

#4350

Public Notice - International Selection Procedure

Recruitment of a Research Technician with a Bachelor Degree (employment contract)

FCiências.ID/2023/IA/1

FCiências.ID - Associação para a Investigação e Desenvolvimento de Ciências, through its Chairman of the Board of Directors, hereby announces the opening of an international call for the recruitment of a Research Technician with a Bachelor Degree, of the FCIências.ID Science and Technology Management Career, within the scope of the project ESOST-PT-1: Euclid Survey Operations Support Team: phase 1 (Ref. PRODEX - ESOST-PT-1), financed by ESA (European Space Agency) through the PRODEX program (ESA), in the form of a(n) indefinite duration fixed-term employment contract, on an exclusive regime, according to the Portuguese Labour Code and complementary legislation.

I. Admission Requirements

Portuguese nationals, foreign and stateless persons may submit applications to this selection procedure, with a Bachelor degree¹, and fully comply with the following requirements:

- a) Experience in algorithms/software development - information provided in the CV and/or in the motivation letter;
- b) Experience in C programming - information provided in the CV and/or in the motivation letter.

¹ Please note that Degrees obtained in foreign countries need a Portuguese Recognition issued by a Portuguese high degree Institution, according to the [Decree-Law nr. 66/2018](#), of August 16th and the [Ministerial Order nr. 33/2019](#), of January 25th. The presentation of such Recognition is mandatory for contract signature. More information can be obtained in: <https://www.dges.gov.pt/en/pagina/degree-and-diploma-recognition>.

II. Preferential Requirements

- a) Degree in Software engineering, Computer Science or similar - information provided in the CV and/or in the motivation letter;
- b) Over 7 years' experience in algorithms/software development - information provided in the CV and/or in the motivation letter;
- c) Experience in development of geometrical algorithms - information provided in the CV and/or in the motivation letter;
- d) Familiarity with quaternion algebra in the context of three-dimensional spatial orientations - information provided in the CV and/or in the motivation letter;
- e) Knowledge of Linux and shell programming - information provided in the CV and/or in the motivation letter;
- f) Knowledge of Postscript programming - information provided in the CV and/or in the motivation letter;
- g) Experience in development of complex software - information provided in the CV and/or in the motivation letter;
- h) Experience in development of scientific software - information provided in the CV and/or in the motivation letter;
- i) Working experience in ESA projects - information provided in the CV and/or in the motivation letter;
- j) Experience with versioning control software and repositories such as Git - information provided in the CV and/or in the motivation letter;
- k) Proficiency in English - information provided in the CV and/or in the motivation letter;
- l) Attention to detail and ability to solve problems autonomously - information provided in the CV and/or in the motivation letter.

III. Applicable Law

1. Portuguese Labour Code, as approved by Law No. 93/2019, of September 04th, in its current version (CT);
2. Administrative Procedure Code, as published in Decree-Law No. 4/2015, of January 7th, in its current version (CPA).

IV. Work plan

The selected candidate will be responsible for the maintenance and further development and documentation of the existing sky survey ECTile software developed in the Faculty of Sciences of the University of Lisbon for ESA's Euclid space mission. ECTile is a survey generation software that produces the sequence of observations to be performed by the Euclid space telescope during its operations. ECTile has a complex architecture with over one hundred modules and tailor-made algorithms for tessellation of the sphere, generation of sky polygons, construction of optimized point-to-point routes in the sphere, computations of polygons areas, and uses quaternions algebra to define pointings in the sky and spacecraft rotations. It is written in C and contains a total of 70,000 lines of code (70K LOC). The selected candidate will be a key player in the Survey Operations Support Team (SOST) of the Euclid Consortium.

This is the team responsible for producing updated operational survey files for timely deliveries to ESA's Science Operations Center (SOC). Other SOST members include the lead that manages the project in close interaction with various key elements of the Euclid mission; other members that will run ECTile to produce the survey files and ancillary analyses to be delivered to ESA's SOC; and possibly a part-time programmer to assist the candidate when needed. The team already has expertise in astrophysics and mission planning, and they are not requirements for this position.

The working plan includes the following tasks to support the scientific observations of the Euclid mission:

- 1) Familiarize him/herself with the code of the software ECTile;
- 2) Designing and implementing algorithms to address replanning needs specified by the Mission Operations Coordination Group, MOCG;
- 3) Producing new code to support case-studies, for constant assessment of scenarios with the goal of keeping the software in a state of readiness;
- 4) Maintaining software versions and documentation in a Git repository.

Euclid is the current state-of-the-art European Space Agency mission for cosmology. The Euclid satellite is launched on July 2023 for a 6-year mission to study the properties of the Universe. It will probe dark energy, dark matter and gravity by mapping a large fraction of the sky, observing a billion galaxies, measuring clustering and gravitational lensing properties. The working plan is done in the SOST team, with a strong interface with ESA. The work will require a few working visits abroad.

V. Composition of the Jury

The members of the jury are:

- President - Dr. Ismael Tereno, Instituto de Astrofísica e Ciências do Espaço;
- 1st Member of the jury - Prof. Dr. António da Silva, Faculdade de Ciências da Universidade de Lisboa;
- 2nd Member of the jury - Dr. João Dinis, Faculdade de Ciências da Universidade de Lisboa;
- 1st Alternate Member of the jury - Dr. Alberto Krone Martins, Universidade da Califórnia, Irvine, USA;
- 2nd Alternate Member of the jury - Prof. Dr. Francisco Lobo, Faculdade de Ciências da Universidade de Lisboa.

VI. Place of work

Work will be developed at the facilities of Research Center IA – Institute of Astrophysics and Space Sciences, in Campo Grande, Lisboa, Portugal. The work can be done remotely by mutual agreement.

VII. Contract Duration

The indefinite duration fixed-term employment contract, on an exclusive regime, is expected to start in September 2023, and will last until the Work Plan referred to in section IV is completed. It will have an expected initial duration until 31/08/2024, will not exceed the limits set in the CT, including an initial experimental trial period of 30 days. However, an extension of the research project contract is envisaged for further 2 years.

VIII. Monthly Allowance

The gross monthly salary to be awarded is between 2228,11 and 3722,16 Euros, according to the FCIências.ID career, according to the experience of the selected candidate, corresponding to level between 33 and 61 of the Single Remuneratory Table, as approved by Government Order No. 1553-C/2008, of December 31st, in its current version, on an exclusive regime, on which legal discounts will apply, plus holiday and Christmas allowances, as well as food allowance in the amount and conditions set out for workers with a legal employment relationship under the Labour Code.

IX. Evaluation of applications

1. Failure to comply with the Admission Requirements implies the non-admission of candidates in absolute merit.
2. The final classification of candidates is given on a scale of 0 to 100%.
3. Based on the assessment of the candidates' scientific and curricular background, each member of the jury presents a justified proposal for admission (final classification equal to or greater than 75%) or exclusion (final classification below 75%) for each candidate, according to the evaluation criteria referred to in no. 4.
4. Evaluation of the relative merit of candidates, will rely on the following criteria:
 - a) Experience and quality demonstrated in the fields indicated in the competition requirements (sections I and II) - 80%;
 - b) Letter of motivation - 20%;
 - c) Interview, if deemed necessary by the jury - 30%.
5. The jury may decide to interview the 8 best ranked candidates [in criteria a) to b) of no. 4], for clarifications and improved explanations of curricular elements. If there is an interview, the sum of the classification obtained in the evaluation criteria a) to b) will correspond to 70% of the final classification and the interview will correspond to 30%.
6. The jury shall deliberate by means of a roll-call vote based on the evaluation criteria.
7. Minutes of the jury meetings are drawn up, summarizing all relevant elements considered by jury members, as well as their individual votes and justifications.
8. After completion of the evaluation process, the jury will draw up a ranking of successful candidates with their classifications.
9. Hiring will be decided by the Chairman of the Board of Directors of FCIências.ID, based on the final jury recommendation.
10. The evaluation results will be published on the website of the FCIências.ID ("Concursos" tab). The candidates will be individually notified of the evaluation results by e-mail sent to the address indicated in the "Personal Data" section of the submitted form.
11. With the notification referred to in no. 10, the hearing phase of interested parties referred to in Article 121 *et seq.* of the CPA will begin, and last for ten working days.
12. The possible pronouncement of the candidate in a prior hearing must be addressed to the President of the jury and submitted in writing to concursos@fciencias-id.pt. The President of the jury will convene a jury's meeting to produce the final decision, within thirty working days.

13. Within five working days of the final jury decision, the Chairman of the Board of Directors of FCIências.ID will approve it and the candidates will be notified.
14. The communication between FCIências.ID (concursos@fciencias-id.pt) and the candidates will be electronic and will comply with the following rules:
 - a) At the time of electronic submission of any document - namely in the case of no. 12 - the candidates must generate proof of "sent message".
 - b) FCIências.ID will send an email message acknowledging documents received to the email address used by the candidates, within two working days.
 - c) In case of absence of a confirmation receipt by FCIências.ID – showing the possibility of technical problems that should neither be the responsibility of the candidate nor FCIências.ID - the candidates should contact FCIências.ID, with the proof referred to in point (a), to ensure delivery and proper receipt of the documents concerned.

X. Processing of personal data

1. FCIências.ID - Associação para a Investigação e Desenvolvimento de Ciências, as the responsible for processing the personal data, in accordance with the [General Data Protection Regulation](#), collects and processes the personal data requested in the context the job application, under paragraphs b) and c) of Article 6.1 of the General Data Protection Regulation (RGPD).
2. The personal data shall be kept for the period necessary for the execution of the purposes for which they are intended, and the processing and protection, in an appropriate and diligent manner, of the confidentiality and integrity of such data shall be ensured through appropriate technical and organisational measures.
3. Personal data may be transmitted to third parties, namely the entity funding the research project, solely for the purposes specifically established. In this sense, whenever necessary the transfer of personal data to countries outside the European Union and/or international organizations, compliance with the applicable legal provisions shall be ensured.
4. You have the right to request access, rectification, erasure, limitation of processing, the right to object and also data portability (if technically feasible) by sending an e-mail to: dpo@fciencias-id.pt. You also have the right to lodge a complaint with the National Data Protection Commission.
5. For more information, we recommend that you consult the Internal Rules of Data Protection of FCIências.ID - Association for Research and Development of Sciences at <https://fciencias-id.pt/>.

XI. Compliance with public policies

1. FCIências.ID actively promotes a policy of non-discrimination and equal access, so that no candidate can be privileged, benefited, disadvantaged or deprived of any right or exempt from any duty due to, inter alia, ancestry, age, sex, sexual orientation, marital status, family status, economic situation, education, social origin or condition, genetic heritage, reduced working capacity, disability, chronic illness, nationality, ethnic origin or race, territory of origin, language, religion, political or ideological beliefs and trade union membership.
2. Under the terms of D.L. No. 29/2001, of February 3rd, a disabled candidate has a preference in equal classification, which prevails over any other legal preference. Candidates must declare their respective degree of disability, the type of disability and the means of communication / expression to be used in the selection process, under the terms of the above-mentioned diploma.

XII. Submission of Applications

1. The present call will be open from the 28th of June 2023 to the 25th of July 2023.
2. The application and all the required documents must be submitted in Portuguese or English.

3. Applications will be submitted online, through the electronic platform of FCIências.ID (<http://concursos.fcencias-id.pt>).
4. On the electronic platform, applicants will complete a mandatory section on Personal Data [name, address, date of birth, contact email, nationality and scientific identifiers] and upload files with the documents listed below:
 - i. Detailed *curriculum vitae* in PDF format - *mandatory*;
 - ii. A motivation letter clearly demonstrating that the candidate has an adequate profile for the position and fully complies with the Admission Requirements (Motivation letter) - *mandatory*;
 - iii. Reference letter(s) - *optional*;
 - iv. Digital copies of documents proving formal academic degrees required in the call and/or other scientific and professional qualifications - original documents must be provided in case of actual recruitment - *mandatory*;
 - v. Other documents that candidates consider relevant for the assessment of their scientific merit, or to declare the personal situation in the cases covered in section XI-2 of this Notice - *optional*.
5. By decision of the Chairman of the Board of Directors of FCIências.ID, candidates who do not submit the documents identified in no. 4 will not be admitted to the call. In case of doubts, the Chairman may also invite candidates to substantiate specific data or statements with official supporting documents, before accepting the candidates' submission.

This Public Note was approved by the jury on the 27th of June 2023.