

New University of Lisbon

NOVA School of Science and Technology

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Deadline: 06/05/2024

Opening of an international selection procedure for the recruitment of a Junior Researcher

Under the terms of Order no. 181/2023, of 04 January, by delegation of powers, the Director of the Faculty of Science and Technology of NOVA University Lisbon, Prof. Dr José Júlio Alves Alferes, hereby announces that, by order of 19/03/2024, an international call for tenders, with internal reference “**Inv.Jun.3-DCM**”, is open for a period of 15 days from the date of publication of this Notice in the *Diário da República*, for the recruitment of 1 Junior Researcher in the scientific area of Materials Science and Engineering or related areas, subarea of Materials for Energy Production and Storage, with emphasis in implementation of sensors in battery cells, on an open-ended employment contract, under the terms of Decree-Law no. 57/2016, of 29 August, amended by Law no. 57/2017, of 19 July, within the scope of the project New Generation Storage (NGS) with ref. C644936001 -00000045.

This competition is open under the Programme Contract for the Financing of the Recovery and Resilience Plan - PRR, financed by the European Union, signed between Universidade Nova de Lisboa and the Directorate-General for Higher Education, under Order no. 11888-B/2021 of 30 November and other applicable national and Community legislation.

In compliance with paragraph h) of Article 9 of the Constitution of the Portuguese Republic, the New University of Lisbon, as an employer, actively promotes a policy of equal opportunities between men and women in access to employment and professional advancement scrupulously ensuring to avoid any form of discrimination. In this sense, terms such as "candidate", "selected", "recruited", "hired", "author", "researcher", among others that refer to people applying for the competition, are not used in this Notice to refer to their gender.

I - Workplace

The place of work will be at the premises of the Faculty of Science and Technology of NOVA University, located on the *Caparica* Campus, in the Department of Materials Science, Materials Research Center (CENIMAT|3N).

The employee will make all the journeys, in Portugal or abroad, inherent to their duties or necessary to carry out their activity.

II - Activities and function

The selected candidate will perform the duties of Junior Researcher and The activities to be developed are part of Business Project 6 — Thin Film batteries (Work Package II — Components and Modules) of the NGS, which aims to develop flexible batteries using sustainable and scalable materials and

processing techniques. Within the scope of this project, the researcher's work plan includes the following functions:

- a) Design and simulation of inductor-capacitor resonant circuits;
- b) Implementation of sensors in current collectors and battery cell electrodes;
- c) Characterization of sensors by impedance techniques;
- d) Development of electronic read-out circuits and algorithms for data processing;
- e) Assist in the management of intellectual property and execution of the activities involved in the project's scope, such as the elaboration of reports and periodical technical-scientific presentations;
- f) Dissemination of the work elaborated in articles and technical-scientific conferences, as well as periodic organization of communication actions to promote the results obtained and guide students.

III - Remuneration positioning:

The definition of the position is based on the remuneration levels of the categories in Annex I of the Statute of the Scientific Research Career, approved by Decree-Law No. 124/99, of April 20th, as amended, and in accordance with Regulatory Decree No. 11-A/2017, of 29 December, corresponding to the 1st remuneration position, remuneration level 38, which corresponds to the value of 2.566,01€.

IV - Modality and duration

1. The opening of this tender procedure is intended for the selection of a doctoral candidate to carry out scientific research activities under an uncertain fixed-term employment contract, the basis of the contract being the performance of a specific, precisely defined and non-durable service, the contract being compulsorily financed regardless of its origin;
2. The fixed-term contract will last for the time necessary to carry out the project, 20 months, or for as long as the respective justification persists, but may not exceed the maximum limit of 6 years, as provided for in article 6(3) of Decree-Law no. 57/2016 of 29 August.

V - Candidates Admission Criteria

- Hold a PhD degree in the scientific area of the call or in related areas, duly registered and/or recognised in Portugal (mandatory requirement);
- To have a relevant scientific curriculum in the area of the call;
- Experience in the simulation, design or implementation of capacitive or inductive sensors
- Experience in the implementation of electronic circuits and algorithms for signal processing is a plus.
- Experience in the scientific coordination of projects related to the area of the tender is a plus.

VI - Application Instruction

1. The application must be completed by filling in the respective application form, which is available at <https://www.fct.unl.pt/en/faculdade/concursos/investigadores>.
2. The application process must be instructed with the documentation in Portuguese or English.
3. The application should be submitted by e-mail, containing the following documents:
 - a) Certificate attesting to a PhD degree in scientific area or similar areas related to the procedure;
 - b) Curriculum vitae of the candidate, which must include:
 - i) “Researcher ID”, “Scopus Author ID” and “Google Scholar ID” identifications
 - ii) Research and development activities and other activities relevant for the present tender procedure, in concordance with the terms of the call.
 - c) Published works, mentioned in the curriculum vitae, namely the most representative ones, as regards their contribution to the development and evolution of the scientific area in which the procedure is open;
 - d) Declaration, under oath, that if the jury chooses to request the documentation indicated in the previous items or any other scientific documentation cited in the candidate's curriculum vitae, it will be delivered within 10 working days;
 - e) Other documents that the candidates may find relevant for the analysis of their application.
4. If a member of the jury is not fluent in Portuguese, the documents for the candidates' prior hearing and complaints are necessarily presented in English that will be assessed by the jury.

VII - Presentation of the application

1. The application documents must be submitted by the 15th working day counted from the day following the publication of the Notice in the *Diário da República*.
2. Candidates must submit their application documents, in a single file in PDF format, by e-mail to the following address: div.rh.recrutamento@fct.unl.pt, indicating in the subject the internal reference “Inv.Jun.3-DCM”.

VIII - Interview

1. The Jury will deliberate at its first meeting whether an interview is necessary and whether to interview all or some of the candidates;
2. The interview if held, has a maximum weight of 10% of the total evaluation;
3. The interview aims at obtaining clarifications or clarifying the elements contained in the candidates Curriculum vitae, in case of need.

IX- Evaluation Criteria

1. The present procedure is designed to evaluate the candidate's capacity and performance in the different parameters under the terms of article 5 of DL no. 57/2016;
2. The curricular evaluation of the various candidates in each of the areas described below must take into consideration the scientific area in which the call is open;
3. The criteria to be considered in the curricular evaluation of the candidates, in each of the aspects, are those listed below:
 - a) Quality of Scientific Work (**QSW**);
 - b) Scientific and Technological Production (**STP**);
 - c) Applied or Practice-Based Research Activities (**APBRA**);
 - d) Extension and Knowledge Dissemination Activities (**EKDA**);
 - e) Science, Technology and Innovation Program Management Activities (**STIPMA**);

X - Reasons for admission and exclusion

1. The following are grounds for exclusion from the competition:
 - a) Failure to fulfil the requirements referred to in point V;
 - b) Failure to submit the documents required in points a) to (d) of paragraph 3 of point VI, or submitting them in an illegible or invalid format.
 - c) Incorrectly formalizing of the application.
2. The jury will decide on the admissibility of candidates to the competition, in accordance with the established requirements;
3. The members of the jury will make a justified proposal for each candidate.

XI - Sorting and voting methodology

1. Once the approved candidates have been definitively identified in absolute merit, the jury proceed to their classification in relative merit;
2. Each member of the jury will perform a curricular evaluation of the candidates by presenting a written statement, which will later be included in the minute, in which it proposes the ranking of the candidates duly based on the evaluation criteria indicated in this notice, scoring each candidate against each criterion on a numerical scale from 0 to 100 points;
3. The evaluation criteria indicated should be weighted as follows:

Quality of Scientific Work (**QSW**): **35%**

Scientific and Technological Production (**STP**): **20%**

Applied or Practice-Based Research Activities (**APBRA**): **20%**

Extension and Knowledge Dissemination Activities (**EKDA**): **10%**

Science, Technology and Innovation Program Management Activities (**STIPMA**): **15%**

4. The ordering of the Approved candidates is done by vote of the members of the jury, respecting the ranking presented in the statement referred to in the previous number, under the following terms:
- a) The first vote is intended to determine the candidate to be placed in first place;
 - b) In the voting referred to in the previous paragraph, if a candidate obtains more than half of the votes to be placed in first, he is ordained in this position;
 - c) If the situation referred to in the previous paragraph is not verified, a new vote is held, only among the candidates who obtained votes for 1st place, after withdrawing the lesser candidate voted for that seat in the previous voting;
 - d) If there is more than one candidate to be withdrawn, due to an equal number of votes, with a minimum of one vote each, a vote is held only on these to determine the candidate for withdraw from the next vote; in this vote, each member will vote, from among the candidates equally of votes, for the candidate occupying the lowest position in the ranking in his opinion;
 - e) If there is a tie, the tiebreaker is done through the tiebreaker vote or vote of quality of the president of the jury;
 - f) Voting shall be repeated until it is determined, by the process described above, which candidate is to be ranked first. If only two candidates remain and each of them obtains half of the votes, the tie shall be broken through the quality vote of the President of the jury;
 - g) Once the candidate for the first place is chosen, he/she is removed from the voting and the entire process is repeated for the second place and so on until the ordered list of all the candidates.

XII - Notifications and Hearing of Interested Parties

1. A prior hearing shall be held, under the terms of the Administrative Procedure Code, for those candidates who have been rejected, and of candidates who have been placed on the ranking list of the candidates who cannot be filled for the position in the competition. All candidates shall be notified of the ratification of the jury's final decision;
2. Notifications shall be made by email;
3. The tender dossier may be consulted by the candidates, in the Human Resources Division of FCT NOVA, under the terms indicated in the above-mentioned notification.

XIV - Jury Composition

President:

Doctor Rodrigo Ferrão de Paiva Martins, Invited Full Professor at NOVA School of Sciences and Technology of the New University of Lisbon.

Efective Members:

Doctor Luis Miguel Nunes Pereira, Invited Associate Professor at NOVA School of Sciences and Technology of the New University of Lisbon;

Doctor Joana Maria Dória Vaz Pinto Morais Sarmento, Assistant Professor at NOVA School of Sciences and Technology of the New University of Lisbon;

Substitute members

Doctor Rui Alberto Garção Barreira do Nascimento Igreja, Associate Professor at NOVA School of Sciences and Technology of the New University of Lisbon;

Doctor Hugo Manuel Brito Águas, Associate Professor at NOVA School of Sciences and Technology of the New University of Lisbon.

XV. Data Protection

In accordance with the RGPD - General Data Protection Regulation, the data collected will be processed exclusively for the processing of the application.

And for the record, this notice is published.

NOVA School of Sciences and Technology, Prof. Doctor José Alferes, Dean