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## **Research Fellowship – 1 vacancy**

**Within the project – HORIZON-INFRA-2022-TECH-01-101094250**

**IMAGINE**

**Ref. <sup>a</sup>: CCMAR/BINCGAM/05/2023**

The Centre for Marine Sciences (CCMAR) opens one (01) Research Fellowship for a person with a Master Degree (Bolsa de Investigação não conducente à obtenção de grau académico para mestre), for applicants of any nationality, including stateless candidates, and holders of political refugee statute, in the scientific field of Artificial Intelligence and Bio-imaging within the research project: IMAGINE - *Next generation imaging technologies to probe structure and function of biological specimen across scales in their natural context*, Ref. HORIZON-INFRA-2022-TECH-01-101094250, funded by Horizon Programme of the European Commission under the following conditions:

**Host and Contracting Institution:** CCMAR

This fellowship is intended for master's degree holders that are enrolled in a non-academic degree course, integrated in the educational project of a higher education institution and developed in association or cooperation with one or more R&D units at the starting date of the fellowship.

**Work Plan, Tasks to perform and objectives:**

The EU-funded IMAGINE project (<https://www.embl.org/about/info/imagine/>) focuses on developing and integrating new imaging technologies to enable structural and functional investigation of biological specimens in their natural context. AI-powered image analysis capabilities will support technology integration and make data widely available.

Specifically, the fellowship holder will be involved in the following tasks and objectives:

1. Development and/or implement deep learning-based image reconstruction, processing and analysis software tools for different imaging modalities, mainly for lightsheet microscopy and optical projection tomography, but also for computed axial tomography (CT), magnetic resonance imaging (MRI) and other imaging techniques developed within the IMAGINE project.
2. Deploy methods as a plugin for Napari and/or ImageJ.
3. Publish research papers together with open-source code that allows others to reproduce the results.
4. Present findings at international conferences.

**Scientific Supervisor:**


Doctor Teresa Correia, team leader at CCMAR.

**Workplace:**

The workplace is CCMAR (Gambelas Campus of the Algarve University, Faro, Portugal) and other places necessary for the execution of the work plan.

**Requirements for the application:**

Applicants must meet all the conditions stated below:

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1. An MSc in Biomedical Engineering, ML/AI/DL, Computer Science, Physics, Optics, although degrees in other related physical sciences or engineering disciplines may be considered.
2. Enthusiasm for innovation and creative thinking and enjoy teamwork.

Non-compliance justifies exclusion from the procedure.

**It is considered as an advantage if the candidate**

1. has an IELTS score of 6.5 or equivalent (for candidates whose first language is not English).
2. has experience with bio-imaging data and is familiar with classical image processing and analysis algorithms.
3. has experience and aptitude in computer programming to solve mathematics and physics problems.
4. has proven Python programming skills and experience with common libraries such as scikit-image and scikit-learn.
5. has prior experience with machine learning and deep learning using Tensorflow or PyTorch.
6. has willingness and availability to embark on a doctoral program within the next 12-18 months in this field of science.

**Evaluation criteria:**


Through the analysis of the application documents the evaluation criteria for the applications and their relative weight for ranking are as follows:

1. experience with bio-imaging data, classical image processing and analysis algorithms (40%)
2. experience and aptitude in computer programming to solve mathematics and physics problems, particularly for bioimaging applications (25%)
3. proven Python programming skills and experience with common libraries such as scikit-image and scikit-learn. (25%)
4. experience with machine learning and deep learning using Tensorflow or PyTorch. (10%)

The selection committee reserves the right to contact and interview candidates if additional information or clarification of any curricular aspect is necessary. In case it takes place, the interview aims to evaluate in more detail the curricular items used to grade the candidate according to the list above.

In the event that no applicant has the necessary profile, the selection committee reserves the right to close the call without any recruitment. In the event that the selected person does not take up the position because of failure to comply with documentary requirements or any other reason, or later during the contract if they resign, the jury reserves the right, upon convenience and opportunity, to assign the post to the next applicant in accordance with the ranking positions based on the selectable reservation list that can be used up to 6 months of the date of the present announcement.

**Fellowship conditions:** The fellowship will have a duration of 06 months, expected to start from October 2023 and eventually renewed for additional periods until the end of the project and up to a maximum of 12 months. The fellowship must be carried out under an exclusivity regimen, according to the FCT Fellowship Regulation (RBI) and of the CCMAR fellowship regulations (see [here](#)) based on the Portuguese law 40/2004, of 18 of August (Scientific Research Fellowship holder statutes) amended by the Decree-Law 123/2019 of 28 of August. A maintenance allowance of 1199.64€ will be paid monthly, through bank transfer, and will be updated as stipulated by the Foundation for Science and Technology (see [here](#)).

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**Application period:** from 2<sup>nd</sup> of August 2023 to 4<sup>th</sup> of September 2023 at 23:59 (Lisbon time, Portugal).

**Application process and mandatory documents:**

Complete applications must be submitted online at <https://www.ccmар.ualg.pt/list/job> and must include:

1. a motivation letter (in English);
2. a detailed Curriculum Vitae (in English);
3. a copy of the Master's degree Certificate.
4. the email contact of up to 3 referees.

**Non-compliance with these documents/information determines the immediate rejection of the application.**

**Results and Preliminary Hearing:** The admission and evaluation results will be communicated by email within 90 working days after the application deadline. After notification, candidates have 10 working days to contest the preliminary decision.

**Selection Committee:** Doctor Teresa Correia, team leader at CCMAR (President of the jury); Doctor Anna Kreshuk, team leader at EMBL (member) and Doctor Dário Passos, senior researcher at CEOT (member)

**Notes:**


**Hiring Documents**

After the candidate is selected and for the hiring purpose the following documentation/information will be requested:

- Proof of the enrolment (Comprovativo de inscrição/matricula) from the Academic Services in a non-academic degree course.
- If applicable, copy of the master's degree.
- Declaration of commitment stating the exclusivity regime.
- Civil, fiscal, and social security Identification (if applicable)
- Account Number – IBAN
- Ciência ID: <https://www.ciencia-id.pt/CiencialD/HomePage.aspx>
- If applicable, a statement from the candidate saying that does not exceed, with the conclusion of the present fellowship contract, an accumulated period of two years in this type of fellowship, consecutive or otherwise.

**Fellowship Agreement model**

After the candidate selection and all information is received, it will be signed a fellowship agreement in accordance with the model [here](#)

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#### Fellowship holder Assessment

At the end of each period of duration of the fellowship contract, the activity developed by the fellowship holder will be evaluated by the supervisor, by applying the following criteria, in accordance with the model below.

Criteria 1 - Compliance with the activity plan (30%)

Criteria 2 - Technical and scientific performance (30%)

Criteria 3 - Dissemination of the scientific findings and outreach (20%)

Criteria 4 - Commitment, responsibility, assiduity and ability to work as part of a team (20%)

Supervisor report model [here](#)

#### Fellowship holder report

By the end of each fellowship period the fellowship holder must present a report. You can find the fellowship holder final report model [here](#)

**The board of Directors reserves the right, due to a change in circumstances at the date of the present announcement, to cancel the present call without any recruitment.**

Disabled candidates shall be preferred in a situation of equal ranking, and said preference supersedes any legal preferences. Candidates must declare, on their honour, their respective disability degree, type of disability and communication / expression means to be used during selection period on their application form, under the regulations above.

CCMAR's non-discrimination and equal access opportunities policy – No candidate can be privileged, benefited, jeopardised or be deprived of any right or exempt of any claim in regards to descendent, age, gender, sexual orientation, marital status, economic situation, origin, social economy, genetic heritage, disability, chronic disease, nationality, ethnicity, territory of origin, language, religion, politics, ideology or union membership.

Faro, 28<sup>th</sup> July 2023

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