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FACULDADE DE CIÊNCIAS
UNIVERSIDADE DO PORTO

RECRUITMENT AND SELECTION OF ONE ASSISTANT PROFESSOR

FOR THE SUBJECT AREA OF QUANTUM MATERIALS AND TECHNOLOGIES

FOR THE FACULTY OF SCIENCES OF THE UNIVERSITY OF PORTO

(Ref. 287 2022/27)

Ana Cristina Moreira Freire, Ph.D. and Dean of the Faculty of Sciences of the University of Porto, makes public that it is open for a period of 15 working days, starting from the immediate working day after the publication of this notice on *Jornal de Notícias* and on the website of the Faculty of Sciences of the University of Porto (FCUP), the selection tender for the recruitment of one assistant professor under an employment contract with an indefinite term, in accordance with the Labour Code and the Regulations for the Recruitment of Full, Associate and Assistant Professors of the University of Porto under the Labour Code (order n. 1567/2013 of 25 January 2013, published in the National Gazette (*Diário da República*), 2nd Series, No. 18, of 25 January 2013), for the subject area of **Quantum Materials and Technologies** in order to strengthen FCUP's interdisciplinary training and research capability in this area.

This recruitment is part of the Contract-Program CEECINST2021 (Stimulus to Employment Programme - institutional recruitment 2018 – application CEECINST/00064/2021) funded by FCT.

1. Admission requirements

Administrative admission requirements

1.1. Only candidates who hold a Doctoral Degree may apply.

If the doctoral degree has been obtained in a foreign higher education institution, it must be recognized by a Portuguese higher education institution in accordance with the provisions of Decree-Law No. 66/2018, published in the Official Gazette (Diário da República), 1st Series, No. 157, of 16 August. This formality must be fulfilled up to the end of the application deadline.

1.2. All documents in the application must be in English.

The first phase of the application review process is the approval on **absolute merit**, as described in paragraph 2.1, based on curricular evidence of the ability to conduct research and training in **Quantum Materials and Technologies**.

The second phase is curricular evaluation (**assessment of relative merit**) of candidates approved on absolute merit, in accordance with paragraph 2.2, which will result in a ranking of candidates in descending order of merit.

The third phase applies only to the candidates in the top five positions, who will make a **public presentation** (in Portuguese or English) with discussion by the selection committee, who will evaluate the presentation and weigh it with the curricular evaluation, in the terms explained in paragraph 2.3. This will result in a unitary list of final

ranking, the rest of the candidates maintaining their prior position on the list.

2. Methods and criteria for evaluating and ranking candidates

2.1. Approval on absolute merit

The admission of candidates is conditional on their approval on absolute merit by a nominal vote of the members of the Selection Committee; no abstentions are allowed.

2.1.1. For admission on absolute merit the candidate must meet all these four requirements:

2.1.2. Hold a Doctoral Degree in Physics, Physics Engineering, Chemistry, Computer Sciences, Mathematics, or other areas the Selection Committee considers adequate to the subject area.

2.1.3. Have a curriculum that clearly shows the candidate's ability to conduct research and training in **Quantum Materials and Technologies**, contributing to the strategic European objective, namely, to make available unprecedented computing power, assurance of privacy and safety in communications, and ultra-precise timing and synchronization, specifically in areas such as information, quantum computing/simulation or communication, quantum sensors, and quantum materials, for applications in fields such as high-resolution biomedical Imaging, terrestrial monitoring, secure communication, metrology, nanotechnology, new light sources, photonics, etc.

2.1.4. Have five published articles in the subject area of **Quantum materials and technologies** in indexed journals Q1 / Q2, Scimago or indexed conference proceedings in CORE with A* or A.

2.1.5. Clearly demonstrate in the scientific-pedagogical project the potential contribution to innovation in the field of **Quantum Materials and Technologies** in its interdisciplinary aspect.

2.2. Evaluation on relative merit: curricular evaluation

Curricular evaluation will be based on the following aspects and criteria: In subject area dependant criteria only contributions in Quantum materials and technologies as described in paragraph 2.1.2 will be considered.

2.2.1. Scientific Merit (MC):

a) Scientific production. Quality of relevant scientific production in the subject area (books, articles in international indexed journals, publications in conference proceedings, book chapters) evaluated in terms of quality of the means of publication, and references by other authors, as well as contribution of the candidate to the publication. This parameter is area dependent.

b) Scientific projects. Relevance of participation in scientific projects related to the recruitment area and funded on a competitive basis. Evaluation will focus on the level of coordination, funding obtained, standard required/level of the competition, national/international origin, type and level of excellence of the networks involved in the project, and evaluations previously carried out. This aspect is area

dependent.

c) Scientific teams. Proven ability to create, organize and lead scientific teams, including supervising of researchers in post-doctoral, doctoral, and master's projects.

d) Scientific recognition. Recognition obtained by the scientific and professional community, by, for example, cooperating with indexed journals (considering the quartile), participating in committees in scientific events of international relevance by holding positions in official and prestigious organizations (national and International), presenting in lectures as guests in international events, participating in academic juries (especially as examiner outside the candidate's institution), and obtaining outstanding awards (national and international) will also be considered.

2.2.2. Pedagogical merit:

a) Teaching activity: Experience and quality of the teaching activity carried out within curricular units or short duration courses in higher education institutions in the area to which this tender procedure relates, considering its scope and diversity as well as the objective data obtained from extended opinion inquiries (e.g., pedagogical surveys). This aspect is area dependent.

b) Pedagogical projects. Involvement in new pedagogical projects (proposals for new courses or new curricular units), in improvement projects (restructuring of courses, study plans or existing curricular units), or in other projects with an impact on the teaching/learning process.

c) Teaching material. Quality and innovation of pedagogical material produced prioritizing publications of a pedagogical nature in prestigious international journals or conferences.

2.2.3. Merit in other relevant activities:

a) Consulting and services. Coordination and participation in consulting and services activities for businesses or the public sector. Coordination and participation in providing professional training or scientific specialization for businesses or the public sector This aspect is area dependent.

b) Knowledge dissemination. Coordination and participation in science dissemination initiatives, for both the scientific community (e.g., organisation of congresses and conferences) and the general public. Publications aiming knowledge and science dissemination.

2.2.4. Scientific-pedagogical project:

The scientific-pedagogical project is evaluated according to these two criteria:

a) Potential of the contribution. Value and adequacy for the recruiting institution and plausible contributions of the candidate regarding research, teaching, and other aspects. This aspect is area dependent.

b) Coherence and vision. Adequacy of the mentioned project, ability to frame it in the local and global

context of the recruitment area, and oratory skills. This aspect is area dependent.

2.2.5. The score of each item is always on a scale of 0-100 points. Each member of the Selection Committee will generate, with clear reasoned justification, a ranked list based on curricular assessment, according to the parameters and criteria in paragraph 2.2, weighing the scores, and presenting the results in a table as in Annex 1, which will be used in the vote that leads to the final ranking of candidates based on curricular assessment.

2.3. Public presentation

In the third phase, the Selection Committee evaluates the oratory and argumentation skills of the best candidates (selected as described in paragraph 2.2), through a public presentation of their scientific-pedagogical project and their ability to answer all questions of the members of the committee.

The candidates' performance is evaluated taking into account their communication skills, organization and clarity of the information presented, argumentation skills, and the conviction generated from the interest and feasibility of the individual project presented.

Each member of the Selection Committee will grade the performance of each candidate on a scale of 0-100, accompanied by a clear and reasoned justification of the assigned grades, and apply the pre-defined weighting in **Annex I** to obtain the corresponding final ratings, which result in a new list of the best candidates. Based on their individual ranking, each member of the Selection Committee participates in the final collective decision on the ranking of the best candidates.

3. Deliberations of the Selection Committee

3.1. The Selection Committee will decide on the approval and ranking of candidates, by means of a nominal vote, based on the selection criteria and the scores given by each member.

3.2. Deliberations are approved by absolute majority; no abstentions are allowed.

3.3. If there is a tie, tiebreaking is carried out by the casting vote of the President of the Selection Committee.

4. Task to be performed

The set of tasks to be performed is described in Annex I of the Regulations for the Recruitment of Full, Associate and Assistant Professors of the University of Porto under the Labour Code (order n. 1567/2013 of 25 January 2013, published in the National Gazette (*Diário da República*), 2nd Series, No. 18, of 25 January 2013) which includes the general requirements candidates must fulfil:

- "The assistant professor is responsible for teaching practical and theoretical-practical courses and services provision in laboratory or field work, in curricular units of the various cycles of study and programmes or courses not leading to a degree, as well as the regency of curricular units of these cycles

of study and programmes or courses.

- He/she is also responsible for supervision of students/researchers and carrying out research projects, according to previously established guidelines in the organic unit in which he/she is integrated.
- He/she is also responsible for university/faculty management activities, science dissemination and other activities, including economic and social valorisation of science.
- The assistant professor may be assigned similar teaching duties as those of associate professors if he/she has five years of effective work as a professor or university researcher."

5. Applications

5.1. Submission of applications

Applications must be submitted exclusively on the recruitment page, **https://sigarra.up.pt/fcup/pt/cnt_cand_geral.concurso_show?pct_conc_id=287**, by the end of application deadline (23:59h of the last day of application - mainland Portugal time).

5.2. Required application documents

The application must be accompanied by the following documents, under penalty of exclusion:

a) **Application form** (template available on the recruitment page);

b) **Curriculum Vitae**, in English, with all relevant information for the evaluation of the candidate's application, in accordance with the selection criteria described in paragraph 2.2 of this public notice;

c) **Doctoral certificate**;

d) **Proof of doctoral recognition** awarded by a foreign higher educational institution by a Portuguese higher education institution (if applicable);

e) **Scientific-pedagogical project**, in English, describing the personal plan for contributions, during the five-year trial period, to the development of the recruitment area in terms of research, teaching, and other relevant activities, highlighting the interdisciplinary nature of the subject area to which this tender procedure relates, in the context of the hiring institution, the current state of the art of scientific area and the previous activity of the candidate. This document must not exceed 8 A4 pages, with 11pt font;

f) **Performance report**, in English, which reflects the candidate's analysis of the work and other aspects of his/her curriculum vitae that he/she deems more relevant, especially those concerning the development of the recruitment area. This document must not exceed 8 A4 pages, with 11pt font;

g) **Scientific publications**, up to a maximum of five, which the candidate considers as the most significant for the recruitment area;

h) **Publications of a pedagogical nature**, up to a maximum of five, which the candidate considers as the most significant for the recruitment area;

i) **Up to three letters of recommendation**, one is mandatory. The candidate should access to the link: https://info.fc.up.pt/fcup/recursos_humanos/cartas_recomendacao/index.php?f_id=1351, where he/she has to select the recruitment is applying, identify his/her name, email, identification number (citizen card or passport), and subsequently indicate the name(s) of the person(s), email address(es) of the persons that will write the recommendation letter. These persons will be notified by email, where a link will be sent to make the upload of the letter, by the end of application deadline (23:59h of the last day of application - mainland Portugal time). The candidates will be notified when the letter has been submitted;

j) Any other documents that the candidate considers relevant for his/her merit evaluation.

The documents referred to in paragraphs a) to i) are mandatory.

6. Exclusion

Failure to comply with the provisions of paragraphs 4.1 and/or failure to submit the required documentation, and/or submission of applications outside the stipulated deadline, and/or the non-adequacy of candidate's profile to the recruitment area, will result in exclusion.

7. Notification of the results

The Human Resources Service of the Faculty Sciences of the University of Porto will notify the candidates on the results from administrative procedures. All candidates will be notified on the final decision of the Selection Committee.

The notifications will be sent by email, under the articles 112.º, n.º 1, al. c) and 113.º, n.º 5, of the Administrative Code Procedures (CPA).

It is further informed that under the provisions of articles 121 and following the Administrative Code Procedure, the deadline for candidates to present comments to the final classification, is ten working days, unless, under the terms of paragraphs a) and c) of article 124 of the CPA, the prior hearing and complaint is not waived, given that the hiring may have to be carried out up to 180 days after the notification of FCT regarding FCUP's application to CEEC INST 2021.

8. Selection Committee

The Selection Committee consists of the following elements:

PRESIDENT:

Ana Cristina Moreira Freire, PhD and Dean of the Faculty of Sciences of the University of Porto.

MEMBERS:

Doutor Paulo Alexandre Carreira Mateus, Professor Catedrático do Departamento de Matemática do Instituto Superior Técnico da Universidade de Lisboa

Doutor Luís Soares Barbosa, Professor Catedrático do Departamento de Informática da Universidade do Minho;

Doutor Vitor Brás de Sequeira Amaral, Professor Catedrático do Departamento de Física da Universidade de Aveiro;

Doutor João Manuel Borregana Lopes dos Santos, Professor Catedrático do Departamento de Física e Astronomia da Faculdade de Ciências da Universidade do Porto;

Doutor Luís Filipe Coelho Antunes, Professor Catedrático do Departamento de Ciência de Computadores da Faculdade de Ciências da Universidade do Porto;

Doutor José Ferreira Alves, Professor Catedrático do Departamento de Matemática da Faculdade de Ciências da Universidade do Porto.

9. Hiring

The candidate selected by this recruitment tender will be hired as a tenure track assistant professor with a five-year trial period.

10. Commitment

In compliance with paragraph h) of Article 9 of the Constitution, the University of Porto, as an employer, actively promotes a policy of equal opportunities between men and women in access to employment and professional advancement, scrupulously avoiding any form of discrimination. In this spirit, terms such as "candidate," "author," or "teacher," among others that refer to the people who apply for this recruitment tender are used as gender neutral.

In addition, no candidate may be privileged, benefited, impaired or deprived of any right or exempt from any duty on grounds of ancestry, age, sexual orientation, marital status, family situation, economic situation, education, origin or social status, genetic heritage, reduced working capacity, disability, chronic illness, nationality, ethnic origin or race, territory of origin, language, religion, political or ideological convictions and trade union membership.

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FACULDADE DE CIÊNCIAS
UNIVERSIDADE DO PORTO

University of Porto, 29th May 2022

The Dean of the Faculty of Sciences of the University of Porto

Assinado por: **ANA CRISTINA MOREIRA FREIRE**
Num. de Identificação: 063165503
Data: 2022.05.29 18:04:22+01'00'
Certificado por: **Diário da República Eletrónico.**
Atributos certificados: **Diretora da Faculdade de Ciências da Universidade do Porto - Faculdade de Ciências da Universidade do Porto.**
CARTÃO DE CIDADÃO

PhD Ana Cristina Moreira Freire

FCT Fundação para a Ciência e a Tecnologia

Annex I

Weights of the curricular evaluation criteria

Scientific merit (MC)	60%
Pedagogical merit (MP)	15%
Merit in other relevant activities (MNAR)	5%
Scientific-pedagogical project (PC-P)	20%

The result of the curricular assessment (CA) is obtained by applying the following formula:

AC = 0.60 x MC + 0.15 x MP + 0.05 x MNAR + 0.20 X PC-P

Weights for the final results after public presentation

Curricular Evaluation (AC)	70%
Presentation (AP)	30%

The final result (CF) will be calculated by applying the following formula:

CF = AC x 0.70 + AP x 0.30