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CALL FOR RESEARCH FELLOWSHIP

Ref. Agenda Mobilizadora GreenAuto - PI N.º 54 – BI2

The Polytechnic University of Coimbra opens a call for one research fellowships, in the framework of the GreenAuto project "Agenda Mobilizadora GreenAuto: Green innovation for the Automotive Industry" (reference: Nº 54), financed by PRR - Plano de Recuperação e Resiliência and Fundos Europeus Next Generation EU (AVISO N.º 02/C05-i01/2022, Component 5 – Capitalização e Inovação Empresarial - Agendas Mobilizadoras para an Inovação Empresarial), in the following conditions:

Fellowship will aim for the implementation and development of the following activities:

1) Development, tests, and trials in a controlled environment of an AGV and COBOTs;

2) Development of supervisory and monitoring software for the Asti-AGV fleet and Dossan COBOTs;

3) Integration and demonstration of prototypes in an industrial environment.

Generic scientific area: Electrotechnical Engineering, Computer Engineering, Mechanical Engineering, or Electromechanical Engineering

Specific scientific area: Automation and RoboticsGeneric scientific

Requirements:

Graduates in Electrical Engineering or similar enrolled in a Master's or a non-academic degree course.

- With experience in:

  a) ROS, Programming in C++, Python, Ladder;

Work plan:

The work plan to be developed foresees, in an initial phase, the identification and study of scientific and industrial works carried out under similar conditions, as well as the definition of the conditions of the experimental tests in collaboration with the industrial partners of this work (Europneumaq and Stellantis S.A, in the development of an AGV fleet supervision system). The need to carry out traffic control measures, zone control, collision avoidance, or a combination of both. Traffic control transmits signals in defined areas, and if the area is free, then it allows the AGV to enter or pass, however, if another one is close, it receives the information that the place is occupied, the development of a management system allows increased efficiency and productivity by eliminating unnecessary routes and allowing you to pace tasks, keeping workers associated with tasks and helping to improve accuracy and minimize lost or misplaced products. The use of AI systems, in addition to optimizing routes, allows for prioritizing work and improving resource utilization. Depending on the system developed, it is possible to create a scalable solution, with the ability to add more additional units, create intelligent routes, plan the most efficient path, reduce congestion and avoid accidents.

Duration:

The duration of the fellowship is 6 months, possibly renewable in an exclusive dedication regime. The fellowship holder is awarded the Fellowship Statute of the Polytechnic University of Coimbra, in its current wording, according to the Research Fellowship Holder Statute, and according to the Regulation for Research Fellowships of the Fundação para a Ciência e a Tecnologia, I.P., both in their current wording. the fellowship is expected to start in May 2023.

Financial conditions:

The amount of the fellowship is € 930,98 corresponding to the monthly compensation stipulated in the FCT table (https://www.fct.pt/en/financiamento/programas-de-financiamento/bolsas/), plus social security (Seguro Social Voluntário, first level contributions) and personal accidents insurance.

Location:

The work will be carried out at the Instituto Superior de Engenharia de Coimbra (ISEC) under the scientific supervision of Nuno Miguel Fonseca Ferreira and Fernando António Gaspar Simões.

Selection methods:

The evaluation criteria for applications are as follows: Curriculum Assessment (70%) and Interview (30%).

In the Curriculum Assessment, the following will be taken into account:

- Absolute merit of curriculum vitae (80%);

- Publications on scientific journals (20%).

During the interview, the following will be taken into account:

- Knowledge and profile suitable for the functions to be developed (50%);

- Availability and flexibility of schedule (20%);

- Motivation and interest (30%).

The jury responsible for selection:

The jury responsible for the selection process will be made up of Ph.D. Professors:

Effective:

Professor Doctor Nuno Miguel Fonseca Ferreira;

Professor Doctor Fernando António Gaspar Simões;

Professor Doctor Pedro Miguel Soares Ferreira.

Deputies:

Professor Doctor Elisabete Dinora Caldas de Freitas;

Professor Doctor Patrícia Sofia Simões Santos.

Formalization of application:

Applications must include the following documents:

- Letter of motivation of the candidate

- The curriculum vitae

- Copy of qualification certificates.
- Other documents relevant to the assessment.

Submission of applications:

It will be 10 working days, from 11 of May to 24 of May.

Applications must be sent to the following e-mail addresses: bolsas.investig@ipc.pt indicating the reference: Agenda Mobilizadora GreenAuto - PI N.º 54 – BI2

Publication/notification of results: The evaluation results will be announced within 90 working days after the end of the application 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 during 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 fellowship. In case of resignation or withdrawal of the selected candidate, the next candidate with the highest evaluation score will be notified immediately.

For further information please contact:

Nuno Miguel Fonseca Ferreira, email: nunomig@isec.pt

Coimbra, 24th April of 2023