

### ANNEX III

## RECRUITMENT CALL FOR 8 TRAINEE RESEARCHERS

#### GRANT

GRANT: ED431G/01 Contract financed by the grant for the accreditation, structuring and improvement of the Singular Research Centres and Consolidated Strategic alliances of the University System in Galicia, of the "Consellería de Cultura, Educación y Ordenación Universitaria de la Xunta de Galicia, which is jointly financed by the European Regional Development Fund (ERDF), of the operative program ERDF Galicia 2014-2020, on a percentage of 80%. Call Order 11/08/2016 of the "Consellería de Cultura, Educación y Ordenación Universitaria".

CENTRE: CITIC

AIM OF THE CONTRACT: Recruitment of 8 trainee researchers.

Collaborator for the research tasks stated.

PLACE AND SCHEDULE: CITIC building . Monday to Friday, 9am to 2 pm and 4pm to 6.30pm (37.5h).

CONTRIBUTION GROUP IN THE GENERAL SOCIAL SECURITY PLAN: Group I

PROFESSIONAL CATEGORY. \*(AGREEMENT OF THE 17TH NOVEMBER 2014 ABOUT THE RECRUITED STAFF FUNDED BY CHAPTER VI OF THE UDC BUDGETS):

Trainee researcher \* Enrollment in a SUG doctoral program required

WORKING DAY: Full Time

CONTRACT PERIOD	31 months (until October 2019 included)	APROXIMATE STARTING DATE	April 2017
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GROSS REMUNERATION : 1.368,50 euros a month, including extra pay. CO-FINANCED SALARY WITH ERDF FUNDS

BUDGET LINE: 6140240508-541A-6490200

\* Remuneration will be distributed in 12 monthly payments (the proportional part of the corresponding extra pay shall be included in each monthly payment)

#### REQUIREMENTS

QUALIFICATION: Technical University Degree. See the report for the call.

EXPERIENCE: See the report for the call.

REQUIREMENTS: Requirements must be met before the application form submission deadline expires.

#### PLACE OF APPLICATION AND DOCUMENT SUBMISSION

PLACE: Send documents required on the report by email to [citic@citic-research.org](mailto:citic@citic-research.org), with the heading **Ref.Predoc** in the subject line of the message.

DEADLINE: until 15/03/2017 at 23:59 (GMT+1)

#### SELECTION BODY AND RESOLUTION DISCLOSURE

BODY: See the report for the call.

PLACE OF RESOLUTION DISCLOSURE: Advertisement section of the UDC website and [www.citic-research.org](http://www.citic-research.org)

A Coruña, 8th February, 2017

MAIN RESEARCHER



  
 Centro de Investigación en Tecnoloxías  
 Información e as Comunicacións

Manuel González Penedo

#### Documents the candidate must submit:

1. Photocopy of National Identity Card (D.N.I.) or passport.
2. Photocopy of academic qualifications.
3. Curriculum vitae.

\*Agreement about job classification, work conditions and reference framework of staff representation hired for projects and R&D agreements financed through Chapter VI of the UDC budgets. Signed the 17/11/2014 between the UDC and the trade unions CCOO and CIG.

## **RECRUITMENT REPORT FOR TRAINEE RESEARCH STAFF, WITH A WORK OR SERVICE CONTRACT FOR THE SINGULAR RESEARCH CENTRE CITIC**

The University of A Coruña, for its Research Centre for Information and Communication Technology (CITIC- Centro de Investigación en Tecnoloxías de la Información y las Comunicaciones), is beneficiary of the Grant (ED 431GH/01) for the accreditation, structuring and improvement of the Singular Research Centres and Consolidated Strategic alliances of the University System in Galicia, of the "Consellería de Cultura, Educación y Ordenación Universitaria de la Xunta de Galicia (Regional Government Institution), which is jointly financed by the European Regional Development Fund (ERDF), under the main line of action 1 of the operative program ERDF Galicia 2014-2020 (specific aim 1.2.3), on a percentage of 80% (Call Order 11/08/2016 of the "Consellería de Cultura, Educación y Ordenación Universitaria"- DOG.: 31/8/2016- y Resolution of awardings of 24/11/2016)

Under this grant, and being scientific excellence and the recruitment of talent, one of the objectives of the Citic's Strategic Plan 2015-2016, the following call for recruitment grants for training research staff with a fixed-term work or service contract is made.

These grants' main objective is to increase the quantity and quality of the new doctors, by preparing their doctoral thesis in the framework of the research projects of the Technological Areas at CITIC and under the direction of their investigation groups, with recognized scientific and academic solvency.

### **AIM**

The aim of this announcement is the recruitment, following an open and competitive basis and applying the principles of equity, merit, publicity and objectivity, of research staff that want to prepare a doctoral thesis connected to one of the research areas and under the direction of the Research Groups at CITIC that can be found in the Annex

A minimum of 8 grants will be made available, which can be incremented depending on budget availability.

### **APPLICANTS' REQUIREMENTS**

1- Must be enrolled in a Doctoral programme at a Spanish University, or fulfill the academic requirements to be admitted in a doctoral programme during the year 2016/2017, at the UDC, in accordance with the Agreement of 17/11/2014, about job classification, work conditions and reference framework of staff representation hired for projects and R&D agreements financed through Chapter VI of the UDC budgets. If necessary, UDC could open an extended registration period for this.

2- Must have finished those studies that give access to the Doctoral degree after:

a- 1st January 2013 in the case of university degree holders (4-5 year degrees) and engineer degree holders (DI) or equivalent in foreign university systems not adapted to the European Higher Education Area (EHEA).

b- 1st January 2012, in the case of bachelor degree holders (3 year degrees) and Diploma of Higher education holders (DipHE), or equivalent qualifications not adapted to EHEA, that have taken the Master's degree to access the doctoral programme.

c- 1st January 2012, in the case of degrees of 180 credits.

d- 1st January 2013, in the case of degrees of 240 credits.

3- Must have the qualifications and competences required for the research area(s) which the candidate has chosen on their application form, among those included in Annex I.

4- Not to be enrolled in a Doctoral Programme for over 12 months.

5- Not to be in possession of a doctorate degree, in any Spanish or foreign university.

#### AMOUNT, DURATION AND CHARACTERISTICS OF THE GRANTS

1- Predictably, the incorporation date of the recruited researcher to their post will be April 2017 and the contract will finalize in October 2019.

2- As well as this, during this period, the contract may be terminated in the following circumstances:

a- The exit of the awarded of the doctoral programme

b- The achievement of the Doctorate title.

c- Termination owing to non-compliance

3- The minimum remuneration that the recruited researcher will receive during this period will be 1,368.50 euros gross per month.

4- The type of contract will be Full time Trainee Researcher.

#### FUNDING OF GRANTS

1- The maximum total amount of the grants will be of 450.000 euros, will be paid from the heading 6140240005.541A.6490200 of the expenditure budget.

2- Providing the budget availability is enough, a maximum increment of 20%, proposed by the Monitoring Committee (defined in the TECHNICAL-SCIENTIFIC MONITORING section), on the initial salary remuneration, upon the terms established in the resolution 1/6/2009, of the RR monitoring committee about economic, administrative procedures referring to recruitment, against appropriations of chapter VI.

3- The awarding of the contracts is made conditional to the existence of enough and adequate credit at the time of the resolution of the awarding.

#### RESPONSABILITIES OF THE CONTRACTING ENTITY

The contracting entity will have the following responsibilities:

a) Formalize a contract with the chosen candidates.

b) Provide them the necessary support and enable use of the facilities, equipment and material resources necessary for an adequate development of their activity.

c) The Appointment of a thesis director will be carried out according to the established in the UDC statutes and the Doctorate Regulations of the UDC.

d) Encourage the adequate development of the Doctorate Programme, not being forced to do any other task not related to the development of their research or the required specific training.

## APPLICATION SUBMISSION

- 1- The submission deadline will be up to 15 business days from the publication on the UDC electronic office, Official Bulletin Board (TEO).
- 2- The candidate must fill in the electronic application form that will be available at <http://www.citic-research.org>. Each application must refer to a maximum of THREE Research areas found on the lists in the Annex of this call.(in order of priority)
3. Together with the application form, the following must be attached in electronic format:
  - a) copy of ID , or valid passport for foreign citizens who do not live in Spanish territory.
  - b) Curriculum Vitae, in Spanish or English
  - c) Academic certificate, for those qualifications that have been obtained or those studies passed before submitting the application, issued or provided by the academic entity. All passed subjects, with their credits, the marks obtained, the academic year and the average grade on the academic report must be stated on the certificate.
  - d) When referring to certificates issued by foreign universities, maximum and minimum marks in the corresponding evaluation system must be stated and which is the minimum pass mark. If the certificate is issued in a language other than Spanish or English, must be accompanied by a sworn translation to one of these languages.
  - e) Declaration of responsibility that the qualifications and studies referred to on the academic certificate are those passed at the time of submitting the application.
  - f) Declaration of responsibility of not having the Doctorate title at any Spanish or foreign University.
  - g) Declaration of responsibility of not being enrolled in any Doctorate Programme for a period of over 12 months.
- 4- The application must compulsorily be submitted with the documents referred to by email to [citic@citic-research.org](mailto:citic@citic-research.org)
- 5- Non-abidance of the terms of this announcement, any failure to fulfill the requirements established in it and/or non-disclosure of information, or any manipulation of the information requested will be a result in the rejection of the application.
- 6- The submission of the application entails the knowledge and acceptance of these regulatory principles, and also the consent of the participants for publicity purposes and the processing of personal data that appears in them, and the consent for other authorities, Administrations and providers, through electronic means, to gather and verify the information about the candidates' circumstances or the applications that, according to the call and the applicable regulation, are relevant for the carrying out of the procedure.

## AMENDMENT OF APPLICATIONS

If the documents submitted were incomplete or had errors that can be amended, the candidate will be required to correct them within 5 working days. If this were not so, the applicant shall be deemed to have withdrawn their application.  
During the amendment period, the applications that have been submitted, cannot be edited.

## COMMUNICATION BETWEEN THE ENTITY AND THE APPLICANTS

The communication of all the actions that are carried out during the procedure of awarding the grants will be through the email address submitted in the application.

## APPLICATION EVALUATION

The relevant office that will carry out the procedure of awarding the grants will be the election body.

The applications subject to an evaluation report based not the applicant's average mark that will be expressed on a rating scale of 0-10 with 1 decimal place. The average grade of the courses taken, will be calculated using the procedure established at the announcement of grants for the Training of University Teachers of 2016 of MECD (Ministry of Education, Culture and Sport) (published in the BDNS - National Grant Database:17-01-2017) reflected in its articles 8,9 and 21.

- 1- The evaluation will be carried out by an Evaluation committee that will be formed by:
  - The Scientific Director of the research group CITIC: Francisco Manuel Gonzalez Penedo
  - the CITIC Deputy Coordinator, Bertha Guijarro Berdiñas
  - a member of CITIC's administration body, that will act as secretary in an advisory capacity,
  - a main researcher of each research group mentioned in Annex I or another person from the group in whom they delegate ( permanent UDC teaching staff)
- 2- The Evaluation Committee shall issue a reasoned report, in which the result of the evaluation shall be specified, and where the chosen applications and those candidates on the reserve list shall be proposed, in accordance with the following and budget availability:
  - a) A list of candidates ordered regarding average marks will be made. In the case of applications that obtain the same score and a winner must be determined, it shall be settled with a reasoned decision specifically by the Evaluation committee based on the candidate's CV and the research area applied for.
  - b) The selection of the candidates will be done following this order, starting with those with more points.. For a candidate to be selected, they must fulfill the following requirements:
    - Have a score of 6 or more points
    - If one of the research groups involved in the research areas they have listed does not have an awarded candidate. Exceptionally, an additional candidate may be designated to a group providing there are no candidates to cover other areas or there is a 2 point difference between this candidate and the following.
  - c) In accordance with these conditions each chosen candidate will be given a research area according to the priorities stated on their applications.
  - d) A reserve list shall be produced for each research area ordered according to the scores of the candidates providing they have obtained a score 6 or more points.

## RESOLUTION PROPOSAL, COMPLAINTS AND ACCEPTANCE

- 1- The provisional resolution proposal shall be published on the UDC's TEO.
- 2- The applicants shall have a period of 5 calendar days after the following day of the publishing of this resolution to file allegations. The submitted applications cannot be edited during this process.
- 3- After this period, the definite resolution proposal shall be published on the UDC's TEO. The chosen applicants and the research area appointed, the reserve list, list of rejected applicants, as well as the conditions of the awarding and the acceptance of the grant shall be stated on this proposal.

## CONTRACT PROCEEDINGS AND INCORPORATION OF PERSONNEL

- 1- The contract shall be based on the publicity instructions of the Secretaria General de Universidades de la Consejería de Cultura, Educación y Ordenación Universitaria- Xunta de Galicia , established for the accreditation, structuring and improvement of the Singular Research Centres and Consolidated Strategic alliances of the SUG (2016 calling) The contract must have on the obverse a stamp in which the following circumstances are stated:
  - a. ERDF logo
  - b. Logo of the Secretaria Xeral de Universidades, Conselleria de Cultura, Educación y Ordenación Universitaria, Xunta de Galicia ( University General Secretariat, Xunta de Galicia)
  - c. The sentence " jointly financed at an 80% by ERDF, in the frame of grants for accreditation, structuring and improving singular research centers and established strategic alliances and the 20% left from the Secretaria General de Universidades de la Consejería de Cultura, Educación y Ordenación Universitaria- Xunta de Galicia"
- 2- To formalize the contract, the beneficiary must provide the following documents:
  - a) Supporting document proof of enrollment or admission in a Doctorate program linked to the Computer Science Faculty at UDC for 2016/2017 academic year, issued by the body responsible of the programme and associated to the one of the research areas in the Annex.
  - b) ID card and/or passport
  - c) Academic qualifications
  - d) Any other document necessary to formalize the contract.

## RESIGNATIONS AND INCORPORATION OF RESERVE CANDIDATES

- 1- Irrefutable resignation of the applicants or the non-compliance with necessary requirements to enable their recruitment can lead to the incorporation of reserve candidates.
- 2- This incorporation will have to be undertaken regarding the priorities on the reserve list and following the award procedure established in this call.
- 3- Resignations or the non-compliance of the requirements not allowing the chosen applicant's recruitment must be documented.

## TECHNICAL-SCIENTIFIC MONITORING

- 1- A Monitoring committee shall be established, formed by the Centre's Board (Coordinator and Deputy Coordinator) who will request an annual technical report of the awarded with the agreement if their thesis director, related to the specific tasks carried out under the contract, issuing assessment about the documents submitted.
- 2- This report will serve to assess the activity and work of the hired candidate.
- 3- At the end of the contract, a global report must be issued referring to all the activities carried out during the contract period.

## PUBLICITY

The awarded must publicize the origin of the funding of the granted activity, specifically referring to the publications, presentations, etc, including the following text:

" This work has received financial support from the Consellería de Cultura, Educación Universitaria (Centro singular de investigación de Galicia accreditation 2016-2019) and the European Regional Development Fund(ERDF) 80%, ERDF Galicia 2014-2020 Operational Program and the 20% left by the Secretaría General de Universidades, belonging to Consellería de Cultura, Educación y Ordenación Universitaria de la Xunta de Galicia."

## NON-COMPLIANCE

The Non-compliance of the established dissemination measures, a negative assessment report issued by the Monitoring Committee will be part of the report mentioned in section 2 of the Technical-scientific monitoring assessment.

A Coruña, 15th February,2017  
Scientific Director of the Research Centre CITIC  
Gonzalez Penedo, Manuel Francisco- 32639592Q

## ANNEX I

### -RESEARCH AREAS, RESPONSIBLES AND REQUIREMENTS

1. Computational Methodologies for the analysis of new modalities of medical imaging  
Key words: medical image processing, computer-aided diagnoses, machine learning.  
Responsible Research group: VARPA  
Requirements: Degree in Computer Science, mathematics or related with advanced programming skills.
2. Development of New Deep learning-based approaches for Computer Vision Applications  
Key words: Computer vision, pattern recognition, deep learning, image understanding.  
Responsible Research group: VARPA  
Requirements: Degree in Computer Science, mathematics or related with advanced programming skills.
3. Machine learning.  
Key words: Scalability of Machine learning algorithms, selection of characteristics for high dimension groups, Ranking and anomaly detection algorithms. Missing data.  
Responsible Research group: LIDIA  
Requirements: Degree in Computer science or Mathematics ( with advanced programming skills)
- 4- Biomedical Informatics  
Key words: Intelligent monitoring systems, Clinical Decision support systems, processing of biomedical signs.  
Responsible research group: LIDIA  
Requirements: University degree in Computer Science
5. Data structure and efficient massive data processing algorithms.  
Key words: Entropy and compression, auto-indexes, algorithm analysis, concise structures  
Responsible Research group: LBD  
Requirements: Degree in Computer Science
6. Automation of Software development: Methods, Technology and platforms.  
Key words: Model Driven Development (MDD), Software product lines (SPL), Advanced Technology for Software engineering.  
Responsible Research group: LBD  
Requirements: Degree in Computer science.



#### 7. Artificial Intelligence Techniques in Civil Engineering.

Key Words: Evolutionary computation, Artificial Neural networks, artificial vision, Ports and coasts, Hydraulics, construction.

Responsible Research group: RNASA

Requirements: Degree in Computer science.

#### 8. Technological solutions for the development of participatory health and empowerment of older people for their well-being and active ageing.

key words: Participatory medicine, participatory health, Well-being and active ageing, wearable, impairment, support technologies, e-health, m-health, patient's empowerment.

Responsible Research group: RNASA

Requirements: Degree in Computer science.

#### 9. 5G radio interface techniques.

Key Words: mmWave, masive MIMO, high mobility, hardware demonstrators.

Responsible Research group: GTEC

Requirements: Degree in Computer engineering, Communications engineering or equivalent.

#### 10. Internet of Things (IoT)

Key words: wireless sensor networks, smart environments, industry 4.0, location and traceability

Responsible Research group: GTEC

Requirements: Degree in Computer engineering, Communications engineering or equivalent.

#### 11. Concurrent and distributed systems.

Key words: Massive scalability, optimization of communication, Eventual consistency

Responsible Research group: MADS

Requirements: Degree in Computer science.

#### 12. Automatic Validation

Key Words: Security testing, safety testing, GUI testing

Responsible Research group: MADS

Requirements: Degree in Computer science.

#### 13. Bioinformatics

Key Words: predicting the structures of proteins, protein folding modeling, computational biology.

Responsible Research group: IRLab

Requirements: Degree in Computer science.

#### 14. Data recovery and Recommendation Systems.

Key words: early risk detection thanks to text mining  
Responsible Research group: IRLab

Requirements: Degree in Computer science.

15. High performance computing: Software and Applications.

Key words: parallel computing, Cloud Computing, GPGPU, heterogeneous computing, HPC applications

Responsible Research group: GAC

Requirements: Degree in Computer science. (engineering or Master degree)

16. Computer architecture.

Key words: Clusters, GPUs, Hardware accelerators, Heterogeneous architecture, energy efficiency.

Responsible Research group: GAC

Requirements: Degree in Computer science. (engineering or Master degree)

17. New challenges in Quantitative Finance: negative rates and stochastic volatility.

Key words: computational finance, interest rate derivatives, stochastic volatility (SABR), partial differential equations, numerical methods. Observation: The thesis will be developed in cooperation with a company in the sector.

Responsible Research group: M2NICA

Requirements: Degree in Computer Science, Mathematics, Telecommunications or equivalent qualification. Masters degree in Industrial mathematics or equivalent training.

18. Modeling and Numeric simulation of industrial processes.

key words: Industrial mathematics, mathematical models, partial differential equations, numeric simulation, scientific calculations. Observation: the thesis research will be developed in cooperation with a company.

Responsible Research group: M2NICA

Requirements: Masters Degree in Industrial Mathematics or equivalent training.

19. Safety in communication networks techniques and methodology using massive information analysis techniques to detect intrusions and other attacks.

Key words: collective intelligence, cyber security

Responsible Research group: TELEMATICA

Requirements: Degree in Computer science.

20. Safety in communication networks techniques and methodology using data from IoT devices for the detection of possible anomalies.

Key Words: Collective intelligence, Cyber security, IoT

Responsible Research group: TELEMATICA

Requirements: Degree in Computer science.



XUNTA DE GALICIA

CONSELLERÍA DE CULTURA, EDUCACIÓN  
E ORDENACIÓN UNIVERSITARIA  
Secretaría Xeral de Universidades



UNIVERSIDADE DA CORUÑA



FONDO EUROPEO DE  
DESENVOLVEMENTO REXIONAL  
*"Unha maneira de facer Europa"*

UNIÓN EUROPEA

21. Big-but-biased data

Key words: bid data, kernel estimation, length biased data

Responsible Research group: MODES

Requirements: Degree in Computer Science, Mathematics, Statistics or operations research, reflected in a degree or masters degree in any of these disciplines.

22. Decision support system for optimal routes problems with periodical replanning.

key words: optimal routes, discrete optimization, decision support system.

Responsible Research group: MODES

Requirements: Degree in Computer science, Mathematics, Statistics or operations research, reflected in a degree or masters degree in any of these disciplines.