications must be submitted by email to the coordinator of the evaluation panel, Dr. Lourenço da Saúde, holder of the CEiiA Chair in Aerospace Science and Technology at the University of Évora ([lourenco.saude@uevora.pt](mailto:lourenco.saude@uevora.pt)).

Each candidate may submit only one application, under penalty of cancellation of all submitted applications.

In case several applications are submitted by the same candidate, the jury will proceed to reject the respective file, and the candidate will be excluded.

The provision of false statements or plagiarism by the candidates shall be grounds for cancellation of the application, without prejudice to the adoption of other sanctioning measures, according to the applicable legislation.

### **2. TYPE AND DURATION OF THE GRANT**

The present PhD research grant is intended to finance research activities leading to a doctoral degree in Portuguese universities.

The research activities leading to a doctoral degree will take place at the Evora Pole of the Institute of Earth Sciences, which will be the grantee's host institution, although the work may be carried out in collaboration with more than one institution.

The research activities leading to a PhD degree of the selected grant holder must be included in the activities and strategy plan of the Institute for Earth Sciences and must be developed within the framework of a PhD programme of the University of Evora, preferably the PhD programme in Earth and Space Sciences of the University of Evora.

The work plan can take place entirely or partially in a national institution (in-country grant or mixed grant,

respectively).

The duration of the grant is, in principle, one year, renewable for up to a maximum of four years (48 months) and cannot be awarded for a period of less than three consecutive months.

In the case of mixed grants, the period of the work plan that takes place in a foreign institution cannot exceed 24 months.

### 3. RECIPIENTS OF THE GRANT

The Doctoral Research Grant is intended for candidates enrolled in the PhD Programme in Earth and Space Sciences at the University of Evora and who wish to develop research activities leading to the award of a doctoral degree at the Evora Pole of the Earth Sciences Institute.

### 4. ADMISSIBILITY

#### 4.1 Admissibility requirements:

The following are the requirements allowing candidates to be eligible to apply to the present call:

- National citizens and citizens from other member states of the European Union.
- Non-EU citizens.
- Stateless persons.
- Citizens benefiting from the status of political refugee.

To apply for a PhD Research Scholarship it is also necessary that the candidate fulfil one of the following conditions:

- Hold a degree with training, in areas of Earth, Atmospheric or Environmental Sciences or in areas considered related, in one of the following degrees:
  - five year graduation degree obtained in the pre-Bologna regime.
  - Master in Science obtained in the pre-Bologna regime.
  - Master in Science obtained in the Bologna regime.
- To be permanently and habitually resident in Portugal at the starting date of the work plan period abroad, if the proposed work plan includes a period in foreign institutions (mixed grants), a requirement applicable to both Portuguese and foreign citizens.
- not to have benefited from a PhD or PhD in Enterprise grant directly funded by FCT, regardless of its duration.
- not to hold a PhD degree.

#### 4.2 Admissibility requirements for the application

It is indispensable, under penalty of not being admitted to the call, to attach the following documents to the application:

- Elements of the identity card/citizen card/passport.
- Curriculum vitae of the candidate.
- Certificates of academic qualifications, specifying the final score and, if possible, the marks obtained in all the courses taken, or alternatively, a declaration of honour from the candidate that he/she will conclude the degree of Master in Science by the end of the application deadline.
- A record of recognition of academic degrees awarded by foreign higher education institutions and a record of the conversion of the respective final grade into the Portuguese grade system, or, alternatively, a declaration of honour from the applicant stating that he/she will obtain the recognition of the foreign degree equivalent to Master in Science by the deadline for application.
- Letter of motivation identifying the work plan for which you are applying (see point 5).
- Letters of Recommendation (two).
- Application form and all associated documents, including letters of motivation and recommendation, written in Portuguese or English.

Regarding the admissibility requirements mentioned above, the following should be noted:

- In the case of academic degrees awarded by foreign higher education institutions, and to ensure the application of the principle of equal treatment to applicants holding foreign and national academic degrees, the recognition of these degrees and the conversion of the respective final grade into the Portuguese grade system is mandatory.

The recognition of foreign academic degrees and diplomas as well as the conversion of the final grade into the Portuguese grade system may be requested in any public higher education institution, or in the Portuguese Directorate General of Higher Education (DGES, only in the case of automatic recognition). Regarding this matter, we suggest consulting the DGES portal through the following address: <http://www.dges.gov.pt>.

- Only candidates that have concluded the study cycle leading to a master degree by the application deadline will be admitted.

If the candidate, at the time of submitting the application, still does not have the certificate of completion of the course, a declaration of honour from the candidate that he/she will complete the necessary qualifications for the competition by the end of the application deadline will be accepted.

The awarding of the scholarship is always dependent on the presentation of proof of the academic qualifications required for the awarding of the scholarship.

- In case the applicant holds a five year graduation course degree and a Master in Science degrees both in the pre-Bologna regime, for the purposes of defining the academic grade to access to the call, the arithmetic average of the grades obtained in the referred courses shall be calculated.
- If the applicant holds a Master in Science degree in pre-Bologna regime, whose grade is qualitative, for the purposes of defining the academic grade to access to this call, it shall be considered the grade obtained in the five years graduation course attained during the pre-Bologna regime.
- In case the candidate holds only five years graduation course in the pre-Bologna regime, for the purposes of academic grade for the access to the present call, the respective final grade shall be

considered.

## 5. WORK PLANS AND SCIENTIFIC GUIDANCE OF THE GRANT

This section presents 16 work plans from each candidate should choose only one of them in their application.

These grant work plans are framed in the activity plan and strategy of the R&D Unit.

The plans are the following:

- Work Plan 1: Effects of climate change on the chemical and ecological status of water bodies, on air quality or on the risk of fire, drought intensification or desertification.
- Work Plan 2: Impacts of atmospheric exposure on Human Respiratory Health: effect of climate change and land use.
- Work Plan 3: Evaluation of satellite products for characterization of Earth System components: multi-sensor approach for the consolidation of series of three-dimensional parameters relevant for climate.
- Work Plan 4: Development of a new drought severity index based on remote sensing.
- Work Plan 5: Floating photovoltaic systems: modelling and simulation.
- Work Plan 6: Numerical modelling of the geochemical interaction of H<sub>2</sub>/CO<sub>2</sub> - rock - brine in geological reservoirs.
- Work Plan 7: Design and optimization of internal flow structures in solar thermal receivers.
- Work Plan 8: Correlation analysis between the geochemical evaluation of the metallogenic potential and the use of geophysical methods and thematic mapping by aerophotogrammetry: construction of holistic models in a GIS environment, using geostatistical techniques.
- Work Plan 9: Spatial and temporal contamination of the Tagus estuary area: assessment of the risk of sediment dredging on water quality.
- Work Plan 10: Development of cartographic models of soil fertility from a geological basis, as a basis for new models of forest and agricultural aptitude.
- Work Plan 11: Remediation technologies for aquatic systems contaminated by mining activities: evaluation of the possibility of exploitation of metals with high economic value.
- Work Plan 12: Improved understanding of active volcanic seismic systems from the combined interpretation of seismic and geodetic data, local recording and remote sensing.
- Work Plan 13: Orogenic processes in the context of the geodynamic evolution of Portugal.
- Work Plan 14: Autonomous drone sensors and images for combined environmental monitoring: design, modelling, Matlab simulation, hardware and software design, testing and evaluation.
- Work Plan 15: Detection of archaeological structures using remote earth observation techniques.
- Work Plan 16: Seismicity and seismic tomography.

## 6. EVALUATION CRITERIA AND BONUSES

The criteria for the evaluation of each of the applications to be submitted under this call are listed below:

- Criterion A - Curriculum Evaluation, with a weight of 70%.
  - Sub-criterion A1 - Education, with a weight of 25% where A1 assumes the values below, based on the grade with which the applicant completed the academic degree specified in "4.1 Admission requirements of the applicant":
    - 1 for final grade higher than 16 values.
    - 0.8 for final grade higher than 14 and 16.
    - 0.4 for final grade between 12 and 14.
    - 0.2 for grade between 10 and 12.
  - Sub-criterion A2 - Participation in relevant research projects and activities and experiences, with a weight of 20% where A2 assumes the following values:
    - 1 for the candidate who has developed activities in the last calendar year.
    - 0 for the candidate who has never developed activities.
  - Sub-criterion A3 - Scientific production and its relevance, with a weight of 20% where A3 assumes the following values:
    - 1 for the candidate who has published at least 3 (three) articles in scientific journals or participated in a book in the field of Earth, Atmospheric or Environmental Sciences or in areas considered related.
    - 0,5 for the candidate who has published 1 (one) article in scientific journals or has participated in a book in the field of Earth, Atmospheric or Environmental Sciences or in areas considered to be related.
    - 0 for the candidate that never published any article in scientific magazines or participated in a book in the domain of Earth, Atmospheric or Environmental Sciences or in areas considered related.
  - Sub-criterion A4 - Training and professional experience with relevance to the work plan, with a weight of 15% where A4 assumes the following values
    - 1 for the candidate who at the date of submission of the application is carrying out professional activity in Earth, Atmospheric or Environmental Sciences or in areas considered related.
    - 0 for the candidate without professional experience.
  - Sub-criterion A5 - Motivation letter for developing the work plan and letters of recommendation, with a weight of 10%, where A5 assumes the following values
    - 1 for motivation letter that clearly describes and adequately structured the plan of

activities to be carried out and presents letters of recommendation produced by at least one national or foreign doctor specialized in the fields of Earth, Atmospheric or Environmental Sciences or in areas considered related.

- 0,5 for the letter of motivation and letters of recommendation that do not fit in the previous point.
- Sub-criterion A6 - Suitability of the candidate's profile to develop the work plan, with a weight of 10% where the value of A6 is the following
  - 1 for the candidate who is assessed with full suitability to carry out the work proposed by him/her.
  - 0,5 for the candidate in relation to whom there are doubts about his/her capacity to carry out the proposed work.
  - 0 for the candidate for whom it is considered that he/she does not have the capacity to carry out the proposed work.

The grade in criterion A is translated through the following formula:

$$\text{Critério A} = (0,25 \times A1) + (0,2 \times A2) + (0,2 \times A3) + (0,15 \times A4) + (0,1 \times A5) + (0,1 \times A6) \text{ points}$$

Where the maximum value for criterion A is 1.

- a) Only candidates obtaining a score equal or higher than 0,250 points in criterion A will be admitted to the second phase of the evaluation process which will involve an interview, being the purpose to assess the candidate ability to carry out the work proposal submitted. The interview is to be scored on a system of 1 to 5 levels (Criterion B) with the following scores for each case:

Level	Score Criterion B	Result of interview
5	1	Candidate was unanimously approved by the jury
4	0,8	Candidate was only not approved by a jury member
3	0,5	Candidate approved by the majority of the members of the jury
2	0,3	Candidate only approved by 2 members of the jury
1	0	Candidate unanimously rejected by the jury

- b) Criterion B - Interview, with a weighting of 30% where the maximum value is 1 and the minimum 0.
- c) The interview associated to Criterion B may take place non-presentially, through a digital platform, and may be recorded, for joint evaluation by the jury and with the candidate's written consent.
- d) For the purpose of the decision on the award of the scholarship, the candidates will be ordered according to the weighted average of the grade obtained in each of the two above mentioned criteria, translated by the following formula whose maximum value is 1:

$$\text{Final score} = (0,7 \times A) + (0,3 \times B)$$

- e) In case of a tie in the final score, the candidates will be ordered for tie-breaking purposes based on the grade s attributed to each of the evaluation criteria in the following order of precedence: criterion A

then criterion B.

- f) Candidates whose application is evaluated with a final score lower than 0,325 points shall not be eligible for a scholarship

**Important notice for applicants with diplomas issued by foreign institutions of higher education:**

- Applicants with diplomas issued by foreign higher education institutions may apply and will be evaluated according to the same criteria as applicants with diplomas issued by Portuguese institutions, provided that they submit, in their application, proof of recognition of the academic degrees and of the conversion of the final grade into the Portuguese grade according to the applicable legislation.
- Applicants with recognized foreign degrees who do not present proof of the conversion of the final grade into the Portuguese grade will be assessed with the minimum grade of 0.1 points in sub-criterion A1.
- In any case, the grant contract with a candidate with a diploma issued by a foreign institution will only be signed upon presentation of the proof of academic degree recognition and conversion of the final grading, as indicated above.

**6.1. Bonus**

Not applicable.

**7. ASSESSMENT OF APPLICANTS**

The evaluation panel of candidates is composed of the following elements:

- Doctor Lourenço da Saúde, head of the CEiiA Chair in Aerospace Science and Technology, University of Évora (Panel coordinator).
- Doctor Miguel Potes, University of Évora.
- Doctor Rui Oliveira, University of Évora.
- Doctor Jorge Pedro, University of Évora.
- Doctor Paulo Canhoto, University of Évora.
- Doctor Manuela Morais, University of Évora.
- 1st Substitute - Doctor Daniel Bortoli, University of Évora.
- 2nd Substitute - Doctor Souhila Chabane, University of Évora.

The Evaluation Panel will assess the applications in accordance with the evaluation criteria set out in this Notice of Call for Applications.

Apart from the Coordinator of the Panel, who has no voting rights, the other members have equal voting rights. All panel members, including the coordinator, undertake to respect a set of responsibilities essential to the evaluation process, such as the duty of impartiality, to declare the absence of conflict of interests (hereinafter CDI) and to maintain confidentiality of the entire process related to this Call. At all moments of the evaluation



process, confidentiality is fully protected and ensured to guarantee the independence of all opinions produced. For each application, the panel will produce a final evaluation report where the arguments that led to the scores attributed to each of the evaluation criteria and sub-criteria are presented in a clear, coherent and consistent manner, as well as any bonuses awarded [not applicable in this case].

The minutes of the evaluation panel meetings shall be produced under the responsibility of all its members.

The minutes and their annexes shall in mandatory manner include the following information:

- Name and affiliation of all members of the evaluation panel.
- Identification of all excluded applications and respective grounds [if applicable].
- Methodology adopted by the panel for cases considered particular [if applicable].
- Final evaluation report for each candidate.
- Provisional ranking and seriation list of candidates, in descending order of the final ranking, of all applications evaluated by the panel.
- CDI declarations of all the panel members.
- Possible delegation of vote and competencies due to justified absence [if applicable].

## 8. RESULTS

The evaluation results will be communicated via e-mail to the e-mail address used by the candidate to submit the application.

## 9. DEADLINES AND PROCEDURES FOR PRIOR HEARINGS, COMPLAINT AND APPEAL

After notification of the provisional list of evaluation results, the candidates have a period of 10 (ten) working days to, if they so desire, to make their comments in a prior hearing of interested parties, under the terms of articles 121 and following of the Administrative Procedure Code.

The final decision will be issued after the analysis of any of the statements submitted during the prior hearings by applicants. Complaints may be lodged against the final decision within 15 (fifteen) working days, or alternatively an appeal may be lodged within 30 (thirty) working days, both counting from the respective notification date. Candidates who choose to file a complaint should address their complaint to the member of the Board of Directors of the Foundation for Science and Technology (FCT) with delegated authority. Candidates who choose to file an appeal should address their appeal to the FCT Board of Directors.

## 10. REQUIREMENTS FOR AWARDING A GRANT

The research grant contract is entered directly into with FCT.



The following documents must be submitted, at the time the grant is awarded, for the purpose of contracting it:

- a) Copy of the civil, fiscal and, when applicable, social security identification document(s).
- b) Copy of the relevant academic certificates of the academic degrees obtained.
- c) Presentation of the foreign academic degree recognition register and conversion of the respective final grade into to the Portuguese grade system if applicable.
- d) Work plan.
- e) Document proving enrolment and registration in one of the Doctoral Programmes identified in the present Notice.
- f) Statement from the advisor(s) assuming responsibility for supervising the work plan, under the terms of article 5-A of the Research Grant Holder Statute (draft of the statement to be made available by FCT).
- g) Document proving acceptance of the applicant by the institution where the research activities will take place, guaranteeing the necessary conditions for the proper development of the research activities, as well as fulfillment of the duties established in article 13 of the Research Grant Holder Statute (draft statement to be made available by FCT).
- h) Up-to-date document proving compliance with the regime of exclusive dedication (draft statement to be made available by FCT).

The award of the grant is also subject to:

- fulfilment of the requirements set out in this Announcement of the Call.
- the result of the scientific evaluation.
- the absence of unjustified non-compliance with the duties of the grant recipient under a previous grant agreement, directly or indirectly funded, that has been entered into with this FCT entity.
- FCT budget availability.

Failure to submit any of the documents needed to complete the grant contractualization process within 6 months of the date of communication of the decision to award the grant conditionally, will result in the expiration of the grant and the termination of the process.

## 11. FINANCING

Payment of the grant will begin after the applicant returns the duly signed grant contract, which must occur within a maximum of 15 (fifteen) working days from the date of receipt.

The grant awarded under this call is financed by FCT with funds from the State Budget and, when eligible, with funds from the European Social Fund (ESF), to be made available under the PORTUGAL2020 programme, through, namely, the Regional Operational Programme of the North (NORTE 2020), the Regional Operational Programme of the Centre (Centro 2020) and the Regional Operational Programme of the Alentejo (Alentejo 2020), according to the regulations established for this purpose.

## **12. COMPONENTS OF THE GRANT**

The grant holder will receive a monthly allowance under the terms of the table in Annex I of the current FCT Research Grant Regulations (hereinafter RBI).

The grant may also include other components, under the terms set forth in article 18 of the RBI and by the amounts established in its Appendix II.

The grant recipient shall be covered by FCT for personal accident insurance related to the research activities.

Grant recipients who are not covered by any social protection system may exercise their right to social security by joining the voluntary social insurance system, under the terms of the Social Security Contributions Code.

## **13. PAYMENT OF GRANT COMPONENTS**

Payments due to the grant recipient shall be made by bank transfer to the account identified by the holder of the grant. The payment of the monthly allowance will be made on the first working day of each month.

Payments for registration, enrolment and tuition fees shall be made by FCT directly to the national institution where the grant recipient is enrolled or enrolled in the doctoral programme.

## **14. TERMS AND CONDITIONS OF RENEWAL OF THE GRANT**

Renewal of the grant always depends on a request submitted by the grant holder within 60 (sixty) working days prior to the start date of the renewal, accompanied by the following documents:

- a) statement(s) issued by the supervisor(s) and host entity(ies) on the monitoring of the grant holder's work and the evaluation of his/her activities.
- b) up-to-date document proving compliance with the regime of exclusive dedication of the holder of the grant
- c) document proving renewal of enrolment in the cycle of studies leading to a doctoral degree.

## **15. INFORMATION AND PUBLICITY OF GRANTED FUNDING**

In all R&D activities directly or indirectly funded by the grant, namely in all communications, publications and scientific creations, as well as thesis, carried out with the support provided by the grant, mention should be made of the financial support from FCT and the European Social Fund, through, namely, the Regional Operational Programme of the North (NORTE 2020), the Regional Operational Programme of the Centre (Centro 2020) and the Regional Operational Programme of the Alentejo (Alentejo 2020). To this end, the insignia of the FCT, the MCTES, the ESF and the EU shall be included in the documents relating to these actions, in accordance with the graphic standards of each operational programme.

Dissemination of results of research funded under the RBI shall comply with the open access rules for data, publications and other research results in force at the FCT.

In all grants, and in particular in the case of actions supported by EU funding, namely from the ESF, monitoring and control actions may be carried out by national and EU bodies, in accordance with the legislation applicable in this area. The grant recipients are obliged to cooperate and provide the requested information, which includes carrying out surveys and evaluation studies in this area, even if the grant has already ended.

## **16. POLICY OF NON-DISCRIMINATION AND EQUAL ACCESS**

FCT promotes a policy of non-discrimination and equal access, in which no applicant shall be privileged, benefited, prejudiced, or deprived of any right or exempted from any duty because of ancestry, age, gender, sexual orientation, marital status, family situation, economic situation, education, origin or social status, genetic patrimony, reduced work capacity, disability, chronic illness, nationality, ethnic origin or race, territory of origin, language, religion, political or ideological convictions, or union membership.

## **17. APPLICABLE LEGISLATION AND REGULATION**

The Call is governed by this Opening Notice, by the FCT Research Grants Regulation, approved by Regulation No. 950/2019, published in the II Series of the DR of 16 December 2019, by the Research Grant Holder Statute approved by Law No. 40/2004, of 18 August, as amended, and by all other applicable national and EU legislation.