

LARSyS PhD Fellowships Public Call

The Laboratory of Robotics and Engineering Systems - LARSyS opens a call for up to eight (8) research scholarships, hereinafter referred to as Research Grants for Doctoral Degrees, in the areas of Robotics, Brain and Cognition, Networked Cyber Physical Systems, Sustainable Energy Systems, and Digital Media, under the FCT Research Grant Regulation (RBI) and the Research Fellowship Statute (EBI).

The LARSyS Ph.D. Program initiative has the objective of strengthening advanced training at LARSyS in cross-cutting research areas.

The scholarships will be financed by the Foundation for Science and Technology (FCT) under the Protocolo de Colaboração para Financiamento do Plano Plurianual de Bolsas de Investigação para Estudantes de Doutoramento, signed between the FCT and LARSyS – UID/50009.

After a successful conclusion of the Ph.D. Program, the candidates will be awarded a Ph.D. degree by Instituto Superior Técnico and the partner institutions when applicable. Details about the LARSyS Ph.D. Scholarships initiative can be accessed on the webpage of the Program at <https://www.larsys.pt/PhDProgram>.

1. ADMISSIONS

The admissions period will be open from June 28th 2023 at 12:00 (GMT) to July 28th 2023 at 12:00 (GMT).

Applications should be submitted online through the form available on the LARSyS website, after a careful reading of all the requirements and submission of the online form with the necessary attachments.

Only applications submitted through this platform will be considered for evaluation. It is the candidate's responsibility to ensure that the online form is correctly filled, and that all the required documents are attached.

Each candidate can submit only one application, under penalty of cancellation of all submitted applications.

False statements or acts of plagiarism made by the candidates will result in the cancellation of the application and possible adoption of sanctioning measures towards the candidate.

2. SCHOLARSHIPS TYPE AND DURATION

PhD Scholarships aim to finance research activities leading to a doctoral degree at Instituto Superior Técnico.

The research activities leading to the academic doctoral degrees will take place at the research units of LARSyS, which will be the host institution of the scholarship holders, without prejudice that the work may be carried out in collaboration with more than one institution.

The research activities leading to the doctoral degree of the selected candidates must be framed in the activity plan and strategy of LARSyS and its research units, and should be developed within the scope of a Doctoral Program at IST in the following research profiles:

- A. **Robotics, Brain and Cognition:** Up to **5 positions** available in research areas related to robotics, brain and cognition, covering multimodal integration of electroencephalogram (EEG) and functional magnetic resonance imaging (fMRI), and associated signal and image processing methodologies; sensorimotor coordination; Bayesian brain, uncertainty modelling and sequential decision-making and learning under uncertainty; learning from demonstration; socially-aware robots.
PhD Degrees: Electrical & Computer Engineering (IST); Biomedical Engineering (IST).
- B. **Networked Cyber Physical Systems:** Up to **5 positions** available in research areas related to networked cyber-physical systems, covering data science and big data processing; systems engineering; computer vision; dynamical systems and optimization; control systems and machine learning; (active) cooperative perception in multi-robot and multi-sensor systems; and networked robot systems, including robot swarms.
PhD Degree: Electrical & Computer Engineering, Computer Science and Engineering (IST)
- C. **Sustainable Energy Systems:** Up to **5 positions** in the area of Sustainable Energy Systems with a multi-disciplinary approach to educate a new generation of sustainability-aware leaders. A focus on energy systems simulation, design and analysis, including the establishment of strategies of carbon neutral pathways in different economic sectors, such as agriculture, industry, buildings or urban systems, making use of a variety of concepts and tools to be at the forefront of sustainable energy systems development.
PhD Degree: Sustainable Energy Systems (IST)
- D. **Digital Media:** up to **5 positions** in research areas related to digital media and human-computer interaction, in understanding and creating content, platforms, services and applications in the digital area, including for the domains of entertainment, marketing, cultural heritage, creative industries and education.
PhD Degree: Digital Media (IST)

The scholarships will be distributed according to the best classifications by the previously chosen areas and may have different typologies depending on whether the studies are carried out in Portugal or (partially) abroad (mixed scholarship), with admissibility conditions.

The work plan may take place in full or in part at a national institution (scholarship in Portugal or mixed scholarship, respectively).

The scholarships are awarded on an annual basis and renewed for up to 4 years (48 months). The scholarships cannot be awarded for less than 3 consecutive months.

In the case of a mixed scholarship, the work plan period in a foreign institution cannot exceed 24 months.

3. SCHOLARSHIP RECIPIENTS

The PhD Research Grants are intended for registered candidates or candidates who meet the necessary conditions to enroll in one of the Doctoral Programs listed in point 2 of this Call and that intend to carry out research activities leading to the attainment of the academic degree of doctor in LARSyS, or in host institutions associated with it.

4. ADMISSIBILITY

4.1 ADMISSIBILITY REQUIREMENTS

The following candidates can apply:

- National citizens or citizens from other member states of the European Union;
- Citizens of third States;
- Stateless persons;
- Citizens who are beneficiaries of political refugee status.

To apply for the Ph.D. scholarships, the following requirements must be met:

- Hold a bachelor (licenciatura) or master's degree, preferably in the LARSyS research areas identified in the introduction of the current announcement;
- To be permanently and habitually resident in Portugal at the starting date of the work plan period abroad, if the proposed work plan includes a period in foreign institutions (mixed grants), a requirement applicable to both Portuguese and foreign citizens.
- Not having benefited from a Ph.D. scholarship or Ph.D. in companies directly funded by FCT, regardless of its duration;
- Not holding a Doctor's degree.

4.2 APPLICATION ADMISSIBILITY REQUIREMENTS

For the application to be considered, it is mandatory to download and complete the online application form available at the Call Announcement at LARSyS website, to be submitted with the following attachments, in one single ZIP file (see Point 18 of the Call Announcement for application submission):

- Details of identification document/passport;
- Candidate's *Curriculum Vitae*;
- Supervisor and co-supervisor support letters;
- Indication of the chosen application profile (A, B, C, D);
- Certificates of qualification of the academic degrees held, specifying the final classification and, if possible, the classifications obtained in all subjects taken, or, alternatively, the candidate's declaration of honor on how (s)he completed the bachelor's (licenciatura) or master's degree by the end the application deadline;
- Registration of recognition of the academic degrees awarded by foreign higher education institutions and registration of the final classification conversion to the Portuguese classification scale for those degrees, or, alternatively, the candidate's declaration of honor on how (s)he will obtain the recognition of the foreign degree equivalent to a bachelor (licenciatura) or master's degree until the end of the selection period;
- Motivation letter;
- Work plan with the following information: title, keywords (following the CCS format); abstract, state-of-the-art review; objectives; draft of study plan;
- 2 Reference Letters.

The online application form as well as the documents to be attached should be written in English. The certificates of qualification of the academic degrees held can be written in English or Portuguese.

Regarding the aforementioned admissibility requirements, the following should be noted:

- In the case of academic degrees awarded by foreign higher education institutions, and in order to ensure the application of the principle of equal treatment to candidates who hold foreign and national academic degrees, it's compulsory the recognition of these degrees and the conversion of the final classification to the Portuguese classification scale.
- The recognition of foreign academic degrees and diplomas as well as the conversion of the final classification to the Portuguese classification scale may be required in any public higher education institution, or at Direção-Geral do Ensino Superior (DGES, just for automatic recognition). For more about this subject please check <http://www.dges.gov.pt>.
- Only applicants who have completed the studies cycle leading to a bachelor (licenciatura) or master degree until the end of the application period, will be admitted. If they do not yet have the course certificate, a declaration of honor from the candidates will be accepted, until the end of the application period, stating that they have achieved the qualifications required for the

purposes of the Call. The granting of the scholarship will depend on the presentation, in the contracting phase, of proof of the academic qualifications required.

5. WORK PLAN AND SCIENTIFIC SUPERVISION

The candidate must have a supervisor from one of the integrated LARSyS members, affiliated to the ISR, ITI, IN+ or MARETEC core research units. The workplans have to be aligned with the LARSyS scientific objectives and thematic lines.

6. EVALUATION CRITERIA

The evaluation takes into account the candidate's merit, the merit of the work plan, and the alignment of the workplan with the thematic areas of LARSyS. Applications considered admissible will be scored on a scale of 0-5 in each of the following evaluation criteria:

- **Criterion A** – Candidate's merit (50%) distributed as follows:
 - A1 (20%) – Academic background (scores for academic degrees, other academic activities), divided as follows: Bachelor's (Licenciatura) degree (40%), Master's degree (50%), other academic activities (10%);
 - A2 (15%)– Previous scientific and/or professional experience, in the context of the proposed research area;
 - A3 (15%) Motivation letter and reference letters.
- **Criterion B** – Merit of the work plan (30%), namely its scientific quality, feasibility, the framework of the work plan research theme in the LARSyS main areas of research.
- **Criterion C** – Alignment with the LARSyS strategic thematic areas (20%), namely the alignment of a candidate to one of the thematic areas: OCEANS, INTERACTION, URBAN, AIR and LIFE and the contribution to promote cross-collaboration between research units: ISR, ITI, IN+ and MARETEC.

For the purpose of deciding on the awarding of scholarships, candidates will be ranked according to the weighted average of the classification obtained in each of the 3 criteria: Final Classification = $(0,50XA)+(0,30XB)+(0,2XC)$.

In case of tie-breaking, the ranking of applicants will be carried out based on the ratings assigned to each of the evaluation criteria in the following order of precedence: criteria A, criteria B, criteria C.

Important notice for applicants with diplomas issued by foreign higher education institutions:

- Candidates with diplomas issued by foreign higher education institutions can apply and will be evaluated using the same criteria as candidates with diplomas issued by Portuguese institutions,

as long as they submit, in their application, proof of recognition of academic degrees and conversion of final classification for the Portuguese classification scale in terms of the applicable legislation;

- Candidates with recognized foreign diplomas who do not present proof of the conversion of the final classification into the Portuguese classification scale will be evaluated with a minimum classification of 3 points in the respective grade(s) within criterion A1;
- Only the academic degrees (Bachelor (Licenciatura), Master) presented by the candidate will be valued in criterion A1, and a score of 0 will be awarded in the absence of a particular degree.
- In any case, scholarship contracts with candidates holding diplomas issued by foreign institutions will only be concluded upon presentation of proof of recognition of academic degrees and conversion of the final classification, as indicated above.

Applicants whose application is evaluated with a final score of < 3 points will not be eligible for scholarship awarding.

7. EVALUATION

The jury will be composed by the coordinator of LARSyS and the directors of the LARSyS core research units who will be supported by a panel of experts according to the different profiles of the applications.

- José Alberto Santos-Victor - Full Professor of Instituto Superior Técnico, Universidade de Lisboa (evaluation panel coordinator);
- Pedro Lima – Full Professor of Instituto Superior Técnico, Universidade de Lisboa;
- Paulo Ferrão - Full Professor of Instituto Superior Técnico, Universidade de Lisboa;
- Tiago Domingos - Associate Professor of Instituto Superior Técnico, Universidade de Lisboa;
- Nuno Jardim Nunes - Full Professor of Instituto Superior Técnico, Universidade de Lisboa;

(Alternate members)

- Valentina Nisi - Associate Professor of Instituto Superior Técnico, Universidade de Lisboa;
- António L. Moreira - Associate Professor, Instituto Superior Técnico, Universidade de Lisboa.

The evaluation panel will evaluate the applications according to the evaluation criteria set out in this Call, considering the elements of appreciation.

All panel members, including the coordinator, are committed to respect a set of responsibilities essential to the evaluation process, such as the dues of impartiality, the declaration of any potential conflict of interest situations and confidentiality. At all times during the evaluation process, confidentiality is fully protected and ensured in order to guarantee the independence of all statements produced.

For each application, a final evaluation form will be produced by the panel, in which the arguments that led to the ratings attributed to each of the evaluation criteria and sub-criteria will be presented in a clear, coherent and consistent manner.

Minutes of the responsibility of all its members will be produced from the meetings of the evaluation panel. Minutes and annexes must include, mandatorily, the following information:

- Name and affiliation of all members of the evaluation panel;
- Identification of all excluded applications and respective reasons;
- Methodology adopted by the panel for particular cases;
- Final Evaluation Sheets for each applicant;
- Provisional list of classification and ranking of applicants, in descending order of the final classification, of all applications evaluated by the panel;
- CDI statements from all panel members;
- Possible delegations of votes and competences due to justified absence.

8. RELEASE OF RESULTS

The results of the evaluation are communicated by e-mail to the e-mail address used by the applicant to send the application / indicated in the application.

9. DEADLINE AND PROCEDURES FOR PRIOR HEARING, CLAIM AND APPEAL

After the communication of the provisional list of results, applicants have a period of 10 working days to, if they wish, make a statement at the prior hearing of interested parties, under the terms of articles 121 and following, of the Code of Administrative Procedure.

The final decision will be communicated after the analysis of the pronunciations presented at the previous hearing of interested parties. The final decision may be lodged within 15 working days, or, alternatively, an appeal may be filed within 30 working days, both counted from the respective notification. Applicants who choose to submit a complaint must address their pronouncement to the member of the FCT Board of Directors with delegated competence. Applicants who choose to submit an appeal must address it to the FCT Board of Directors.

10. GRANT REQUIREMENTS

Scholarship contracts are signed directly with the FCT.

The following documents must be sent, when the scholarship is granted, for the purpose of contracting:

- a) Copy of the identification document, tax document and, when applicable, social security identification document¹;
- b) Copy of certificates of the academic degrees held;
- c) Presentation of the registration of recognition of foreign academic degrees and conversion of the respective final classifications to the Portuguese classification scale, if applicable;
- d) Work plan;
- e) Document proving registration and enrollment in one of the Doctoral Programs identified in this Call;
- f) Declaration of the supervisor(s) assuming responsibility for supervising the work plan, according to article 5-A of the Research Fellowship Statute (template to be made available by FCT);
- g) Document proving the candidate's acceptance by the institution where the research activities will take place, guaranteeing the necessary conditions for its proper development, as well as the fulfilment of the duties provided in the article 13 of the Research Fellowship Statute (template to be made available by FCT);
- h) Updated document proving compliance with the exclusive dedication regime (template to be made available by FCT);

The granting of the scholarship is still dependent on:

- compliance with the requirements set out in this Call;
- the result of scientific evaluation;
- the absence of unjustified non-compliance with the candidate's duties under a previous scholarship contract financed, directly or indirectly, by FCT;
- FCT budget availability.

Failure to deliver any of the documents necessary to complete the scholarship contracting process, within 6 months from the date of communication of the decision of conditional grant decision, implies the expiration of the referred grant and the end of the process.

11. FUNDING

Payment of the grants will begin upon return of the duly signed grant contract by the applicants, which must occur within a maximum of 15 working days from the date of receipt.

Grants awarded under this call will be financed by FCT with funds from Orçamento de Estado and, when eligible, with funds from the European Social Fund, through Programa Demografia, Qualificações e Inclusão (PDQI), according to the regulations established for that purpose.

¹ The availability of these documents can be replaced, at the candidate's option, by presentation in person at the funding entity, which will keep the elements contained therein that are relevant to the validity and execution of the contract, including the civil, fiscal and social security identification numbers and the validity of the respective documents.

12. COMPONENTS OF THE SCHOLARSHIP

Scholarship recipients receive a monthly maintenance allowance in accordance with the table in Annex I of the “Regulation for Research Studentships and Fellowship” (RBI).

The scholarship may also include other components, under the terms set out in article 18 of the RBI and at the amounts provided for in Annex II.

All scholarship holders benefit from personal accident insurance for research activities, supported by FCT.

All scholarship holders who are not covered by any social protection regime can ensure the right to social security by joining the voluntary social insurance regime, under the terms of the Contributory Schemes of the Social Security System, ensuring FCT the charges resulting from contributions under the terms and within the limits provided for article 10º of the EBI.

13. PAYMENT OF SCHOLARSHIP COMPONENTS

Payments due to the scholarship holder are made by bank transfer, to the account identified in the scholarship holder’s file. The monthly maintenance allowance is paid on the first business day of each month.

The payments for the registration, enrollment or tuition fee are made by FCT directly to the national institution where the fellow is enrolled in the Ph.D.

14. TERMS AND CONDITIONS FOR THE SCHOLARSHIP RENEWAL

The renewal of the scholarship will depend on an application submitted by the holder, within 60 working days prior to the renewing start date, with the following documents:

- a) statement(s) issued by the supervisor(s) and by the host entity(ies) reporting the monitoring of the scholarship holder's work and the evaluation of his/her activities;
- b) updated document proving compliance with the exclusive dedication regime;
- c) document proving the renewal of enrollment in the cycle of studies leading to the doctoral degree.

15. INFORMATION AND PUBLICITY OF THE FINANCING GRANTED

In all R&D activities directly or indirectly funded by the grant, namely in all communications, publications and scientific creations, as well as theses, carried out with the support provided by the grant, mention must be made of financial support from FCT and the European Social Fund, namely through Programa

Demografia, Qualificações e Inclusão (PDQI). To this end, the insignia of the FCT, the MCTES, the FSE and the EU shall be inscribed on the documents referring to these actions, in accordance with the graphic standards of the Community support program.

Dissemination of results of research funded under the RBI shall comply with the open access rules for data, publications and other research results currently in place at FCT.

In all grants, and in particular in the case of actions supported by EU funding, namely from the FSE, monitoring and control actions may be carried out by national and EU bodies, in accordance with applicable legislation in this area, with the grant recipients being required to cooperate and provide the requested information, which includes surveys and evaluation studies in this area, even if the grant has already ended.

16. NON-DISCRIMINATION AND EQUAL ACCESS POLICY

FCT promotes a policy of non-discrimination and equal access, so that no candidate can be privileged, benefited, harmed or deprived of any right or exempt from any duty due, namely, to ancestry, age, gender, sexual orientation, marital status, family status, economic status, education, origin or social status, genetic heritage, reduced work capacity, disability, chronic illness, nationality, ethnic or race origin, territory of origin, language, religion, political or ideological beliefs and affiliation union.

17. APPLICABLE LEGISLATION AND REGULATION

The call is governed by the present Announcement, by the Regulation for Research Studentships and Fellowship (RBI), approved by Regulation No. 950/2019, published in the II Series of the DR of December 16, 2019, by the Research Fellowship Holder Statute approved by the Law 40/2004, of August 18, in the current wording, and by other applicable national and community legislation.

Additional information may be requested to the email (applyphd@larsys.pt)