

(BL32/2026-IST-ID)

Research Studentships (for PhD students)

Applications are open for 2 Research Studentship(s) (for PhD students), within the framework of project/R&D institution (1801P.01325.1.01) XPACE - 101045172 - IST-ID- 930901, under the following conditions:

Scientific Area: Plasma Physics and Nuclear Fusion

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

Workplan: The studentship holders will perform numerical simulations using particle-in-cell codes to study collisionless shock waves. The goal is to identify how the electromagnetic field structure at the shock and the spectrum of accelerated particles depends on the initial conditions of the plasmas, such as its magnetisation and composition, and to determine what are the most efficient regimes in terms of acceleration. This work is aligned with the focus of the ERC project XPACE in studying collisionless shock waves in both astrophysical and laboratory scenarios.

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; IST Regulation of Scientific Research Fellowships, available on https://drh.tecnico.ulisboa.pt/files/sites/45/despacho_8532_regulamento_bolsas.pdf

Workplace: The work will be developed at GPA of IPFN at Instituto Superior Técnico, Campus da Alameda, under the scientific supervision of Frederico Fiúza.

Duration: The research fellowship(s) will have the duration of 12 months. It's expected to begin in Abril 2026, and may be eventually renewed.

Monthly maintenance allowance: the amount of the monthly maintenance allowance is €1426,92, 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: Frederico Fiúza, Marta Fajardo, Jorge Vieira.

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

Deadlines and procedures of complaint and appeal. After notification of the provisional list of evaluation results, candidates have a period of 10 working days to, if they wish, make a statement at a preliminary hearing of interested parties, in accordance with Articles 121 et seq. of the Code of Administrative Procedure. The final decision will be made after analyzing the statements presented at the preliminary hearing of interested parties. The final decision may be appealed to the competition jury or to the President of IST-ID within 15 working days of notification.

Application deadline and formalization: The call is open from March 9 until March 13, 2026.

It is mandatory to formalize applications with the submission of the following documents: i) B1 Form – Fellowship application (<https://ist-id.pt/recursos-humanos/bolseiros/#documentos-relacionados>); 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: bolsas@drh.tecnico.ulisboa.pt

