



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

Research Fellowship (BI-RE)

One research fellowship (BI-RE) for a holder of a master's degree is open at the **Fundação da Faculdade de Ciências da Universidade de Lisboa, F.P. (FFCUL)**, with the possible transfer to **FCiências.ID – Associação para a Investigação e Desenvolvimento de Ciências** (see point nr. 14) for the project entitled "Transcranial brain stimulation as innovative therapy for chronic pediatric neuropsychiatric disorders" (STIPED), to be carried out at the Institute of Biophysics and Biomedical Engineering, and funded by the European Union's Horizon 2020 research and innovation programme under grant agreement No 731827, under the following conditions:

1. **Scientific Area:** Biomedical Engineering
2. **Requirements for admission:** Applicants should have an MSc in Biomedical Engineering, Physics or related areas and have a strong background in bioelectromagnetics. Degrees from outside the European Union must have been officially recognised by a Portuguese University.
3. **Factors preferred:** Preference will be given to candidates with experience in segmentation of magnetic resonance images of the head, and mesh generation for finite element analysis. Previous experience with the finite element method is also an advantage.
4. **Work plan:** One of the aims of the project is to provide optimized stimulation parameters for the treatment of ADHD and ASD pediatric patients, based on individual head models. This part of the project will be carried out at the Institute of Biophysics and Biomedical Engineering, Faculty of Science of the University of Lisbon, in collaboration with the other partners. The successful candidate will be involved in setting up an automatic pipeline to create individual head models from MRI and DTI data, based on tetrahedral meshes for finite element analysis of the electric field in the brain. Successful automatic segmentation may require the development of age specific templates for 10 – 18 years old healthy subjects. The candidate will also be involved in developing methods to automatically place electrodes on the scalp at standard positions of the 10/10 International system, and to automatically define target regions such as the dlPFC, the rIFC or the TPJ. Methods to determine electrode positions and currents that optimize the electric field at the selected targets will also have to be implemented. The optimized individual stimulation protocols will be implemented on Neuroelectronics' Starstim32 neurostimulator (<http://www.neuroelectronics.com/products/starstim/starstim-r32/>), in close collaboration with this company. A postdoctoral researcher is also being hired to work on this project.
5. **Legislation framework:** Statute of the Scientific Research Fellowship, in accordance with Law 40/2004, of 18 August, as amended and republished by Decree-Law No. 202/2012 of 27 August, and as amended by Decree-Law No. 233/2012 of 29 October and by Law No. 12/2013, of January 29, and Decree-Law No. 89/2013 of 9 July; And also by the FCT, I.P. Fellowships Regulation, in force (<http://www.fct.pt/apoios/bolsas/docs/RegulamentoBolsasFCT2015.pdf>) and FFCUL's Fellowship Regulation, as approved on 22nd December 2014.
6. **Place of work:** The work will be developed at the Institute of Biophysics and Biomedical Engineering (IBEB), Faculty of Science of the University of Lisbon, under the scientific guidance of Pedro Cavaleiro Miranda.
7. **Fellowship duration:** This position is initially opened for 6 months and will begin on the 1st of July 2017. The fellowship contract may be renewed for 7 additional periods of 6 months each, for a total duration of 48 months, or eventually until the end date of the project, in accordance with the provisions of Regulation of Research Fellowships from the Foundation for Science and Technology, I.P.
The grantee must register for a PhD in Biomedical Engineering and Biophysics at the Faculty of Science of the University of Lisbon, for the duration of the fellowship.





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8. **Monthly allowance:** The fellowship amounts to € 1000.00. This monthly allowance may be increased during the course of the fellowship up to the limit of € 1200.00. This amount is not subject to income tax.

The fellowship holder will have a personal accident insurance and, if not covered by any social protection scheme can ensure the right to social security through adherence to the voluntary social insurance scheme, pursuant to Código dos Regimes Contributivos do Sistema Previdencial de Segurança Social.

The fellowship will be paid monthly by bank transfer.

The PhD fees will be paid directly by the project to the Faculty of Science of the University of Lisbon.

9. **Selection method:** Candidates will be assessed by the quality of their CV and the motivation letter (50%) and the relevance of their experience (50%). Shortlisted candidates will be interviewed via Skype. In this case, the weights will be: quality of CV and motivation letter (33%), relevance of experience (33%), interview (34%) The Committee reserves the right not to make any appointment, should there be no suitable candidates.

10. **Selection Committee:** Pedro Cavaleiro Miranda (President), Alexandre Andrade and Nuno Matela (members), Hugo Ferreira (substitute).

11. **Publication/notification of results:** The final results of the evaluation will become public, through an ordered list of the final grade, which will be posted at the entrance hall of the **FFCUL**, located at the Faculdade de Ciências da Universidade de Lisboa, C1 bldg – 3rd floor, Campo Grande, 1749-016 Lisboa, and sent by email to the candidates. The selected candidate will be notified by e-mail.

12. **Deadlines:** This call for applications is open from the 19th of April to the 4th of June 2017. Interviews will take place between the 5th and the 9th June 2017.

13. **Application:** Applications may be sent via e-mail to pcmiranda@fc.ul.pt, by attaching the following documents: Curriculum Vitae, motivation letter, copy of master's degree, and other documents deemed relevant. Applications sent by mail will not be accepted.

14. **Hiring Institution:** FFCUL was the MEDEA-CHART applicant Legal Institution during the proposal stage. The project STIPED is expected to be transferred to the counterpart institution **FCiências.ID – Associação para a Investigação e Desenvolvimento de Ciências**. In case the project transfer is concluded at the fellowship start time the fellowship contract will be awarded by FCIências.ID, without adversely affecting the applicant(s).

