

*ENABLE-S3 project has received funding from the European Union's Horizon 2020
Research and Innovation Programme under Grant Agreement No 692455*

POSTDOCTORAL POSITION IN ENBLE-S3 PROJECT (EUROPEAN INITIATIVE TO ENABLE VALIDATION FOR HIGHLY AUTOMATED SAFE AND SECURE SYSTEMS) FUNDED BY THE HORIZON 2020 PROGRAM (ECSEL JOINT UNDERTAKING, H2020-ECSEL-2015-2-IA-TWO-STAGE, GRANT AGREEMENT 692455) FOR THE PERIOD 2016-2019

The University of Las Palmas de Gran Canaria (ULPGC), Spain wishes to appoint 1 Post-Doctoral contract to work in the EU Project ENABLE-S3 during 24 months. The ENABLE-S3 Project (European Initiative to Enable Validation for Highly Automated Safe and Secure Systems, H2020-ECSEL-2015-2-IA-TWO-STAGE, Grant Agreement 692455) funded by the Horizon 2020 Program for the period 2016-2019, is dedicated to pave the way for accelerated application of highly automated and autonomous systems in the mobility domains automotive, aerospace, rail, maritime and health, through provision of highly effective test and validation methodology and platforms that will save significant fractions of field tests. Virtual testing and verification and coverage oriented test selection methods will enable certification of these systems with reasonable efforts and project results will be considered for standardization of such systems. In particular, this contract will deal with the development of digital integrated systems for space application in two areas: hyperspectral image compression and autonomous navigation systems based on image processing.

The University will recruit the best candidate following the recommendations of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers. The job offer will be published through a wide range of portals. The evaluation of candidates and their selection criteria will be aligned with the equal opportunities policies of the ULPGC. Selection and hiring procedures will follow transparent mechanisms attending national and regional legislation.

The selection committee will be composed by Mr. Antonio Marcelino Santana González (Fundación Canaria Parque Científico y Tecnológico at the ULPGC), Mr. Rafael de Francisco Concepción (who will act as secretary of the commission), Prof. José Fco. López Feliciano (ENABLE-S3 coordinator at ULPGC, who will act as President of the Commission) and Prof. Roberto Sarmiento Rodríguez (coordinator of the research to be done in this contract).

The selected researcher must be Ph.D. level candidate with ample experience in the design of complex digital electronic systems, and with know-how on FPGAs, software tools for the design of digital systems, fault tolerant techniques for space applications and VHDL.

The responsibilities of the postdoctoral scientist should contemplate the following research topics:

- Design, development and verification of algorithms to be implemented in hardware platforms whose aim is the lossless and lossy compression and decompression of hyperspectral images
- Design, development and verification of algorithms to be implemented in hardware platforms for an autonomous satellites navigation system based on image processing
- Application of techniques for the designed systems in order to reduce the effect of radiation existing in the space
- Performance evaluation of the systems developed in terms of complexity, power dissipation, compression ratios, radiation hardness, computation time, resolution.

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Additionally, the researcher will support any activity related with the management and organization of the project, participate in research meetings with the partners of the project, assist in the supervision of research work related with this project, publish results in specialized journals and conferences, and lecture in Master Programs related with the research conducted in ENABLE-S3.

PREREQUISITES

The candidates must comply the following conditions:

- PhD in Electronic Engineering or Telecommunication Engineering
- A degree in Telecommunication Engineering or Electronic Engineering
- Demonstrate a good language level in English
- Experience in the following items:
 - Complex electronic systems design
 - FPGAs
 - Fault tolerance techniques
 - Software tools for digital systems design
 - VHDL

WORKING CONDITIONS

This temporary contract is for specified work and services for the execution of ENABLE-S3 in the Foundation Canary Scientific and Technology Park of the University of Las Palmas de Gran Canaria. More specifically the tasks to be performed will be orientated towards the development of on-board digital systems to compress/decompress hyperspectral images as well as to facilitate the autonomous navigation of satellites based on image processing.

The contract will conclude in case of funding shortfall. The position is suitable for a full-time employment on annual basis. Gross salary: 36,462.00 €/year in 12 payments, working 40 hours per week.

The start of the contract is November 1st, 2016, and the duration is 26 months. The hired scientist will mainly work at the laboratories of the Institute for Applied Microelectronics (IUMA), in the University of Las Palmas de Gran Canaria, Canary Islands, Spain.

Further information about the Fundación Canaria Parque Científico y Tecnológico of the University of Las Palmas de Gran Canaria, IUMA and the University of Las Palmas de Gran Canaria can be found on the website:

<http://pct.ulpgc.es>

<http://www.iuma.ulpgc.es>

<http://www.ulpgc.es>

REQUIRED DOCUMENTATION

Your application must include:

- A complete CV with the same sections appointed in the EVALUATION item below.
- Photocopy of the ID Card or passport
- Photocopy of your academic records
- The model included in the annex of this call

EVALUATION

The following items and scores will be taken into account in order to evaluate the CV submitted:

1. ACADEMIC (máx. 20 points)

1.1. PhD (máx. 8 points)

1.1.A Calification of the PhD dissertation (máx. 4 points)

1.1.B PhD related to the research to be done in this contract (up to 4 points)

1.2. Undergraduate degree (máx. 6 points)

1.2.A Type of degree (4 points)

1.2.B Specialization (up to 2 points)

1.3. Academic records (máx. 4 points)

1.4. Other degrees (máx. 2 points)

1.4.A Short degree which gives access to the main degree (only if it requires a degree dissertation and if it is related to this contract) (0.5 points)

1.4.B Short term degree (0.5 point)

1.4.C Long term degree (1 point)

2. PROFESSIONAL EXPERIENCE (máx. 12 points)

2.1. University lecturing experience (máx. 7 points)

2.1.A In courses related to this contract (2 points/year)

2.1.C In courses not related to this contract (1 point/year)

2.2. Activity (not including lecturing) in enterprises related to this contact (máx. 5 points)

3. RESEARCH EXPERIENCE (máx. 40 points)

3.1. Research activities (máx. 10 points)

3.1.A As main researcher in research projects (international: 2,5 points/year, national: 2 points/year, regional: 1 point/year)

3.1.B As associated researcher (international: 2 points/year, national: 1 point/year, regional: 0,25 points/year)

3.1.C Others (according to the evaluation commission)

3.2. Book publications (title, dates, editorial, ISBN) (máx. 6 points)

3.2.A Complete book (international: up to 4 points, national: up to 3 points, regional: up to 2 points)

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- 3.2.B Chapter of a book (international: up to 1 points, national: up to 0,5 points, regional: up to 0,2 points)
- 3.3. Journal publications (title, date, volumen, pages, ISSN) (máx. 12 points)
 - 3.3.A With impact factor (up to 3 points/publication)
 - 3.3.B Without impact factor (international: up to 1,5 points, national: up to 1 point, regional: up to 0,5 puntos)
 - 3.3.C Others (according to the evaluation commission)
- 3.4. Conference publications (máx. 8 points)
 - 3.4.A With ISBN (international: 1 point, national: 0,5 points, regional: 0,3 points)
 - 3.4.B Without ISBN (international: 0,5 points, national: 0,25 points, regional: 0,1 points)
 - 3.4.C Posters (international: up to 0,5 points, national: up to 0,25 points, regional: up to 0,1 points)
- 3.5. Other publications and patents (máx. 4 points)
 - 3.5.A Other publications (up to 0,5 points/publication)
 - 3.5.B Patents (up to 2 points/patent)
 - 3.5.C Others (according to the evaluation commission)
- 4. OTHER MERITS (máx. 10 points)
 - 4.1. Lectures in courses and seminars (máx. 2 points)
 - 4.1.A Lectures in courses and seminars related to this contract (1 points/credit) (máx. 3 points)
 - 4.1.B Lectures in courses and seminars not related to this contract (0,2 points/credit) (máx. 1 punto)
 - 4.2. Received courses and seminars (máx. 2 puntos)
 - 4.2.A Received courses and seminars (0,25 points/course, mín 20 hours) (máx. 2 points)
 - 4.2.B Recognized University Master courses (up to 2 points)
 - 4.2.C Others (according to the evaluation commission)
 - 4.3. Fellowship fundings received (máx. 2 points)
 - 4.4.A During doctorate (Ministry or autonomous Community, 0,5 points/year, University 0,25 points/year, University Foundation 0,1 points/year) (máx. 2 points)
 - 4.4.B Post-doctorate (1 point/year) (máx. 3 points)
 - 4.4. Prizes (after the main degree) (máx. 1 point)
 - 4.5. Stays in national and foreign centers (máx. 2 points)
 - 4.6.A International stays (1 point/year)
 - 4.6.B National stays (0,5 points/year)
 - 4.6. Other merits in lecturing and research (máx. 1 point)
 - 4.7.A To be habilitated to a permanent position at the university (1 point)
 - 4.7.B Other merits in lecturing and research
- 5. MERITS RELATED TO THE CONTRACT PROFILE (máx. 12 puntos)
 - 5.1. Experience in projects related with radiation hardness in digital systems for space applications (up to 4 points)
 - 5.2. Experience in projects related to the space sector (up to 4 points)

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5.3. Knowledge in software tools for digital circuit and high level language (VHDL, Verilog, Cadence, Synopsys, CatapultC) as well as hardware programmable platforms (Xilinx, Altera) (up to 4 points)

6. INTERVIEW (according to the evaluation commission) (máx. 6 POINTS)

Notes:

- a) The CV to be presented should follow the sections described above, with the same numbering.
- b) When it says “maximum” the score will be truncated once reached that maximum
- c) When it says “up to” the evaluation commission will decide the score according to the quality of the merits
- d) The evaluation commission has the right to propose no candidate to this contract if it is found that no one fulfills the necessary experience to participate in this project.

PRESENTATION OF THE DOCUMENTATION

The CV according to the sections mentioned above, as well as the model included in the Annex of this call for contract, should be sent by e-mail before July 12 at 14.00 p.m. (WEST – Western European Summer Time), to the following e-mail address: almudena.suarez@ulpgc.es

The subject of the e-mail should mention “Research contract for ENABLE project”

Las Palmas de Gran Canaria, June 22, 2016

**General Manager at Fundación Canaria Parque Científico y Tecnológico ULPGC
Mr. Antonio Marcelino Santana González**

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Annex I

Submission model

Mr/Mrs _____ with Passport no. _____ with address in
_____, and with the following contact data:

Phone number: _____

E-mail address: _____

With respect to the call for a research contract presented by the Fundación Parque Científico y Tecnológico (FPCT) at the University of Las Palmas de Gran Canaria, corresponding to a research position for the European project “*European Initiative to Enable Validation for Highly Automated Safe and Secure Systems, ENABLE-S3*” funded by the Horizon 2020 program for the period 2016-2018.

REQUESTS

To be admitted as a candidate for this position according to the evaluation criteria described in the call for contract.

According to the laws related to data protection, I authorize the FPCT to include my data in their archives in order to participate in the selection of personnel.

[Place and date]

Signature
The candidate