

CALL FOR RESEARCH GRANT

A call for three (3) research fellowship is open, in the framework of the TOOLING4G project “Advanced Tools for Smart Manufacturing” (reference: POCI-01-0247-FEDER-024516), co-financed by the European Regional Development Fund, by the Competitiveness and Internationalization Operational Program (POCI) of Portugal 2020, in the scope of the System of Incentives for Research and Technological Development, in the following conditions:

Scientific area: Electrical and Computer Engineering, Informatics Engineering, Physics Engineering, or related areas.

Admission requirements: The scholarship is for students enrolled in a doctoral/PhD course in a Portuguese higher education institution; or enrolled in a course not conferring an academic degree integrated in the educational project of a Portuguese higher education institution.

The course not conferring an academic degree must be related to the work plan of the fellowship and, in this case, the fellowship can only be awarded to those who do not exceed, with the conclusion of the fellowship contract in question, including possible renewals, an accumulated period of two years in this typology of fellowship, followed or interpolated.

“Courses not conferring an academic degree” are the courses referred to in paragraph e) of number 3 of article 4 of Decree-Law no. 74/2006, of 24 March, in the current wording, provided that they are developed in association or cooperation between the higher education institution and one or more R&D units, in accordance with the provisions of paragraph e) of article 3 of the Regulation of Research Grants of the Fundação para a Ciência e a Tecnologia, I.P.

Preferential conditions: knowledge of computational intelligence, intelligent control, control, digital control, real-time systems, computer programming; knowledge in the subject areas of the activity object of the fellowship .

Work plan: The fellowship(s) aims(aim) at consolidating scientific training through the development of research and development work in real-time systems, computational intelligence and control, in the domain of the molds and plastic injections industries, for: (i) Development of an application for monitoring and control of the mold; (ii) Development of an application for monitoring and control of the machines and peripherals; (iii) Development of algorithms for the prediction of defects in the injected products and failures in the tools, as well as their corresponding correction; (iv) Development of algorithms for the detection of failures that may occur in the injection process as well as in all the peripherals.

A large part of the work will focus mainly on algorithms, data processing, and machine learning.

Regime: The attribution of the fellowship does not generate or entitle a relation of a legal-labour nature, and the fellowship is undertaken in an exclusive dedication regime. The fellow is granted with the Fellow Statute of the UC, in its current wording, according to the Statute of the Scientific Research Fellow, and according to the Regulation of Research Grants of the Fundação para a Ciência e a Tecnologia, I.P., both in their current wording.

Location: Department of Electrical and Computer Engineering, Faculty of Science and Technology (FCTUC-DEEC) at the University of Coimbra, and partner facilities as needed.

Duration: The duration will be such that the fellowship(s) will have a termination date coincident with the date of the end of the project. Presently, the end date of the project is defined to be 2021-February-28, and it is planned to request the extension of the project until 2021-June-30.

Renewal: Initially, the fellowship will have an end date equal to the end date of the project at the date of contract signature. If the end date of the project is postponed to a date after the end of the fellowship, then the fellowship will be renewed until the new end date of the project.

Scientific orientation: Professor Rui Alexandre de Matos Araújo.

Financial conditions: The amount of the grant is € 1074.64 corresponding to the monthly compensation stipulated in the FCT table (<https://www.fct.pt/apoios/bolsas/valores.phtml.en>), plus social security (Seguro Social Voluntário, first level contributions) if the fellowship has a duration not lower than 6 months, and personal accidents insurance. The payment will be made by bank transfer. This amount will not be increased during the entire period of the grant duration.

Selection methods: Curricular evaluation (70%) and interview (30%) of the 10 best classified candidates in the curricular evaluation part. For each fellowship, in case no candidate has an adequate profile (global evaluation under 50%), the fellowship will not be granted.

Applicants who have not submitted the relevant certificate of enrollment in course during the fellowship application phase, but just declaration on the honor by the candidate that he/she will enroll in the course, the University of Coimbra may eventually establish a deadline (equal to or before the date of signature of the fellowship contract) to submit that certificate. Candidates who do not present the certificate by this deadline will be excluded from the fellowship.

Selection criteria: The curricular evaluation will focus on the following criteria: (1) Curricular elements presented, including the characteristics of academic education (30%); (2) Knowledge in the area of the work plan and desired profile; knowledge on real-time systems, computational

intelligence, intelligent control, control, digital control, computer programming; knowledge in the subject areas of the activity object of the fellowship (40%). In the interview, motivation, commitment, perseverance, adequacy of the profile and merit of the candidate to the needs of the project, and knowledge in the area of the work plan and desired profile will be evaluated (30%). The final evaluation results will be publicized through an ordered list (by final grade obtained), posted in a visible and public place at FCTUC-DEEC.

Jury responsible for selection: Professor Aníbal Traça de Carvalho Almeida, Professor Rui Alexandre de Matos Araújo e Professor Urbano José Carreira Nunes.

Formalization of application: Applications must be formalized, obligatorily, by sending the following elements: (1) Letter of presentation, application and motivation; (2) Curriculum Vitae (CV) of the applicant, specifying skype address; (3) Copy of the certificate(s) of academic qualifications with the mean overall final classification in the courses (e.g. Grade Point Average, GPA); (4) Proof of enrollment in a doctoral/PhD course, or in a course not conferring an academic degree integrated in the educational project of a Portuguese higher education institution, or a declaration on the honor by the candidate that he/she will enroll in the course until the date that eventually may be defined by the University of Coimbra (date equal or previous to the date of contract signature, a date that may exist in case a fellowship is granted); (5) Declaration on the honor of the candidate(s) with the indication of the fellowship(s) of the type to which the contest is held and the respective duration of such fellowships. The CV should include: (i) contact information, (ii) Academic qualifications (including, for each course, a complete list of the concluded courses/subjects/curricular units and their classifications), (iii) List of scientific publications, (iv) Main projects where the applicant has participated, (v) other information considered relevant. information considered relevant.

Applications submission: Applications should be sent in PDF format by email to: rui@isr.uc.pt.

Submission of applications: Between 2020/12/15 and 2021/01/08.

Publication date: 2020/12/14.

Submission deadline date: 2021/01/08.

Additional information: The evaluation results will be announced within 90 days after the end of the applications submission deadline, by notifying the applicants via email. After the announcement of the results, candidates are considered automatically notified to, if they wish to do so, comment on the results on a preliminary hearing period within 10 days after that date. After this, the selected candidates will have to declare in writing their acceptance. Unless a justification worthy of



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consideration is presented, if the declaration is not submitted within the referred period, it is considered that the candidate waives the grant. In case of resignation or withdrawal of the selected candidate, the next candidate with the highest evaluation score will be notified immediately.