

## **ANNOUNCEMENT FOR A RESEARCH FELLOWSHIP (1) one vacancy**

Open application from 13 July to 13 August 2021

### **Project BREUCA (048257) - IC&DT**

A call for applications is open for one (1) Research Fellowship for a Master in the context of the co-promoted enterprise R&DT project with the number POCI-01-0247-FEDER-048257 - *BREUCA - Development of a high-precision Virtual Reality simulator designed to be used in a professional simulation and gaming environment associated with real events*, under the following terms:

#### **Area of expertise**

Electrical Engineering, Computer Engineering, Computer Sciences and related areas.

#### **Admission requirements**

National, foreign and stateless applicants holding a Master's degree in Electrical Engineering, Computer Engineering, Computer Science or related areas are eligible to apply to this call. At the time of signing the contract, the selected applicant must be enrolled in a higher education programme leading to a degree or diploma. If the master's degree has been conferred by a foreign higher education institution, it must be recognised under the terms and pursuant to the provisions of Decree-Law no. 341/2007, of 12 of October or Decree-Law no. 66/2018 of 16 of August, until the date of contract signature.

Good knowledge of programming, data analysis and machine learning/deep learning techniques is required.

#### **Work plan**

The selected applicant will work as part of the BREUCA project, participating in the development of the different systems that will constitute the BEUCA project solution, including data analysis and design of the models to be integrated in the solution, development of models for defining vehicle trajectories, using, automatic learning/deep learning techniques, construction and prototyping of the system, testing, fine-tuning and validation of the system.

#### **Legislation and applicable regulations**

The award of this fellowship is based on the Regulations for Research Fellowships of the Fundação para a Ciência e Tecnologia (FCT), I.P., in force (<https://www.fct.pt/apoios/bolsas/docs/RegulamentoBolsasFCT2019DR.pdf>) and the Research Fellowship Holder Statute (Law nº 40/2004, of 18 of August, as successively amended).

#### **Workplace**

The work will take place on any of the premises of the Instituto Politécnico de Tomar (without prejudice to agreements that may be established between the stakeholders involved in the project) under the scientific supervision of Professor João Manuel Mourão Patrício and the co-supervision of Professors Sandra Vilas Boas Jardim, António Manso and Luís Merca Fernandes.

### **Fellowship Duration**

The fellowship is held on a full-time basis and has a duration of one year, renewable for up to the same period.

### **Amount of the monthly grant**

The amount of the grant is €1104,64 according to the table of amounts of grants awarded directly by the Fundação para a Ciência e Tecnologia (FCT), I.P. in Portugal ([https://www.fct.pt/apoios/bolsas/docs/Tabela\\_Valores\\_SMM\\_LOE\\_2021.pdf](https://www.fct.pt/apoios/bolsas/docs/Tabela_Valores_SMM_LOE_2021.pdf)) plus voluntary social insurance where applicable, as well as personal accident insurance. Payments will be made monthly by bank transfer.

### **Selection methods**

Admissible applications will be scored on a scale from 0 (zero) to 20 (twenty) in each of the following evaluation criteria:

Criterion A - Curriculum Evaluation against the project's objectives and the specific nature of the research work to be developed worth 50%.

Criterion B - Previous experience in scientific projects worth 30%.

Criterion C - Interview to discuss the applicant's CV worth 20%.

The interview may be held in person or remotely and its classification will be the sum of the scores obtained in the following criteria: a) Motivation; b) Autonomy; c) Ability to adapt; d) Communication and oral fluency. These criteria will be graded from zero to twenty, with the total score resulting from the sum of the criteria being divided by four (0 to 20 points).

For the purposes of selection, the applicants will be sorted according to the weighted average of the score obtained in each of the 3 (three) criteria, translated by the following formula:

$$\text{Final Score} = (0, 50 \times A) + (0, 30 \times B) + (0, 20 \times C)$$

If none of the applicants are considered to meet the necessary requirements to perform the tasks specified in the Work Plan, the fellowship will not be awarded. Applicants who do not obtain a minimum score of 10 (ten) on a scale of 0 (zero) to 20 (twenty) in any of the selection methods shall be excluded from the selection process.

### **Composition of the Selection Panel**

Chairman: Professor João Manuel Mourão Patrício (Instituto Politécnico de Tomar); Permanent members: Professor Sandra Vilas Boas Jardim (Instituto Politécnico de Tomar), Professor Ricardo Campos (Instituto Politécnico de Tomar) and Professor Luís Merca Fernandes (Instituto Politécnico de Tomar); Substitute members: Professor Ana Jacinta Pereira da Costa Soares (University of Minho) and Professor António Manso (Instituto Politécnico de Tomar).

### **Form of publication/notification of results**

Applications will be assessed against the above selection criteria. The final results of the evaluation will be announced within 30 (thirty) working days from the deadline for submission of applications and the list sorted by order of applicants, and the successful applicant will be notified by e-mail as well as the other applicants. If the selected applicant withdraws, the second applicant will automatically be selected from the applicants' ranking list, and so on, until the list

is exhausted. After the announcement of the results by e-mail, the applicants shall be considered to have been immediately notified so that, if they so wish, they may request a preliminary hearing within a maximum period of 10 (ten) working days after that date, pursuant to Articles 121 *et seq.* of the Code of Administrative Procedure. At the end of the period established for hearing interested parties and, in the absence of any response from them, the list of candidates will become definitive. A complaint may be filed against the final decision within 15 (fifteen) working days, or, alternatively, an appeal may be filed within 30 (thirty) working days, both counting from the respective notification.

#### **Application deadline and submission process**

The call for applications is open from July 13 to August 13, 2021. Applications must comprise: a) Detailed CV, including a breakdown of the grades achieved in individual units/modules and overall course grade; b) Copy of diploma; c) Elements related to the identification document - citizen card / identity card / passport. Applications should be submitted by e-mail to (fill in the "reference" field): BREUCA Project - M-SCHOLE - 048257, addressed to Sandra Vilas Boas Jardim, e-mail: [sandra.jardim@ipt.pt](mailto:sandra.jardim@ipt.pt) and Centro de Investigação em Cidades Inteligentes, e-mail: [ci2@ipt.pt](mailto:ci2@ipt.pt).

#### **Funding sources**

The grant awarded under this tender will be financed by the Instituto Politécnico de Tomar with funds from the Own Revenues Budget and, when eligible, with funds from European Funds, to be made available under PORTUGAL 2020, namely through the POCI Competitiveness Operational Program and Internationalization (COMPETE 2020), under the project POCI-01-0247-FEDER-048257 - *BREUCA - Development of a high-precision Virtual Reality simulator designed to be used in a professional simulation and gaming environment associated with real events.*

#### **Information and publicity of the granted funding**

In all R&D activities directly or indirectly funded by the grant, namely, in all communications, publications and scientific creations, as well as theses, carried out with the support provided for in the grant, the mention of financial support from IPT and PORTUGAL 2020 through the POCI Competitiveness and Internationalization Operational Program (COMPETE 2020) must be expressed. For this purpose, the insignia of IPT and the EU must be present in the documents referring to these actions, in accordance with the graphic standards of each operational program.