Public Notice - Doctoral Researcher

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Deadline: 26/07/2023

Under the terms of Dispatch No. 181/2023, of January 4, by delegation of powers, the Dean of the NOVA School of Sciences and Technology of the Universidade NOVA de Lisboa, Prof. Doctor José Júlio Alves Alferes, makes it known that it is open, for a period of 15 working days from the day immediately following the publication of this Notice in the Diário da República, international documentary competition, with internal reference CT-PRR-16-2023-DCM-R2U-Inv3, for the recruitment of 1 Doctoral Researcher, under an uncertain term employment contract, for the maximum period of execution of the projects "R2U Technologies | modular systems", REF. C644876810-00000019, and "Agenda Be.Neutral", REF. C625244769-00462300, under the Contract -Funding Program of the Recovery and Resilience Plan (PRR), pursuant to no. 1 of Dispatch no. 11888-B/2021, of 30 November, signed between Universidade NOVA de Lisboa and the General Directorate of Higher Education, under the terms of Decree-Law no. 57/2016, of August 29, amended by Law no. 57/2017, of July 19, in the scientific area of Microelectronics, Electrical Engineering or related areas, with emphasis on circuit design, characterisation and integration.

In compliance with paragraph h) of article 9 of the Constitution of the Portuguese Republic, Universidade NOVA de Lisboa, as an employer, actively promotes a policy of equal opportunities between men and women in access to employment and professional progression, scrupulously providing in order to avoid any and all forms of discrimination.

I - Workplace:

Facilities of the NOVA School of Sciences and Technology of the Universidade NOVA de Lisboa, located on the Caparica Campus, Department of Materials Science, Materials Research Center (CENIMAT|i3N).

II - Activities and Functions:

The activity to be developed is inserted in WP2 and WP3 of the "R2U Technologies | modular systems" project and in WP6 of the "Be.Neutral Agenda" project, and it is intended that the researcher designs and characterises multiple circuits for addressing, conditioning and reading signals, fundamentally for sensorial arrays and displays, and supports the integration tasks of the same in laboratory prototypes and in building construction panels and in the interior of low cost vehicles. More specifically, the duties include:

a) Surveying specifications for the various circuits to be developed in the projects, in order to select the appropriate technologies and approaches for their development. Needs already identified are i) circuits for sensor arrays (addressing, conditioning and reading signals), ii) addressing circuits for displays, iii) circuits for energy management between energy capture and storage systems. As far as possible, circuits should be based on semiconductor oxide TFTs (e.g. IGZO) to enable their implementation in
flexible electronics concepts (though not excluding blocks in Si CMOS technology, whenever necessary);

b) Design, simulation and layout extraction of the circuits referred in a) and contact management with FCT-NOVA foundry and/or internal process team for circuit fabrication;

c) Characterization of the circuits at laboratory scale, including, if necessary, the design of the support PCBs;

d) Support in integration activities of circuits and other components to be fabricated in the projects in laboratory prototypes for technology demonstration;

e) (Co-)mentoring MSc and/or undergraduate students in research projects related to the topics described above;

f) Participation in regular consortium meetings and elaboration of periodic technical and scientific reports and presentations related to the topics described above;

g) Dissemination of the work developed in articles and technical-scientific conferences.

III - Remuneration level:

The definition of the position has as reference the remuneration levels of the categories in Annex I of the Statute of the Career of Scientific Research, approved by Decree-Law no. 124/99, of 20 April, in its current wording, and the initial level to be applied has as reference the Single Remuneration Table (TRU) according to regulatory decree 11-A/2017 of 29 December, corresponding to the 2nd remuneration position, remuneration level 44, which corresponds to the value of 2,809.52€.

IV - Modality and duration:

1 - The opening of this tender procedure is aimed at selecting a doctoral position to carry out scientific research activities under an employment contract for an uncertain resolutive term, being the basis for contracting the execution of a specific service, precisely defined and not lasting, the hiring being mandatorily financed regardless of its origin.

2 - An employment contract for an uncertain term has the duration of the project task, (2 years and 7 months) or for the duration of the funding, but may not exceed the maximum limit of 72 months.

V – Requirements for admission of candidates

1 - Pursuant to article 12.º Decree-Law no. 57/2016, of 29 August, the candidate must:

- Hold a Doctor's degree in the scientific area of the competition or in related areas;
- Have a relevant scientific curriculum in the area of the competition;
- Practical experience in design, simulation and layout extraction of circuits based on CMOS and/or TFT technologies;
- Experience in participating in collaborative scientific projects with multiple institutions.
2 - Preference will be given to candidates with the availability and logistical capacity to begin the tasks listed in point II of this announcement as soon as possible.

VI - Application procedure

1 – The application must be instructed by filling in the respective application form, which is available at https://www.fct.unl.pt/faculdade/concursos/investigadores.

2 – The application process must be accompanied by documentation in Portuguese or English.

3 – The application must be submitted by email, containing the following documents:

   a) Curriculum vitae of the candidate, which must include:
      i) The identifications “Researcher ID”, “Scopus Author ID” and “Google Scholar ID”.
      ii) Research and development activities and all other activities considered relevant to this tender procedure, in accordance with the terms of this notice;

   b) Certificate proving the degree of Doctor in one of the disciplinary areas or similar to which the competition refers;

   c) Published works, mentioned in the curriculum vitae, namely the most representative ones, with regard to their contribution to the development and evolution of the subject area in which the tender is opened;

   d) Declaration, under oath, that if the jury chooses to request the documentation indicated in the previous paragraphs or any other scientific documentation mentioned in the candidate’s curriculum vitae, it will be delivered within 10 working days;

   e) Other documents that candidates deem relevant for the analysis of their application

4 - If a member of the jury is a non-Portuguese-speaking member, the documents for the candidates’ prior hearing and complaints to be considered by the jury must be submitted in English.

VII - Submission of applications

1 - The documents supporting the application must be submitted by the 15th working day, counted from the day following the publication of this Notice in the Official Gazette.

2 - Candidates will submit their application documents, in PDF format, by email to the following address: div.rh.recruta.ndoc@fct.unl.pt

VIII - Interview

1 - The Jury will deliberate at the first meeting on the need to carry out an interview all or part of the candidates.

2 - The interview has a maximum weight of 10% of the total evaluation.
3 - The interview shall aim at clarifying or explaining the elements contained in the candidates' Curriculum Vitae.

IX — Evaluation parameters

1 - This competition is intended to assess the capacity and performance of candidates in the different parameters pursuant to no. 1 of article 5 of DL no. 57/2016.

2 - Curriculum assessment of the various candidates in each of the aspects described below must take into account the scientific area in which the tender is open.

3 - The parameters to be taken into account in the curriculum assessment of candidates, in each one of the aspects, are the ones listed below referring to the last 5 years:

a) Scientific and technological production (STP);

b) Applied or practice-based research activities (ABRA);

c) Extension and dissemination of knowledge activities (EDKA);

d) Science, technology and innovation program management activities (STIMA);

X — Reasons for exclusion

The following are reasons for exclusion from admission to the competition:

a) Incorrectly formalising the application;

b) Failure to submit the documents required in subparagraphs a) to d) of paragraph 3 of point VI, or their submission in an illegible or invalid form.

XI - Classification of candidates

1 - The jury will deliberate on the admissibility of the candidates, by justified nominal vote, expressed by the Rejected or Approved formulas.

2 - Each member of the jury presents a justified proposal of rejection or approval for each of the candidates.

3 - The candidate who manages to obtain a favorable vote of more than half of the candidate is considered approved of the members of the jury.

XII — Ordering and voting methodology

1 - Once the candidates who have been approved on absolute merit are definitively identified, the jury ranks them on relative merit.

2 - Each member of the jury will carry out his/her curriculum evaluation exercise of the candidates by presenting a written opinion, which must subsequently be included in the minutes, in which he proposes the ranking of candidates duly substantiated in the evaluation criteria indicated in this notice, scoring each candidate against each criterion on a numeric scale from 0 to 100 points.
3 - The evaluation criteria indicated must be weighted as follows:

a) Scientific and technological production (STP): 50%

b) Applied or practice-based research activities (ABRA): 30%

c) Extension and dissemination of knowledge activities (EDKA): 10%

d) Science, technology and innovation program management activities (STIMA): 10%

4 - Approved candidates shall be ordered by vote of the jury members, respecting the order presented in the opinion 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 first, he is ordained in this position;

c) Should the situation referred to in the previous sub-paragraph not occur, a new vote shall be held, only among the candidates who obtained votes for first place, after withdrawing the candidate who received the least votes for that position in the previous vote;

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 shall be held only on those candidates in order to determine the candidate to be withdrawn from the following vote; in that vote, each member shall vote, from among the candidates with equal votes, for the candidate occupying the lowest position in the ranking on his or her report;

e) In case of a tie, the tie shall be broken by the tie-breaker vote or casting vote of the President of the Jury.

f) Voting shall be repeated until it is determined, by the process previously described, which candidate shall be ranked first. If only two candidates remain and each one obtains half of the votes, the tie-breaker is made 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 is obtained.

XIII - Notifications and Hearing of Interested Parties

1 - A prior hearing shall be held, under the terms of the Administrative Procedure Code, for candidates who have been rejected, and for candidates who have been placed on the ranking list of candidates who cannot be filled for the position open for competition. All the candidates shall be notified of the homologation of the jury’s final deliberation.

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 - Composition of the Jury:

President:
Doctor Pedro Miguel Cândido Barquinha, Associate Professor at NOVA School of Sciences and Technology of the Universidade NOVA de Lisboa;

Effective Vowels:
Doctor Emanuel Abreu Antunes Gameiro Carlos, Researcher at NOVA School of Sciences and Technology of the Universidade NOVA de Lisboa;
Doctor Rodrigo Ferrão de Paiva Martins, Invited Full Professor at NOVA School of Sciences and Technology of the Universidade NOVA de Lisboa;

Substitute Members:
Doctor Rita Maria Mourão Salazar Branquinho, Assistant Professor at NOVA School of Sciences and Technology of the Universidade NOVA de Lisboa;
Doctor Rui Alberto Garção Barreira do Nascimento Igreja, Associate Professor at NOVA School of Sciences and Technology of the Universidade NOVA de Lisboa;

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.

The present Notice is published for the record.

The Dean, Prof. Doctor José Alferes.