

PUBLIC NOTICE FOR A RESEARCH SCHOLARSHIP

Referência i2A/PRR-AgriFlex-Lic2/2023

IPC/ i2A is now accepting applications to award one (1) **Research Scholarship** (BI) within the scope of the project “**AgriFlex - Flexibility of energy consumption in agriculture for the energy transition**”, reference **PRR-C05-i03-I-000214-LA11.2**, funded by IFAP through RRP Programme – Recovery and Resilience Plan, as follows:

Scientific area: Agriculture.

Requirements:

- A. Holders of a Bachelor’s degree in the fields of Agriculture, Environmental Engineering or other related areas;
- B. If the candidate holds a higher education degree obtained abroad, he/she must have the respective recognition of the degree, if applicable;
- C. Enrolment in a master's degree or advanced studies in the area of agricultural production, environmental management or similar areas or in a non-academic degree course;
- D. Knowledge about sustainable agricultural production processes;
- E. Oral and written fluency in Portuguese and English.

Work Plan achievements:

In the context of the energy transition, there is an increase in the production of decentralized renewable energy also in the agricultural sector, with the consequent competition for land use between this activity and photovoltaic production. The technological solution to the problem, usually called agrivoltaics, consists of combining the two uses in the same agricultural area/plot, integrating photovoltaic panels in structures which do not prevent the use of the soil for farming not the mechanization of operations. In addition to improving land use efficiency, this solution increases crop resilience and agricultural yield. Other advantages are the reduction of water needs for irrigation, the use of rainwater, the reduction of erosion and the protection of crops from weather phenomena such as frost, hail and heat peaks. Although studies have already been carried out on the applicability of agrivoltaic solutions in some European countries, applications in Portugal are scarce, particularly in small fruit crops and horticulture. This work plan thus intends to contribute to the study of the effect of shading of agrivoltaic systems on agricultural productivity in real conditions and includes as main tasks:

1. Literature review on agricultural production trials in agrivoltaic systems, in particular on the relationship between shading levels and productivity, in different cultures and geographic contexts;
2. Planning and experimental design of trials with vegetables;
3. Implementation of trials and technical monitoring of crops, in terms of production, health, fertilization, irrigation, weed control, etc.;
4. Monitoring of agricultural production and various environmental variables, such as radiation, humidity, temperature, air velocity, etc.;
5. Monitoring of electricity consumption and production;
6. Technical-economic assessment, considering the agricultural and energy components;
7. Collaboration in project management activities, as well as in the organization of training activities (e.g., training actions, open days, seminars, good practice manuals, videos) and communication and dissemination activities (e.g., news, scientific communications and publications).

Scholarship Length:

The scholarship, on an exclusive basis, has a duration of 12 months, possibly renewable for identical periods, when permitted by regulation, until the end date of the project, within the limits established in the Regulation of the Fellow of the PIC, approved by Order no.5963/2020, published in the 2nd series of the Diário da República of 1 June, and Regulation no. 950/2019 of 16 December (Regulation of Research Grants of the Foundation for Science and Technology), scheduled to start on 01/09/2023.

Monthly Maintenance Allowance:

930,98 euros, according to the table of scholarships amounts awarded by FCT to positions held in Portugal (www.fct.pt/apoios/bolsas/valores). The payment will be made by bank transfer monthly, to the account to be designated by the Fellow. To this amount is added the voluntary social insurance corresponding to the first tier, and a workplace accident insurance contract.

Workplace:

The work will be carried out at the Agriculture School of the Polytechnic Institute of Coimbra, under the scientific guidance of Prof. Cristina Isabel Cabral Galhano.

Selection Criteria:

Applications will be assessed on a scale of 0 to 20 using the following weights:

- a) Curriculum evaluation (50%), with a value of 50% for academic qualifications and 50% for the degree of fulfilment of the requirements relating to competences;
- b) Interview (50%), to be carried out only with the candidates placed at least in the first three positions, according to the order resulting from the previous criterion (the number of candidates to be interviewed may exceed three if the selection board decides).

The scholarship cannot be awarded to candidates who obtain an overall evaluation of less than 10 points.

Jury of Selection:

President: Prof. Doutora Marta Alexandra dos Reis Lopes

Members: Prof. Doutora Daniela Valente Simões dos Santos
Prof. Doutora Cristina Isabel Cabral Galhano

Substitutes: Prof. Doutora Maria Isabel Ribeiro Dinis

Prof. Doutora Elisabete Dinora Caldas de Freitas

Mandatory documents:

- a) Motivation letter, in which the candidate must explain his/her motivation to carry out this multidisciplinary work plan, as well as mention if he/she is available to start the scholarship on schedule date;
- b) Document(s) proving that the candidate hold the academic degree and/or diploma(s) required in the competition, preferably indicating the final average and the marks obtained per curricular unit. Applicants with foreign qualifications must provide proof of their foreign degree and diploma in accordance with Decree-Law no. 66/2018, of 16th August;
- c) Document proving enrolment and registration in the master's or doctoral degree or non-degree course, which may be made at a later date than the application, provided that it is prior to the contractualization of the scholarship;

- d) Updated *Curriculum Vitae* of the candidate, with a description of the qualifications;
- e) Supporting document(s) for other assessment parameter(s) indicated in the application notice;
- f) Declaration, under oath, regarding the scholarship(s) of the same type that the candidate have carried out and its duration;
- g) Other certifications and/or other documents considered relevant by the candidate.

Deadline of Application Submission:

The application period will be of 10 working days, starting on 26/07/2023 and ending on 08/08/2023. Applications should be sent by e-mail to the following e-mail address: bolsas.investig@ipc.pt with the mention in the subject line: **i2A/PRR-AgriFlex-Lic2/2023**.

Legislation and applicable Regulation:

The award of this scholarship is based in the Law 40/2004, of the 18th of August (Statute of the Scientific Research Fellow), changed and republished by the Decree-Law 202/2012, of the 27th of August, updated by: Decree-Law 233/2012, Law 12/2013, Decree-Law 89/2013 and Decree-Law 123/2019; the Regulation of the research scholarships from the Fundação para a Ciência e a Tecnologia, I. P. and the Regulation of the Research Scholarships from Coimbra Polytechnic no. 12709/2016, published on the DR, 2nd serie, of 21/10/2016.

The model of the scholarship contract, as well as that of the final reports to be prepared by the scholarship holder and the scientific supervisor, are those set out in the annexes to the above-mentioned Statute for Scientific Research Scholarship Holders.

Information of Results:

The results of the evaluation will be published within 90 working days from the deadline for submission of applications, by sending a communication to the candidates, via email. After the results have been published, candidates will be notified to, if they wish, give their opinion in a prior hearing within a maximum of 10 working days after that date. After this deadline, the selected candidates will have to declare their acceptance in writing. Unless a justifiable reason is provided, failure to make the declaration within the deadline will be considered as a waiver of the scholarship. In case of resignation or withdrawal of the selected candidate, the immediately best ranked candidate will be notified.

For further information please contact:

Marta Alexandra dos Reis Lopes: mlopes@esac.pt

Coimbra, 13th July 2023