

## **CALL FOR APPLICATIONS**

Job:

Job reference: AE2019-0214 (GSL - HASLAB)

INESC TEC - Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência

Position: Research Grants (BI)

City: Dep Informática, UMinho, Braga Research field: Main: COMPUTER SCIENCE

Job summary:

INESC TEC is accepting applications to award 1 Research Grant for Degree holders .

Project: GreenSoftwareLab: Towards an Engineering Discipline for Green Software

Scientific Advisor: João Alexandre Saraiva

**Duration Grant:** from 2019-10-01 to 2019-12-31 (3) - Eventually renewable until the project conclusion or budget.

Location: Dep Informática, UMinho, Braga

Job description:

Work Area: Software Engineering

Project overview: In the context of the project, we have developed a catalog of "energy smells" that indicate a possible abnormal energy consumption of the software. Each of sucg smells has an associated refactoring that eliminates it. This project aims at develop the concept of "Energy Debt" that will indicate the difference in terms of energy consumption of eliminating the smells before or after evolving a software Objectives: In this project we will: 1- Study the concept of Technical Debt, Souce Code Bad Smells and refactoring. 2- Adapt the concept of Technical Debf to the energy consumption realm. 3- Validate the concept by using the SERAPIS tool to detect and eliminate Energy Smells. Apply such tool to a large set of software applications. 4- Write a scientific paper.

**Academic Qualifications: Graduated Informatics Engineering Sciences** Minimum Profile required: Academic Study and Experience on Green Software Preference factors: Experience in the analysis and teste of software

**Monthly Grant:** €752,38 (Degree) according to the Stipends values of the grants awarded directly by the FCT, paid by bank

> transfer. The grant holder may also benefit from additional incomes in the sequence of a quarterly evaluation process (Clauses 12 and 13 of INESC TEC Grants Regulation and Annex II), up to a maximum of 50% of the

monthly grant.

Project duration: 2016-07-01 a 2019-12-31

**Funding Entity:** Funded by FEDER through the Operational Programme for Competitiveness and Internationalisation -

COMPETE 2020 Programme, and by National Funds through the FCT - Portuguese Foundation for Science

and Technology, I.P., within project PTDC/EEI-ESS/5341/2014 (POCI-01-0145-FEDER-016718) .

The grant contract shall be submitted to the legislation concerning the Research Grant Holder Statute, approved by Law n 40/2004, dated 18 August, amended and republished by Decree-Law No. 202/2012 of 27 August and amended by Decree-Law No. 233/2012 of 29 October and by Law No. 12/2013, of January 29, and Decree-Law No. 89/2013 of July 9 as well as by INESC TEC Grant Regulation, approved by FCT -Fundação para a Ciência e a Tecnologia (Science and Technology Foundation) in 12 January 2011 and FCT current Grant Regulation. Additional information about INESC TEC Grants Regulation and relating annexes may be found at www.inesctec.pt/grants

Selection Criteria: Curriculum evaluation based on the criteria referred to in Clause 7 INESC TEC Grants Regulation and will include individual interviews in the final stage of the selection process, with its valuation: 80% curriculum evaluation (30% CV, 25% scientific domains and 25% Expertise) and 20% interview. Only those candidates who obtain at least 70% in the curricular evaluation (CV + Scientific Domain + Experience) will be called for the interview.

Selection Jury: President of the Jury: Prof. João Alexandre Saraiva;

> Member: Prof. António Nestor Ribeiro; Member: Prof. José Creissac Campos;

Notification of results: The results of the selection process will be disseminated to interested parties by mail, as referred to in Clause

8 of INESC TEC Grants Regulation.

Application period: From 2019-08-26 to 2019-09-06

Application submission: Fill in the electronic form in the section Work with Us at www.inesctec.pt, , attaching the Curriculum Vitae,

certificate of qualifications and other supporting documents relevant to the final assessment.







