

CALL FOR AWARDING RESEARCH FELLOWSHIPS WITHIN PROJECT GRANTS AND R&D INSTITUTIONS

1 Research Fellowship for R&D Initiation (BII)

1 Research Fellowship(s) for R&D Initiation (BII) is(are) open at the **FCiências.ID – Associação para a Investigação e Desenvolvimento de Ciências**, for the project/R&D institution “Instituto de Biofísica e Engenharia Biomédica”, “Special support Summer with Science 2022”, funded by the Fundação para a Ciência e a Tecnologia, I.P./MCTES through national funds (PIDDAC) under the programme “Special support for scientific and technological research activities in R&D units”, under the following conditions:

1. **Scientific Area:** Non-invasive Brain Stimulation, Brain functional Connectivity, Biomedical Engineering and Biophysics (Engenharia Biomédica e Biofísica)
2. **Requirements for admission:** Must have a Bachelors’ degree (or 1st cycle of the Integrated Masters) in Biomedical and Biophysics Engineering. Must have participated in outreach activities and projects related to the topic of this call.
3. **Additional optional skills and qualifications:** Previous experience in collecting, processing and analysing electroencephalography (EEG) signals, skills in Python programming, previous contact with neurostimulation techniques, collaborations in multidisciplinary projects.
4. **Contracting requirements:** Presentation of the academic qualifications and/or diplomas. Enrolment in Masters Biomedical Engineering and Biophysics (<https://fenix.ciencias.ulisboa.pt/degrees/mebb>).
5. **Work plan:** The work plan is under the scope of an ongoing experimental project, with the aim of determining the effects of transcranial direct current stimulation (tDCS) in brain connectivity patterns obtained by EEG, related with motor execution (ME) and motor imagery (MI) tasks, with the purpose of addressing viability for future clinical trials using tDCS in patients with motor dysfunctional conditions, such as in amyotrophic lateral sclerosis and stroke. The student will have to perform the following tasks: 1) Processing and analysis of EEG data collected before and after tDCS application in rest, ME and MI tasks, using the software MNE-Python (week 1); 2) Calculation of the electric field induced tDCS in a realistic head model using the software SimNIBS (week 2); 3) Functional connectivity analysis of EEG data processed in 1; correlation between EEG connectivity patterns and electric field patterns determined in 2; final report (weeks 3 e 4).
6. **Legislation framework:** Research Fellowship Holder Statute, in accordance with Law 40/2004, of 18 August, in its current version and the FCT Regulation for Research Studentships and Fellowships, in its current version (Reg. 950/2019 published in DR on 16th December: <https://dre.pt/application/file/a/127230968>, or at the FCT website: <https://www.fct.pt/apoios/bolsas/regulamento.phtml>), and FCIências.ID Fellowship Regulation, as approved on 12th May 2020 (available at [Regulamento de Bolsas de Investigação Científica da FCIências.ID](#)).
7. **Place of work:** The work will be developed at the Instituto de Biofísica e Engenharia Biomédica under the scientific supervision of Professor Dr. Sofia Rita Fernandes.
8. **Fellowship duration:** This position is initially opened for 1 month due to start in September 2022.
9. **Monthly allowance:** The fellowship amounts to € 486.12 ,according to [table values](#) of the fellowships awarded directly by the FCT, IP. The fellowship holder will have a personal accident insurance and can ensure the right to social security through adherence to the voluntary social insurance scheme, if not covered by any other social protection scheme, pursuant to *Código dos Regimes Contributivos do Sistema Previdencial de Segurança Social*. The fellowship will be paid monthly by bank transfer.

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10. **Evaluation and selection process:** Candidates will be assessed by Grade achieved in Bachelors in Biomedical Engineering and Biophysics (A), CV (B), motivation letter (C), Interview – optional (D). All criteria are graded in the scale 0-20, as described below.

Criterion A – Grade achieved in the Bachelors in Biomedical Engineering and Biophysics (or 1st cycle of Integrated Masters in Biomedical Engineering and Biophysics), percentage weight of 30%;

Criterion B - CV, with emphasis on academic experience, internship, ongoing Masters project, work experience, percentage weight of 30%;

Criterion C – Motivation letter demonstrating the suitability of the candidate to the project, percentage weight of 40%

Final Grade = $(30\% \times A) + (30\% \times B) + (40\% \times C)$

If there is more than one candidate with the same final grade, the candidates will be ordered based on the highest grade in criterion C, followed by criterion B, followed by criterion A. If required, an interview (D) will take place, and a weight of 30% will be attributed.

Applicants whose application is scored with a final classification of less than 17 points are not eligible for granting a fellowship.

11. **Selection Committee:**

President of jury: Prof. Alexandre Andrade, Instituto de Biofísica e Engenharia Biomédica, Faculdade de Ciências da Universidade de Lisboa, Campo Grande, 1749-016-Lisboa

Member of jury 1: Prof. Raquel Conceição, Instituto de Biofísica e Engenharia Biomédica, Faculdade de Ciências da Universidade de Lisboa, Campo Grande, 1749-016-Lisboa

Member of jury 2: Dr. João Miguel Pinto Coelho, Instituto de Biofísica e Engenharia Biomédica & Laboratório de Óptica, Lasers e Sistemas, Faculdade de Ciências da Universidade de Lisboa, Campo Grande, 1749-016-Lisboa

Alternate member of jury 1: Prof. Brígida Ferreira, Instituto de Biofísica e Engenharia Biomédica, Faculdade de Ciências da Universidade de Lisboa, Campo Grande, 1749-016-Lisboa

Alternate member of jury 2: Prof. Nuno Matela, Instituto de Biofísica e Engenharia Biomédica, Faculdade de Ciências da Universidade de Lisboa, Campo Grande, 1749-016-Lisboa.

12. **Publication/notification of results:** All the candidates will be notified by e-mail, sent by the call holder, with the selection meeting minutes enclosed.

13. **Deadlines:** This call for applications is open from 28/07/22 to 03/08/2022 .

14. **Application:** Applications should be sent via e-mail to srcfernandes@fc.ul.pt, by attaching the following documents:

- Curriculum vitae - **CV may be provided in PDF or through the [CIÊNCIAVITAE](#) system;**
- Certificate of completion of previous degree (is the certificate is not available yet, proof that the certificate was requested and proof of grade or a declaration of honour will be accepted);
- Motivation letter.

15. **Time limits for the appeal procedure:** In case of negative decision, the candidates have 10 business days, after the date of announcement of the results of the candidates evaluation, to pronounce their disagreement in accordance with the *Código do Procedimento Administrativo*. Appeals against the final decision may be submitted to the Administration Board of FCiências.ID (fciencias.id@fciencias-id.pt) within 15 business days after the notification date

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Note 1: The documents that prove the entitlement of the academic qualifications and diplomas, or the proof of registration in the academic degree or diploma requested on the call, can be dismissed during the application period and replaced by a declaration on their honour from the applicant. Their delivery is mandatory for the fellowship contractualization.

Note 2: Please note that - higher education degrees and diplomas awarded by foreign higher education institutions need to be recognized by a Portuguese higher education institution, pursuant to the [Decree-Law nr. 66/2018](#) (August 16) and the [Ministerial Order nr. 33/2019](#) (January 25). The presentation of the recognition certificate is mandatory for contract signature. More information can be obtained at: <https://www.dges.gov.pt/en/pagina/degree-and-diploma-recognition>.