

(BL129/2022-IST-ID)

### Research Studentships (for PhD students)

Applications are open for 1 Research Studentship(s), within the framework of project/R&D institution (1801P.01193.1.01) AWAKE-CERN/FIS-TEC/0034/2021 - IST-ID), financed by national funds through FCT/MCTES (PIDDAC), under the following conditions:

**Scientific Area:** Plasma Physics, Laser and Nuclear Fusion

**Admission Requirements:** *To be enrolled at a PhD.*

**Workplan:** The foreseen work for this fellowship consists of investigating fundamental aspects of the two instabilities that are most relevant for the AWAKE experimental set-up, and possibly to other beam-driven plasma wakefield experiments. The instabilities in question are the self-modulation and the beam hosing instability. The overarching goal of this research is to use the knowledge about the physics that drives them to mitigate the detrimental one (hosing) and enhance the desirable one (self-modulation). The product of this effort is expected to lead to at least two peer-reviewed publications. This work will be conducted using theory and particle-in-cell simulations.

**Legislation and Regulations:** Statute of Scientific Research Fellow, approved by Law nr. 40/2004, of August 18, as worded by Decree-Law nr. 123/2019, of August 28; FCT Regulation for Research Studentships and Fellowships, available on <https://www.fct.pt/apoios/bolsas/docs/RegulamentoBolsasFCT2019.pdf> and <https://dre.pt/application/file/a/127230968> .

**Workplace:** The work will be developed at GoLP-IPFN/Complexo of Instituto Superior Técnico, under the scientific supervision of Professor Jorge Vieira.

**Duration:** The research fellowship(s) will have the duration of 12 months. It's expected to begin in August, and may be eventually renewed up to the end of the project

**Monthly maintenance allowance:** According to the values for Research Fellowships awarded by FCT in Portugal (<http://www.fct.pt/apoios/bolsas/valores> ), the amount of the monthly maintenance allowance is €1144,64, being the payment method an option of the Fellow by Wire Transfer/Check.

**Selection methods:** The selection methods will be the following: *Curriculum evaluation*, with the respective weight of 100%.

**Composition of the selection Jury:** : Professor Nelson Lopes; Professor Jorge Vieira; Professor Gonçalo Figueira

**Announcement/ notification of the results:** The final evaluation results will be communicated to all applicants by email.

**Deadlines and procedures of complaint and appeal.** A complaint may be lodged from the final decision within 15 working days, or an appeal to the Executive Board of IST-ID within 30 working days, both counted from the respective notification

**Application deadline and formalization:** The call is open from July 15 until July 28, 2022.

It is mandatory to formalize applications with the submission of the following documents: i) B1 Form – Fellowship application (<https://ist-id.pt/concursos/bolsas/> ); ii) *Curriculum Vitae*; iii) academic degree certificate, where applicable; iv) proof of enrollment at an academic degree course (PhD); v) motivation letter;

Applications must be submitted to the email: [Claudia.romao@tecnico.ulisboa.pt](mailto:Claudia.romao@tecnico.ulisboa.pt)