

Pedido: 675601

## PUBLIC NOTICE

I publicly announce that, by my order of 03/07/2020, an international tender to fulfill 1 vacancy for the position of Junior researcher in the field of Engineering and Technology, Materials Engineering, Mechanical Engineering, Materials Engineering is hereby open for 10 working days following the publication of the present notice in *Diário da República* [Official Journal of the Portuguese Republic]. The stated position will be held under a public service employment contract of specified duration at University of Coimbra, Departamento de Engenharia Mecânica, UNIDADE 285 - Centro de Engenharia Mecânica, Materiais e Processos, no âmbito do Projeto MCTool21: Manufacturing of cutting tools for the 21st century: from nano-scale material design to numerical process simulation- POCI-01-0247-FEDER-045940.

This international tender shall be conducted pursuant to paragraph 1 of Article 57 of the *Lei Geral do Trabalho em Funções Públicas* [Public Employment Act], to the Decree no. 57/2016, of 29 August, in its latest version, to the Regulatory Decree no. 11-A/2017, of 29 December, and the *Regulamento de recrutamento, contratação, prestação de serviço e avaliação de doutorados contratados a termo, na Universidade de Coimbra* [Regulation on the Recruitment, Hiring, Service Provision and Assessment of Fixed-term PhD Employees at the University of Coimbra], hereinafter referred to as RRCPADCT, as well as further applicable legislation.

Project co-financed by the European Regional Development Fund (ERDF) through the Operational Program for Competitiveness and Internationalization – COMPETE 2020 (POCI-01-0247-FEDER-045940) and by the Portuguese Foundation for Science and Technology under UT Austin Portugal Program.

### I. Reference, Place of Work and Monthly Wage

**I.1** Public tender reference: IT057-20-10079

**I.2.** Place of Work: University of Coimbra, Departamento de Engenharia Mecânica, UNIDADE 285 - Centro de Engenharia Mecânica, Materiais e Processos, no âmbito do Projeto MCTool21 - POCI-01-0247-FEDER-045940.

**I.3.** Job description: The candidate research will be aimed at developing, upscaling and testing new coating systems predicted on the project, as well as, provide feedback data to the simulation partner to develop finite element models which can predict the service performance of optimized tools and DFT models which can predict the proper films structure to control the diffusion of the lubricious element release. A new technology HIPIMS – High power impulse magnetron sputtering will be implemented to produce the revolutionary films. Our group seeks an enthusiastic researcher with a background in sputtering films production, and expertise in

their physical, mechanical, structural, thermal, oxidation and tribological characterization. Background in machining is also valuable.

**I.4.** Gross monthly wage: €2.134,73, corresponding to level 33 of the single remuneration table, approved by Ordinance no. 1553-C/2008, of 31 December and in conjunction with Decree-Law no. 10-B / 2020, of March 20, which updated the remuneration base and the value of the monthly base salaries of the Public Administration.

**I.5.** Contract length: three-year contract, which may be renewed for periods of one year up to a maximum of 6 years, accordingly to Decree no. 57/2016, of 29 August, in its latest version.

## **II. Admission Requirements**

**II.1.** Applicants shall be at least 18 years of age or older, not be inhibited to holding a job in the public sector nor forbidden to perform the intended position; applicants shall also be in good health and possess the psychological profile required for the job and shall meet the compulsory vaccination requirements, in accordance with Article 17 of Law no. 35/2014, of 20 June, in its latest version.

**II.2.** At the time of application, applicants shall hold a Ph.D. in the above-mentioned scientific area(s) or in a correlated one, in which case the applicant's scientific background shall demonstrate the ability to thoroughly develop work in the main field(s) of the tender.

**II.3.** Applicants who are non-native speakers of either Portuguese or English shall attest their proficiency at level C1 of the Common European Framework of Reference for Languages (CEFR) in, at least, one of those languages.

## **III. Application**

**III.1.** Submission: candidates must access and register on the electronic platform [apply.uc.pt](http://apply.uc.pt), to submit the application, selecting the procedure to which they intend to apply.

The documents included in the application are exclusively in digital portable document format (pdf), with the exception of the documents referred in III.2.3. to III.2.5., which can be delivered in other digital formats.

The application submission is carried out by completing the sections available on the Apply UC electronic platform, under "My application".

If any of the works/papers submitted contains classified information, revealing trade or industrial secrets or literary, artistic or scientific property secrets, candidates must select that

option, available on the platform for each document; otherwise, those works/papers can be freely accessed by any of the other applicants when consulting the tender records.

### **III. 2** Mandatory documents:

**III.2.1** *Curriculum Vitae* duly dated and signed, referring to the last five years (or to the extended period to which the candidate may be entitled by decision of the committee, if so requested and justified on the grounds of suspension of scientific activities for socially protected reasons, such as parental leave, prolonged illness and other legally established situations, in which case applicants must indicate the period of time that is to be assessed and provide supporting documents for that purpose).

The *Curriculum Vitae* shall include a foreword with the candidate's full professional background in the last five years (or the extended period to which he/she is entitled), mentioning the type of contract, the category and the scientific area, and indicating the institution and the type of contract held at the time of application. The CV shall also include a summary clearly demonstrating that the candidate specializes in the scientific area(s) for which this tender is open.

The candidate's *Curriculum Vitae* shall be structured in order to separately respond to the different items listed below in **IV.2**. Candidates shall also justifiably identify, on penalty of exclusion, 3 to 6 of their most relevant contributions to the field, from the point of view of each of the assessment criteria listed in **IV.2**.

**III.2.2.** Copy of qualification certificates. On penalty of exclusion, candidates with qualifications obtained abroad shall make proof that their Ph.D. was reconized under Decree-Law no. 66/2018, of 16 August, or provide evidence that they have requested this, until the end of the application process.

**III.2.3.** Separate copy (one PDF file for work/paper) of the 3 to 6 of the candidates' most relevant works/papers that have contributed to the development of the scientific area(s) for which this tender is open.

**III.2.4.** Copy of all works/papers mentioned in the *Curriculum Vitae*.

**III.2.5.** Any other information considered relevant by the candidate.

**III.3** All application documents above indicated in **III.2** shall be submitted in either Portuguese or English, exception made to those mentioned in **III.2.4** and **III.2.5**, which may be submitted in a different language. If the original documents mentioned under **III.2.2** and **III.2.3** are written in a language other than Portuguese or English, candidates are required to

include a version in one of those languages. It is not necessary to provide translations of diplomas in Latin.

**III.4.** Applications that do not comply with the instructions or that fail to meet the tender's formal requirements, pursuant to the applicable laws and to this Public Notice, shall not be accepted. In the same way, if the required documents or papers are submitted outside the established timeframe, the application will not be accepted.

**III.5.** The present tender ends when the positions are filled or when they cannot be filled due to lack or insufficiency of candidates.

#### **IV. Selection methods and criteria**

**IV.1.** Selection Methods: Assessment of scientific background and CV [ABC (90%)] and Interview [I (10%)].

**IV.2.** In the assessment of the candidate's background and CV, scientific performance and outreach and management activities are taken into account, in accordance with the criteria mentioned below.

**IV.2.1.** Scientific performance of the candidate in the research area(s) for which the tender is open, in the last five years or the extended period requested, if accepted by the committee, with a weight of 80%, based on the following parameters:

**IV.2.1.1.** Scientific, technological, cultural or artistic production: Relevance, quality and national and international recognition of the scientific, technological, cultural or artistic production, with particular focus on the works/papers selected as their most significant contributions to the development of the field;

**IV.2.1.2.** Applied research: Activities of applied or practice-based research, their impact and national and international recognition, with particular focus on the works/papers indicated as having the greatest impact;

**IV.2.2.** Outreach and management activities in the last five years in the area(s) for which this tender is open, with a weight of 20%, based on the following parameters:

**IV.2.2.1.** Outreach activities: Outreach and dissemination of knowledge activities carried out in the context of the promotion of culture and scientific practices;

**IV.2.2.2.** Management activities: Management of science, technology and innovation programs, observation and monitoring of the scientific and technological system or the higher

education system, in Portugal or other countries, and also the coordination and participation in scientific projects.

**IV.3.** The assessment of the candidate's background and CV is based on the criteria and parameters defined in **IV.2**, and is duly justified and graded on a scale of 0 to 20 points (calculated to the hundredths) by the selection committee.

**IV.4.** The assessment of the interview is based on the criteria and parameters defined in **IV.2**, and is duly justified and graded on a scale of 0 to 20 points (calculated to the hundredths) by the selection committee. Its aim is solely to clarify aspects related to the results of the candidates' research. The interview is open to the public.

**IV.5.** All the candidates complying with the application requirements are subject to the background and CV assessment, which shall be conducted under the criteria and evaluation parameters mentioned above (**IV.2** and **IV.3**). However, only the first 4 candidates with the best scores in the ranking resulting from the assessment of the background and CV will be called for the interview.

**IV.6.** Candidates who obtain a score under 9.5 points in one of the selection methods will be excluded from the tender procedure, pursuant to paragraphs 3 and 4 of Article 13 of RRCPADCT, and the next method, if it exists, is not applied. Candidates who fail to appear, who desist or who, although approved, were not included in the lots used, will also be excluded from the tender.

**IV.7.** The final score (*FS*) is expressed in a scale of 0 to 20 points, calculated to the hundredths, based on the following formula:

$$FS = (ABC \times 90\%) + (I \times 10\%)$$

## V. Selection Process

### V.1. First meeting:

**V.1.1.** The Selection Committee decides, first, on the admission and exclusion of applications. In case of non-fulfilment or partial fulfilment of any of the requirements defined in section **III** above, the Committee decides whether this insufficiency prevents accepting the application, or if having no relevant impact on the evaluation process, the application may nevertheless be accepted.

**V.1.2.** After deciding on the admission and exclusion of candidates, the Committee begins the procedures relating to the phased application of the selection methods. First, it assesses the scientific background and CV of all the admitted candidates. The merit of the candidates will

only be assessed based on their previous experience in the scientific area(s) for which the tender is open, according to the selection criteria and evaluation parameters described in this public notice. The candidates' merit and experience in other areas shall not therefore be taken into consideration by the Committee. The ranking of the candidates in the ABC method is based on the scores given to each candidate.

**V.1.3.** Candidates both excluded and admitted to the interview shall be notified by Public Notice, under the terms mentioned below in section **VI**.

**V.2.** Second meeting:

**V.2.1.** The Selection Committee conducts the interview with the admitted candidates, which shall have the maximum duration of one hour, although the Chair of the Committee may decide to extend it further for a period of 30 minutes. The Committee shall only take into account the merit of the candidates based on their experience in the scientific area(s) for which the tender is open. The interview is conducted by the Chair of the Committee, although other committee members may also interact with the candidate. This interview shall be held in Portuguese, unless the candidate or any members of the Committee are not proficient in that language. In this case, it may be conducted in English, upon decision of the Chair.

**V.2.2.** Candidates who fail to attend the interview at the set time and place shall be excluded from the tender procedure. Similarly, candidates failing to attend a duly scheduled teleconference call shall also be deemed excluded.

**V.2.3.** After conducting and scoring the interviews, the Committee calculates the final score and ranks the candidates approved in both methods by applying the formula defined above in **IV.7**.

**V.2.4.** According to section **VI** herein, all the candidates shall be notified regarding the provisional deliberations of the Selection Committee, containing the proposed ranking of the admitted applicants as well as the list of those excluded.

**V.3.** Candidates can, if they so wish, appeal the decision of the Committee, in due respect for their right to a fair hearing, pursuant to Article 121 of the Código do Procedimento Administrativo [CPA - Code of Administrative Proceedings]. The period to submit an appeal begins on the day the public notice with the Selection Committee's deliberation is published, pursuant to paragraph 8 of Article 113 of the CPA.

**V.4.** Third meeting:

**V.4.1.** If any of the candidates exercises their right to be heard, the Selection Committee shall hold a third meeting in order to analyze the request, and the candidates will be notified of its deliberations, under the terms of section **VI** herein.

**V.4.2.** If the Selection Committee finds the candidates' allegations well founded, it shall proceed according to its deliberations, thereby notifying the candidates under the terms of **VI.3** herein.

**V.4.3.** If the Selection Committee finds such allegations unfounded, following the candidates' notification under the terms of **VI.3** herein, the procedure shall then be submitted to the Rector for approval.

**V.5.** All the candidates will be notified regarding the approval decision under the terms of section **VI** herein. The administrative records of the tender may be consulted by the candidates, upon previous appointment, requested by e-mail sent to the Human Resources Management Service's e-mail address: sgrh@uc.pt.

## **VI. Tender timetable and notification of candidates**

**VI.1.** The tender timetable will be available on the electronic platform Apply UC until the end of the application period. The candidates are notified by public notice of the following acts: List of admitted and excluded candidates; the date, time, place and names of the candidates selected for the interview, as well as the names of those allowed to be heard by teleconference; the final deliberation draft; deliberations concerning allegations by candidates, if any and the tender's final result upon approval. It is mandatory that the tender timetable include the dates of publication of Public Notices.

**VI.2.** If any of the terms established in the timetable of the tender procedure cannot be met, an updated timetable will be published on that same date on the University of Coimbra website, replacing the previous one. If the interview cannot be conducted on the appointed date, the new date will be announced in a public notice confirming that it is to be held and containing the list of admitted and excluded candidates.

**VI.3.** Notifications by public notice under the terms of VI.1 herein shall be published on the on the electronic platform Apply UC pursuant to paragraph 1 d) of Article 112 of the CPA and Article 51 RRCPADCT, being effective under the terms of Article 113 of the CPA.

**VI.4.** The entire tender records may be consulted by candidates, upon previous appointment, requested by e-mail sent to the Human Resources Management Service's e-mail address: sgrh@uc.pt.



## VII – Selection Committee:

Chair:

Doutor Albano Augusto Cavaleiro Rodrigues de Carvalho, Professor Catedrático, Departamento de Engenharia Mecânica da Faculdade de Ciências e Tecnologia da Universidade de Coimbra.

Committee members:

Doutora Sandra Maria Fernandes Carvalho, Professora Auxiliar com Agregação, Universidade do Minho;

Doutor Bruno Miguel Quelhas de Sacadura Cabral Trindade, Professor Associado, Departamento de Engenharia Mecânica da Faculdade de Ciências e Tecnologia da Universidade de Coimbra;

Doutor João Carlos Barbas de Oliveira, Professor Auxiliar, Departamento de Engenharia Mecânica da Faculdade de Ciências e Tecnologia da Universidade de Coimbra.

Alternate committee members:

Doutora Ana Sofia Figueira Ramos, Professora Auxiliar, Departamento de Engenharia Mecânica da Faculdade de Ciências e Tecnologia da Universidade de Coimbra;

Doutora Ana Paula da Fonseca Piedade, Professora Auxiliar, Departamento de Engenharia Mecânica da Faculdade de Ciências e Tecnologia da Universidade de Coimbra;

Doutora Marta Cristina Cardoso de Oliveira, Professora Associada, Departamento de Engenharia Mecânica da Faculdade de Ciências e Tecnologia da Universidade de Coimbra.

In the event of absences or impediments of the Chair, he/she shall be replaced by the first Committee member mentioned, who shall be replaced, likewise, by the subsequent Committee member.

This Public Notice will be published in Portuguese in *Diário da República*, 2nd Series, and on the website *Bolsa de Emprego Público* (Governmental Public Employment Portal), as well as in both Portuguese and English at Apply UC ([apply.uc.pt](http://apply.uc.pt)) and on the *pan-European Researcher's Mobility Portal* (<http://www.eracareers.pt/>).

Pursuant to paragraph h) of Article 9 of the Portuguese Constitution, the Public Administration, as employer, actively promotes a policy of equal opportunities between men and women in



access to employment and professional development, and takes action to prevent all forms of discrimination.

In accordance with Decree-Law no. 29/2001, of 3 February, candidates with disabilities take precedence over others when they obtained the same classification, and this prevails over any other eligible preference.

The University of Coimbra clarifies that, in reference to paragraph 5 of Article 6 of Decree-Law no. 57/2016, of 29 August, it makes no commitment to considering that it has a strategic interest in opening tenders for tenure-track research or teaching positions.

Paço das Escolas,

The Rector, Amílcar Falcão