



RESEARCH POSITION (ICP2) IN ENABLE-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 Research contract to work in the EU Project ENABLE-S3 during 6 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 a system composed by a drone with an onboard hyperspectral sensor to be applied to precision agriculture.

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 (Science and Technology Park Foundation of the University of Las Palmas de Gran Canaria), Ms. Almudena Suárez (who will act as secretary of the commission), Prof. Sebastián López Suárez (ENABLE-S3 IP researcher at ULPGC, who will act as President of the Commission) and Prof. José Fco. López (coordinator of the research to be done in this contract and researcher at ULPGC).

The selected researcher must present ample experience with drones, Dji SDK Onboard, hardware architectures, GPUs and hyperspectral technology. Additionally, he/she should speak fluent Spanish, English and German.

The responsibilities of the researcher should contemplate the following research topics:

- Optimization of the capture of hyperspectral images from a drone
- Development of orthorectification algorithms to solve problems related with the sensor characteristics and changes in the position of ground objects caused by the perspective of the sensor view angle and ground terrain
- Development of algorithms to correct deformation of hyperspectral images due to the dynamics of the flight of the drone
- Synchronization in the capture of RGB and hyperspectral images
- Implementation of algorithms into GPUs
- Validation of the whole system by using the flight simulator and real flight testing while capturing images



Additionally, the researcher will 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 enroll in PhD courses.

PREREQUISITES

The candidates must comply the following conditions:

- Nationality: Spanish or any other of the EU state members
- A degree in Telecommunication Engineering, Electronic Engineering or Civil Engineering
- A Master degree in Telecommunication Engineering, Telecommunication Technology or Industrial Engineering
- Fulfill all the requisites to be enrolled in a PhD Program by November 1st 2018
- Demonstrate a good language level in English, German and Spanish
- Demonstrate the certification which habilitates as drone pilot
- Experience in the following items:
 - Drones
 - GPUs
 - Dji Onboard SDK
 - Hyperspectral technology
 - Hardware Programming languages and High Level Synthesis tools
 - Orthorectification algorithms

WORKING CONDITIONS

This temporary contract is for specified work and services for the execution of ENABLE-S3 in the Science and Technology Park Foundation of the University of Las Palmas de Gran Canaria. More specifically the tasks to be performed will be orientated towards the development of a system to capture high quality hyperspectral images from a drone.

The contract will conclude in case of funding shortfall. The position is suitable for a full-time employment compatible with his/her enrollment in a PhD Programmed at IUMA. Gross salary: 3.049,58 €/month.

The start of the contract is November 1st, 2018, and the duration is 6 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
- Certificate of drone pilot
- 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)

- 1.2. Undergraduate degree (máx. 10 points)
- 1.3. Academic records (máx. 10 points)

2. RESEARCH EXPERIENCE (máx. 15 points)

- 2.1. Research activities (máx. 6 points)
 - 2.1.A As associate researcher in national projects (up to 3 points, 0.15 points/month worked)
 - 2.1.B As associated researcher in international projects (up to 3 points, 0.20 points/month worked)
- 2.2. Journal publications (title, date, volumen, pages, ISSN) (máx. 5 points)
 - 2.2.A With impact factor (up to 2 points/publication)
 - 2.2.B Without impact factor (up to 0,5 puntos)
- 2.3. Conference publications (máx. 4 points)
 - 2.3.A With ISBN (international: 0.5 point, national: 0,25 points)
 - 2.3.B Without ISBN (international: 0,25 points, national: 0,1 points)

3. MERITS RELATED TO THE CONTRACT PROFILE (máx. 40 puntos)

- 3.1. Knowledge in Dji Onboard SDK and Mobile SDK for drones programation (10 points)
- 3.2. Basic knowledge of GPUs (10 points)
- 3.3. Advanced knowledge of hyperspectral technology (10 points)
- 3.4. Knowledge on drones communications (5 points)
- 3.5. Knowledge on Vegetation Index for precision agriculture (5 points)

4. OTHER MERITS (máx. 10 points)

- 3.1. Spanish, german and english language expertise (3 points). The interview should take place in any of these languages.
- 3.2. Previous experience in corrdinating industrial projects (máx. 5 points, 0.20 points/month worked)
- 3.3. Prizes (after the main degree) (máx. 2 poins, 0.25 points/prize)

5. INTERVIEW (according to the evaluation commission) (máx. 15 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 required documentation must be presented before September 10th at 14.00 p.m. at the following address:

Fundación Canaria Parque Científico Tecnológico de la ULPGC
C/ Practicante Ignacio González s/n. 35017
Edificio Polivalente III
Campus Universitario de Tafira

Applications sent by fax or e-mail will not be accepted.

Las Palmas de Gran Canaria, September 3rd 2018.

**General Manager at Science and Technology Park Foundation of the University
of Las Palmas de Gran Canaria**

Mr. Antonio Marcelino Santana González



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 Science and Technology Park Foundation of the University of Las Palmas de Gran Canaria (FCPCT-ULPGC), corresponding to a research position (ICP2) 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 2016-2019.

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 FCPCT to include my data in their archives in order to participate in the selection of personnel.

[Place and date]

Signature
The candidate



ANEXO II

Contenido orientativo del CURRICULUM VITAE (a completar con la documentación justificativa de todos los requisitos y méritos) a adjuntar con la solicitud (Válido también el Modelo de la ANECA)

I.- Datos personales:

- Nombre y Apellidos
- DNI/ Pasaporte
- Nacionalidad
- Fecha de nacimiento
- Domicilio
- Número de teléfono
- Dirección de correo electrónico
- (Incluir fotografía reciente)....

II.- Formación académica:

(Detallar.....)

III.- Idiomas:

(Detallar.....)

IV.- Experiencia Profesional y participación en Actividades y Proyectos de investigación relacionados con el proyecto:

(Detallar.....)

V.- Actividad investigadora:

(Detallar.....)

VII. Premios y reconocimientos

(Detallar.....)

(Al Currículum Vitae (CV) debe adjuntarse toda aquella documentación que, de acuerdo con las precisiones de las bases de la convocatoria sobre las formas de acreditación, acredite el cumplimiento de los requisitos de la plaza y los méritos declarados).