CALL FOR RESEARCH GRANTS

Process 385328

It is open a call for three research fellowships, in the framework of the project "KhronoSim - System for Simulation and Test of Complex Systems" (reference: Project Nr. 17611), co-financed by the European Regional Development Fund (FEDER), through the "Portugal 2020" (PT2020) program, within the framework of the System of Incentives to Research and Technological Development (SII&DT) and the Operational Program for Competitiveness and Internationalization (POCI), with the following characteristics:

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

Admission requirements: Holding a degree at the master/MSc level in the area of Electrical and Computer Engineering, Informatics Engineering, Engineering Physics, or a related area.
Preferential conditions: knowledge on real-time systems involving software and/or hardware, simulation, control, digital control, intelligent control, computational intelligence, computer programming; Knowledge in the subject area of the activity object of the corresponding fellowships;
Activities of the fellowships: will focus on various areas of the project in an integrated way. However, in a simply indicative way, the following emphases may be identified for the fellowships: Fellowships 1 and 2: emphases in the hardware architecture and in the software architecture; Fellowship 3: emphasis in the closed-loop simulation and control architecture.

Work plan: It will be performed research activities for the development of architecture and platform of software and/or hardware for testing closed-loop systems involving: (i) real-time systems, (ii) simulation involving dynamic models of the environment and of the equipment (e.g. sensors, actuators), control algorithms (system under simulated test or real test), (iv) simulation control interface (execution of tests, gathering of results, etc). Steps of the project: preliminary studies, specification and integration of the architectures of hardware and software of the test bench, design of closed-loop simulators (simulation and control of the systems), test bench of the system under emulated test, test bench of the system under real test. Case study that will be the target of the development and validation of the system for simulation and test of complex systems: sun-synchronous earth satellite (sun-synchronous orbit).

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 University of Coimbra, in its current wording, according to the Statute of the Scientific Research Fellow, in its current wording (https://www.fct.pt/apoios/bolsas/estatutobolseiro.phtml.en), and according to the Regulation of Research Grants of the Fundação para a Ciência e a Tecnologia, I.P., also in its current wording (https://www.fct.pt/apoios/bolsas/docs/RegulamentoBolsasFCT2015.pdf).

Location: Departamento de Engenharia Eletrotécnica e de Computadores, da Faculdade de Ciências Tecnologia - Universidade de Coimbra (FCTUC-DEEC) and Critical Software, SA. Facilities.

Duration: 6 months.

Renewal: Eventually renewable, until the end of the project (30/09/2018).

Scientific Orientation: Prof. Rui Alexandre de Matos Araújo.

Financial conditions: The amount of the grant is € 980,00 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) 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 (90%) and interview (10%) to the 10 candidates best classified 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.

Selection and attribution criteria: The curricular evaluation will focus on the following criteria:
1. Curricular elements presented, including the adequacy of the profile and merit of the candidate to the needs of the project (50%);
2. Experience and knowledge in the area of the work plan and desired profile: previous experience in works and/or research and development projects related to the research and development program to be developed; knowledge on real-time systems involving software

and/or hardware, simulation, control, digital control, intelligent control, computational intelligence, computer programming; knowledge in the areas of activity of the corresponding fellowships (40%);

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

Formalization of application: Applications should be sent by email with the following documents and informations: (1) Letter of presentation, application and motivation; (2) Curriculum Vitae (CV) of the applicant; (3) Copy of the certificate(s) of academic qualifications with the mean overall final classification in the courses (e.g. Grade Point Average, GPA). 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, and working experience, (v) other information considered relevant.

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

Submission of applications: Between 26/10/2016 and 09/11/2016.

Publication date: 25/10/2016.

Deadline for application: 09/11/2016

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