

**NOTICE OF OPENING OF AN INTERNATIONAL SELECTION PROCEDURE FOR RECRUITMENT OF A DOCTORATE POSITION, UNDER DECREE-LAW Nº 57/2016, AUGUST THE 29TH, CHANGED BY LAW Nº 57/2017, JULY THE 19TH.**

1. By order of 20/02/2018, of the Director of FEUP, Professor João Bernardo de Sena Esteves Falcão e Cunha, it is open a call for a position for a doctorate in the scientific area of Informatic Engineering, for the exercise of activities of scientific research. This recruitment is carried out in the framework of project SIMUSAFE – Simulator of Behavioural aspects for safer transport funded by the European Union’s Horizon 2020 research and innovation programme under grant agreement No 723386, in the form of a Uncertain Term Work Contract, never exceeding the maximum duration of 30 months.

This position aims at R&D activities focusing on devising architectures and implementing simulators in the domain of road safety, resorting to tools and techniques belonging to areas such as virtual reality, agent-based modelling and simulation, and participatory simulation through behavioural modelling. More specifically, the candidate shall be working within the project team, developing and implementing an integrated and distributed urban traffic simulation platform, considering the multitude of actors, their profiles in several scenarios, as well as their microscopic interactions, mainly amongst pedestrians, multi-axle vehicles, as well as two-wheelers (motorbikes and bicycles). Additionally, the candidate shall participate in the design of appropriate techniques for data collection in both real and simulated environments with the ultimate goal of inferring the risk-proneness profiles.

2. Legislation: Decree-Law no 57/2016, August 29, that approves the rules for post doctoral work contacts, designed to stimulate employment in science and technology in all areas of knowledge (RJEC), changed by the Law no 57/2017, July 19, Regulatory decree no 11-A/2017, July 19, within the legal provisions of the Labor Code, Law on 7/2009, February 12, in its current wording .

3. In accordance of Decree-Law no 57/2016, August 29, the present process is released from the authorization from the members of the Government responsible for the areas of Finance and Public Administration, namely that referred to in paragraph 3 of article 7 of the LTFP; obtaining the favorable opinion of the members of the Government responsible for the areas of Finance and Public Administration, referred to in paragraph 5 of article 30 of the LTFP and the procedure for recruitment of workers in requalification, referred to in article 265 of the LTFP.



4. In accordance with article 13 of the RJEC and according with the appointment the jury is composed as follows:

President: Professor Doutor Eugénio da Costa Oliveira

Member: Prof. Doutor Rosaldo José Fernandes Rossetti

Member: Prof. Doutor Daniel Augusto Gama de Castro Silva

Supplementary member: Prof. Doutor Henrique Daniel de Avelar Lopes Cardoso

Supplementary member: Prof. Doutora Sara Maria Pinho Ferreira

5. The work will be developed at the Department of Informatic's Engineering of Engineering of the University of Porto (FEUP).

6. The monthly payment, in exclusive basis, corresponds to the no 1 of article 2 of the Regulatory decree no 11-A/2017, July 19, corresponding to the level 33 from the remuneration single table, approved by the Ordinance no 1553-C/2008, December 31, which is € 2 128.34 – Doctorates with reduced post-doctoral experience or without scientific curriculum after the phd.

7. To this call can be opponents, candidates, nationals, foreigners and stateless persons who are holders of a PhD degree in Informatics Engineering or related areas and holding of a science curriculum and training to reveal a profile suitable for the activity to develop. If the PhD degree has been awarded by a foreign institution of higher education, the same must conform to the provisions of the Decree-Law No. 341/2007, of October 12, and any formalities must be fulfilled until the deadline date for the application.

8. The general requirements for admission are those defined in the preceding paragraph. For the purpose of determining the appropriate profile to the activity the following criteria are defined: Candidates should have proficiency in research and development activities in the areas of virtual environments, modelling and simulation in virtual environments with the aid of game engines such as Unity3D, interaction in virtual worlds, the use of virtual reality and related tools, the use of biometric sensors for data collection for context awareness, and in the development of digital games. Ideally the candidate should have experience in behavioural modelling and multiagent simulation, participatory simulation, machine learning, and mobile computing. The candidate also should demonstrate a proficient use of the English language, written and spoken, equivalent or above the C1 level.

9. In accordance with Article 5 of The RJEC the selection takes place through the evaluation of the scientific career and the curriculum of the candidates.



10. Taking into consideration the suitable profile to the activity, the assessment of the candidate scientific career and the curriculum focuses on its relevance, quality and timeliness of:

- a) the scientific production, technological, cultural or artistic work of the last five years considered most relevant by the candidate;
- b) the activities of applied, or based on practice, research developed in the last five years and considered of greater impact by the candidate;
- c) the extension activities and dissemination of knowledge developed over the past five years, particularly in the context of the promotion of culture and scientific practices, considered of major importance by the candidate;
- d) the activities of the administration of programs of science, technology and innovation, or experience in observation and monitoring of the scientific and technological system or of higher education in Portugal or abroad.

11. The five years period referred to in the previous paragraph can be increased by the jury, at the request of the candidate, when justified on the suspension of scientific activity for socially protected reasons, such as, license for parenting, serious illness, and other situations of unavailability for work legally safeguarded.

12. This position is open for carrying out activities in the area of Informatics Engineering, with particular focus on the development, modelling and simulation of virtual environments with the aid of game engines such as Unity3D, behavioural modelling and multi-agent simulation, machine learning, and interaction in virtual worlds, below designated by **area of preference**.

The evaluation criteria are the following:

The Evaluation of the Scientific Career and Curriculum Vitae (ESCC) focuses on three parts described below and the final classification is obtained by:  $ESCC = 0.2 AQ + 0.5 SCC + 0.3 MCI$ .

1. Academic Qualifications (AQ)

Assessment of the area of study of the candidate: PhD in Informatics Engineering, AQ = 5 points;  
PhD in Related Areas, AQ = up to 3 points

2. Evaluation of Scientific Career and Curriculum (SCC)

Assessment of the relevance, quality and timeliness of scientific career and curriculum. This evaluation focuses on the parameters described below and the classification is obtained by:  $SCC = 0.6 SC + 0.4 RA$ .



## 2.1 Scientific Production (SC)

Assessment of the scientific production (SCV), over the last five years. The classification is obtained by:  $SC = 0,6 SCV + 0,4 SCQ$ .

Quantitative Evaluation (SCV): publications in ISI journals, in the area of preference, SCV = up to 5 points; publications in related areas, SCV = up to 3 points; publications in other areas, SCV = 0 points.

Qualitative Evaluation (SCQ): the candidate must provide copies of up to 5 articles considered to be most relevant, SCQ = up to 5 points.

## 2.2 Research, Extension, and Management Activities (RA)

Evaluation of applied research activities, or based on practice, as well as activities of extension and management developed in the last five years. This parameter includes (i) supervision/co-supervision of Master, Doctoral and Post-doctoral programs and (ii) participation in R&D projects, services, transfer of technology and (iii) participation in other activities of science management and dissemination of knowledge, including the organization of conferences, symposia, and activities of scientific cooperation: activities in the area of preference, RA = up to 5 points; activities in related areas, RA = up to 3 points; activities in other areas, RA = 0 points.

## 3. Motivation and Capacity for Innovation (MCI)

Evaluation of the candidate's motivation and capacity for innovation. For this evaluation, the applicant must submit the documents described below and the classification is obtained by the following formula:  $MCI = 0.5 LM + 0.5 PR$ .

### 3.1 Letter of Motivation (LM)

Letter of motivation describing the relevance of the candidate's scientific career to this position and career personal goals: LM = up to 5 points.

### 3.2 R&D Project (PR)

Summary of R&D Project (maximum 2 pages A4) in the scientific area of preference: PR = up to 5 points.

13. The selection process includes a professional interview (PI) which exclusively aims to clarify aspects regarding the research results, for the three best candidates. The professional interview (PI) will be classified on a scale of 0 to 5 values.



14. The final grade is the weighted sum of the classifications ( $0.9 * ESCC + 0.1 * SPI$ ) obtained in Assessment of the Scientific Career and Curricular and Professional Interview. The position can only be filled by candidates whose final classification is greater than 4 points.

15. The jury shall act by a roll-call vote, justified in accordance to the publicized and adopted selection criteria, where abstentions are not allowed.

16. For all meetings of the jury, the respective minutes must be written which contain a summary of what occurred, as well as the votes issued by each of the members and their reasoning, and should be made available to applicants when requested.

17. After completion of the application of the selection criteria and the interviews, the jury shall draw up the ordered list of candidates with their classification.

18. The final decision of the jury is approved by the head of the institution who is also responsible for the hiring decision.

19. Applications submission

19.1. Applications must be mandatorily formalized by email to [recursoshumanos@fe.up.pt](mailto:recursoshumanos@fe.up.pt) and to [rossetti@fe.up.pt](mailto:rossetti@fe.up.pt) and should clearly state the reference **FEUP-Investigador-Simusafe**.

The application must include: complete name, filiation, number and date of the identity card, tax identification number, date and location birth, marital status, profession, residence and contact address, including e-mail and telephone contact.

19.2 The application is accompanied by all the documents proving the conditions laid down in paragraphs 7 and 8 for admission to this call, in particular:

- a) Certificate of PhD degree;
- b) PhD Thesis;
- c) Detailed Curriculum Vitae, structured according to paragraphs 10 and 12;
- d) Other documents relevant to the assessment of the qualification in related scientific area;
- e) Abstract of R&D project (máx. 2 pag. A4);
- f) Copy of the 5 most relevant publications;
- g) Motivation letter;
- h) Recomendatiom letters;
- i) Documentary evidence of professional experience;
- j) Information concerning scientific and technological research production, applied research activities, extension activities and dissemination of knowledge and science technology and innovation program mangement activities.



19.3. The application period begins the day after the publication of this announcement, and lasts for the period of 10 (ten) working days.

20. Candidates that incorrectly formalize the application or who do not demonstrate the general requirements for this call will be excluded. In case of doubt, the jury may require from any candidate, the submission of documentary proof of their statements.

21. False statements made by the candidates shall be penalized in accordance with the law.

22. The list of candidates admitted and excluded as well as the final classification list will be forwarded to the candidates through registered letter, and the candidates are notified by e-mail with a delivery receipt of notification. This lists will also be affixed in FEUP facilities, at Rua Roberto Frias, s/n, 4200-465 Porto, and advertised at [https://sigarra.up.pt/feup/pt/noticias\\_geral.lista\\_noticias#gruponot12](https://sigarra.up.pt/feup/pt/noticias_geral.lista_noticias#gruponot12).

23. Prior Hearing and deadline for the final decision: Under Article 121 of the Code of Administrative Procedure, after notification, the candidates have 10 working days to object. The final decisions of the jury are given within a maximum period of 90 days from the deadline for the submission of applications.

24. This call is intended exclusively to filling the position indicated and can be made to cease until the approval of the final ordination of candidates list and it expires with occupation of the job on offer.

25. Policy for non-discrimination and equality of access: FEUP actively promotes a policy of non-discrimination and equality of access, so that no candidate (he or she) can be privileged, benefited, harmed or deprived of any right or exempt of any duty due, in particular, ascendancy, age, gender, sexual orientation, marital status, family situation, economic situation, education, origin or social status, genetic heritage, working capacity reduced, disability, chronic illness, nationality, ethnic origin or race, territory of origin, language, religion, political or ideological convictions and union membership.

26. The jury approved this notice at the meeting held on February 28th, 2017.

27. In terms of the Decree-Law no. 29/2001, February 3, candidates with disabilities have preference in the case of equal classification, which prevails over any other legal preference. Candidates must declare on the application, under oath, the degree of incapacity, the type of disability and the media/words to be used in the selection process, in accordance with the diploma.

