

NOTICE FOR THE OPENING OF AN INTERNATIONAL SELECTION PROCEDURE FOR HIRING A PH.D. HOLDER, UNDER THE PROJECT REF 31480 FUNDED BY NATIONAL FUNDS UNDER THE DECREE-LAW 57/2016 OF AUGUST 29th, AMENDED BY LAW 57/2017 OF JULY 19th AND COMPLEMENTARY LEGISLATION

Notice n.º 2584/2019

1. Following the approval from the Scientific Board of the Instituto de Educação da Universidade de Lisboa (IE-ULISBOA), at the meeting of December 13th, 2018, and by order of the Dean of the IE-ULisboa dated January 8th, 2019, made under the authority delegated to it by the Rector of the Universidade de Lisboa (by Order 10594/2018 of October 26th, published in the *Diário da República*, 2nd series, issue 220 of November 15th 2018), it was decided the opening of an international selection competition for one Ph.D. holder, to be hired under the research project “GoSTEM - Let's go STEM: Its influence on Physics' learning, interest and motivation”, funded by national funds, with reference PTDC/CED-EDG/31480/2017, on the scientific domain of Education, under a public service work contract for a fixed term of three years, for activities of scientific research.

In the context of the mentioned project, the researcher to be hired will carry out the following duties:

- a) To construct inquiry tasks for physics teaching, taking into account a STEM approach;
- b) To design a training professional development program for physics and chemistry teachers involved in the project and its implementation in higher education institutions and schools;
- c) To collaborate in the implementation of the inquiry tasks, following a STEM approach, in the schools (in a formal and non-formal context);
- d) To collaborate in the implementation of the inquiry tasks, following a STEM approach, in the higher education institutions;
- e) To select, adapt and construct questionnaires, interviews and other data collection instruments;
- f) To collect data in the schools and institutions of higher education;
- g) To analyze data of the project, using SPSS and Nvivo software;
- h) To collaborate in dissemination activities of the project.

2. Applicable legislation:

- a) Decree-Law 57/2016, of August 29th, establishing a system for Ph.D. holders designed to encourage employment in the fields of science and technology in all areas of knowledge (RJEC), in the wording granted to it by Law 57/2017, of July 19th, considering also the provisions of Regulatory Decree 11-A/2017, of December 29th;
- b) The general Law on Employment in Public Service (Lei Geral do Trabalho em Funções Públicas - LTFP), approved in annex to Law 35/2014 of June 20th, and its amendments.

3. In accordance with article 13 of the RJEC, the members of the selection board, are the following:

Chairman: João Pedro Mendes da Ponte, Professor at Instituto de Educação da Universidade de Lisboa;

Members

i) Mónica Luísa Mendes Baptista, Assistant Professor at Instituto de Educação da Universidade de Lisboa;

ii) Ana Sofia Martins Silva Freire dos Santos Raposo, Assistant Professor at Instituto de Educação da Universidade de Lisboa;

iii) Estela Mafalda Inês Elias Fernandes da Costa, Assistant Professor at Instituto de Educação da Universidade de Lisboa.

4. The workplace is at Instituto de Educação da Universidade de Lisboa, Alameda da Universidade, 1649-013 Lisboa.

5. The monthly remuneration to be awarded is the corresponding to the 1st position of the initial level, which is established in clause 1 of article 2 of Regulatory Decree 11-A/2017 of December 29th, corresponding to level 33 of the consolidated table of remuneration, as approved by Government Order 1553-C/2008 of December 31st, in the amount of 2,128.34 Euros.

6. Under the terms of Decree-Law 29/2001, of February 3rd, disabled candidates take preference where scores are equal, which prevails over any other legal right of preference. Candidates should state on the application form, under declaration on honor, the degree and type of disability and the means of communication to be used on the selection procedure, in accordance with the terms of the above-mentioned legislation.

7. The contract is concluded for a period of 3 (three) years and is automatically renewable for periods of one-year periods, up to a maximum of 6 (six) years, unless:

a) The Instituto de Educação Scientific Board proposes its termination, based on an unfavorable assessment of the work undertaken by the Ph.D. holder, in accordance with the rules in force in the Institute, which should be communicated to the interested party up to 90 days before the term of the initial contract or of the ongoing renewal;

b) When applied any of the causes for termination in accordance with article 289 of the LTFP, approved by Law 35/2014, of June 20th;

c) The public employer, or the employee, communicates in writing, up to 30 days before the term of the contract or of an ongoing renewal, their will to not renewing it, with the ensuing expiration of the fixed-term work contract concluded as result of this Notice.

8. Portuguese, foreign and stateless persons who hold a doctoral degree in a branch of knowledge or specialism in the scientific domain of Education, or a closely related field, may submit applications through this selection procedure, as may those who, in accordance with Decree-Law 341/2007 of October 12th, as regulated by Government Order 227/2017 of July 25th, are acknowledged to have the rights inherent in the title of the degree of Doctor in Education or in Chemistry or in Physics, or a closely related field, and those who have been granted equivalence to, or recognition of the degree of Doctor in Education, with relevant curriculum in the scientific area covered by the project, or a closely related field, under the terms of Decree-Law 283/83 of June 21st, and have an academic and professional *curriculum* that demonstrates an adequate profile to the research activities to be undertaken. Equivalence, recognition or registration of the degree of Doctor must be obtained until the application period deadline. Candidates must also hold domain of the Portuguese oral and written language.

9. Formal procedure for applications:

9.1 Applications shall be submitted using the application form available on the website of the Instituto de Educação (<http://www.ie.ulisboa.pt>), addressed to the Dean of Instituto de Educação da Universidade de Lisboa, mentioning the notice reference, full name, number and date of expiry of identification document, citizen's card or civil identification number, tax number, or in the case of foreign or stateless persons, passport number, date and place of birth, occupation, residential address, telephone number and e-mail address.

On the application form, the candidate must indicate his/her consent to have the communications and notifications regarding this procedure sent to the e-mail address provided.

9.2 The application is to be accompanied by the documentation proving compliance with the conditions set out in point 8 for eligibility for this selection procedure, namely:

- a) Copy of certificate or diploma;
- b) Doctoral thesis or equivalent document(s) that lead to the award of this academic degree;
- c) Detailed *curriculum vitae*, structured according the items set out in point 13 and 15, highlighting, in the form of attached copies, the research work that the candidate considers to be most relevant for each of the items of point 13 and 15;
- d) Scientific project, bearing of the theme of STEM, using inquiry tasks, to promote students' physics learning, interest and motivation, showing possible contributions for the development of scientific knowledge, using qualitative and quantitative research methodologies.
- e) Other documents that the candidate substantiates being relevant to the assessment of his/her application.

9.3 Candidates are required to submit the documentation mentioned in 9.1 and 9.2, in PDF format by e-mail, to the e-mail address recursoshumanosIE@ie.ulisboa.pt, until the last day of the time limit for the start of the selection procedure, which is set at 30 working days after publication of this Notice on *Diário da República* (Portuguese Government Gazette), on Bolsa de Emprego Público (Public Employment Exchange) and on the websites of Instituto de Educação da Universidade de Lisboa and FCT, I.P., in Portuguese and in English. A candidate may, due to technical difficulty or impossibility of sending by e-mail any of the documents mentioned in 9.1 and 9.2, deliver them in physical form, within the time-limit mentioned above, by registered postal mail with notice of receipt, to the postal address Instituto de Educação da Universidade de Lisboa, Alameda da Universidade, 1649-013 Lisboa, or by hand during business hours (10h00 to 12h30 and 14h00 to 16h30) at the Human Resources Management Department. If the candidate's reasons for submitting documents in physical form are not accepted, the Chairman of the Selection Board shall grant the candidate an additional 5 working days to submit them in digital form as well.

10. By decision of the Dean of Instituto de Educação, candidates that do not comply with the stated in point 9 will not be admitted to the selection procedure. Candidates will be automatically excluded when not submitting the application form or the documents mentioned in paragraphs a) to d) of point 9.2, or when the documents are illegible, incorrectly filled in or invalid. The selection board is also entitled, in case of doubt and in order to confirm eligibility for the selection procedure, to request documentary proof of statements made by any candidate.

11. Approval on absolute merit:

11.1 The selection board will decide to approve or reject applications based on absolute merit, justified by a roll call vote, where no abstentions are admitted.

11.2 Candidates that obtain favorable vote of more than half of the voting members of the board are considered approved on absolute merit.

11.3 Candidates who have an academic and curricular trajectory relevant to the academic field to which this selection procedure refers, will be approved on absolute merit, considering compliance with the additional weighting criteria set out in point 15.5.

11.4 A vote against approval on absolute merit may further be based on non-compliance with the following conditions: the research project presented by the candidate is clearly insufficient and not appropriately positioned in the academic field in question, suffers from serious inaccuracies or is not supported by the candidate's previous work.

12. Under the terms of article 5 of the RJEC, selection will be carried out by evaluation of candidates' scientific and curricular career path.

13. The evaluation of candidates' scientific and curricular path is based on the relevance, quality and topicality of:

a) The scientific, technological and academic production of the last three years considered more relevant by the candidate;

b) Applied research or practice-based activities, undertaken in the last three years that the candidate considers of greatest impact;

c) Knowledge extension and dissemination activities undertaken in the last three years, in particular in the promotion of culture and research practice, that the candidate considers most relevant;

d) Management of science, technology and innovation programs, or experience in observing and monitoring the science and technology or higher education systems in Portugal or abroad in the last three years.

14. The board may extend the three-year period set out in the previous point, at the candidate's request, when provided justified and documented proof of the suspension of the research activity for reasons related to social protection, namely parental leave, prolonged serious illness and other situations legally justifying non-attendance for work.

15. The criteria for evaluation are those set out in this clause, with the additional criterion set out in point 15.5, and paying particular attention to the candidate's *curriculum vitae* and contributions the candidate considers of greatest relevance over the last five years:

15.1. Quality of the scientific, technological, and academic production, considered the most relevant by the candidate, and relevant to the project to be developed, which was given a weighting factor of 40% considering:

i) Scientific publications: a parameter which takes into account books, book chapters, articles in scientific journals and in international conference proceedings of which the applicant was the author or co-author, considering:

- its nature;

- its impact;
- the scientific/technological level and innovation;
- the importance of contributions to the advancement of the current state of knowledge.
- the importance of the works that have been selected by the candidate as most representative, namely regarding their contribution to the development and evolution of the scientific area for which the competition is open.

ii) Recognition by the international scientific community, a parameter that takes into account:

- participation in editorial bodies of scientific journals;
- coordination and participation in program committees of scientific events;
- membership of scientific societies of competitive admission and other similar distinctions.

iii) Coordination and participation in scientific projects: a parameter that takes into account the participation and coordination of scientific projects by the candidate, subject to a selection on a competitive basis, considering:

- the territorial scope and its dimension;
- the innovation and the diversity.

iv) Guidance and supervision of students, trainees and research fellows: a parameter that takes into account the supervision of doctoral students, master's and undergraduate students, trainees and research fellows considering the number, quality, scope and scientific/technological impact of the resulting publications, theses, dissertations and final course papers, particularly distinguishing awarded works and international recognition.

15.2. Activities of applied, or practice-based, research considered of greatest impact by the candidate, and relevant to the project to be developed, which was given a weighting factor of 30% considering:

i) Professional training activities and lifelong training: a parameter which takes into account the participation and coordination of training activities in the field of Education.

ii) Provision of services and consultancy integrated in institutional mission: a parameter that takes into account participation in activities involving the business community and the public sector, taking into account the type of participation, size, diversity, technological intensity and innovation.

15.3. Activities of extension and dissemination of knowledge, namely in the context of the promotion of scientific culture and practices, considered of greatest relevance by the candidate, and relevant to the project to be developed, which was given a weighting factor of 25% considering:

i) Publications of scientific outreach: a parameter that takes into account the articles in journals and national conferences and other publications of scientific diffusion, taking into account their professional and social impact.

ii) Services to the scientific community and to the society: a parameter that takes into account the participation and coordination of scientific and technological diffusion initiatives and taking into account the nature and the results achieved by these initiatives.

15.4. Contribution to management activities in science, technology and innovation programs, or experience in the observation and monitoring of the higher education or scientific and technological

systems in Portugal or abroad, which is relevant to the project to be undertaken. This factor has a weighting of 5%, considering:

- i) Positions in boards of the university, school, or research unit: a parameter that takes into account the nature and the responsibility of the position ;
- ii) Other positions: a parameter that takes into account the exercise of positions in national and international scientific organizations.

15.5. In weighting the evaluation criteria outlined in points 15.1 to 15.4, each examiner may take into consideration the following additional parameters:

- a) Relevance and quality of the scientific project proposed in the theme of STEM, using inquiry tasks, to promote students' physics learning, interest and motivation;
- b) Contribution to the development and evolution of theme STEM, using inquiry tasks, to promote students' physics learning, interest and motivation, within the scientific area in which the competition is opened;
- c) Contribution to the development and evolution of theme STEM, using inquiry tasks, to promote students' physics learning, interest and motivation, within the scientific area in research unit UIDEF;
- d) Contribution to the development and evolution of theme STEM, using inquiry tasks, to promote students' physics learning, interest and motivation, within the research project "GOSTEM";
- e) Contribution to the development and evolution of theme STEM, using inquiry tasks, to promote students' physics learning, interest and motivation, through qualitative and quantitative research.

16. The selection board may decide to select up to 3 (three) candidates with absolute merit who will be required to hold a session to present the results of their research, following which the board members should stimulate an open debate on their content and innovative character. This presentation session does not constitute a selection method and is not classified, aiming merely to obtain explanations or explanations of elements contained in the candidates' *curricula*.

17. Whenever the board considers necessary, they may ask the candidate to provide additional documents that support statements made, relevant to the assessment of the application.

18. Classification of candidates:

18.1. Each examiner shall award a mark to each candidate for each evaluation criterion, on a scale of 0 to 5 points, and will proceed to rank candidates according with the final marks obtained through the sum of all the individual marks obtained for each evaluation criterion, and taking into account the weighting for each parameter.

18.2. Candidates are ranked by applying the method of successive voting outlined in clause 3 and subsequent clauses of article 20 of the University of Lisbon's General Rules for Tenders (Regulamento Geral de Concursos da Universidade de Lisboa), published by Dispatch 2307/2015 of March 5th.

18.3. The selection board shall reach its decisions by absolute majority, and no abstentions are allowed.

18.4. The final position of each candidate matches his or her ranking resulting from applying the method mentioned in point 18.2.

19. The meetings of the selection board will result in minutes containing a summary of the events, as well as the number of votes assigned by each examiner and its rationale. These minutes will be available to candidates on request.
20. The final deliberation of the selection board shall be approved by the Rector, and the conclusion of the contract is competency of the Dean of Instituto de Educação.
21. False statements made by any candidate will be punished under the terms of the law.
22. The list of selected and excluded candidates, as well as the final list of results, will be displayed at the premises of Instituto de Educação da Universidade de Lisboa, at Alameda da Universidade, 1649-013 Lisboa, published on the Instituto de Educação website (<http://www.ie.ulisboa.pt>), and the candidate(s) will be notified by e-mail with receipt of delivery, without prejudice to the provision of articles 110 to 114 of the Administrative Procedure Code (Código do Procedimento Administrativo).
23. Preliminary audition and deadline for the final decision: once notified, candidates have 10 working days to make their claim. After 90 days, counting from the deadline for application submission, the selection board will deliver the final decision.
24. This selection procedure is exclusively intended to filling the position mentioned in this Notice, and may be cancelled until the list of final ranking of the candidates is approved. It will cease when the employment position is filled.
25. Policy of non-discrimination and equal access: The Instituto de Educação da Universidade de Lisboa actively promotes a policy of non-discrimination and equal access, so that no candidate may benefit or be harmed, deprived of any right or exempted of any duty, due to origin, age, gender, sexual orientation, marital status, family status, financial status, education, social status, genetic inheritance, reduced ability to work, disability, chronic illness, nationality, ethnic or racial origin, land of origin, language, religion, political or ideological beliefs or union membership.

15 January 2019 – The Dean, Luís Miguel Carvalho.