

**CURRICULUM VITAE**

Dr. JOSÉ LUIS LÁZARO GALILEA

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(Fecha última actualización: mayo, 2022)

**Current position**

Full Professor  
University of Alcalá  
Electronics Department

**Academic education**

PhD Telecommunication Eng. Universidad de Alcalá (1998)  
Telecommunication Eng. Universidad Politécnica de Madrid (1992)

**CV summary**

Dr. J.L. Lázaro has been recognized with 6 research periods (sexenios) including one transfer research period. He is co-author of 68 articles with impact index (JCR), 54 of them in the first quartile (Q1). Additionally, it has published multiple non-indexed articles and more than 150 contributions in congresses (peer-reviewed). Dr. Lázaro is Guarantor of the doctoral program. He has participated in a total of 43 research projects with public funding (5 at European level) all obtained in competitive processes, being main researcher in 19 of them. He has also participated in 55 research contracts with private financing being main researcher in 44 of them and patenting 5 inventions. It has supervised 15 PhD thesis: (5 with international mention) Currently, Google Scholar has indexed 223 research contributions with an h-index of 22/ i10-index55 and a total of 1969 citations, more than 930 in the last 5 years. He is Reviewer for: ANEP, DGI/AEI, CYTED, and reviewer of international journals of: IEEE, ELSEVIER, ASP, AESTED, MDPI. He has completed 13 stays abroad.

Has been teaching at the university for 37 years. Regularly involved in subjects in the Post-Degree Programs. Author of 31 teaching books and director of more than 60 TFC and TFM. Director of the Siemens Automation Chair of the UAH. Coordinator of the Teaching Innovation group participating in 8 teaching innovation projects, 4 of them as main researcher. He has presented 10 works in congresses of a teaching nature. He has Visiting Professor Diploma of the University of Oriente.

In relation to management positions: Department Secretary, Head of the Geintra Research Group, Vice-Rector for Students and Promotion, Vice-Rector for Teaching and Students, Vice-Rector for Academic Planning and Teaching Staff, Member of the Governing Council, Chairperson of Governing Council Commissions, etc.

In relation to cooperation and internationalization, he is coordinator of the cooperation group with Latin American universities participant for two decades in university cooperation programs of AECID and responsible for cooperation programs of the UAH.

He is committee chairperson in International Panels of Experts for the Accreditation of Universities of HCÉRES, and also collaborate with Andalusian Knowledge Agency.

**RELEVANT MERITS (Last 10 years)****Some relevant publications in research indexed journals with "peer review":**

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Authors: P. Fernández **JL Lázaro**, A. Gardel, F. Espinosa, I. Bravo, A. Cano

Title: "Differential binary encoding method for calibrating image sensors based on IOFBS"

Journal: Sensors Volume: 12 (4), Pages: initial: 4133 final: 4155 Date: March 2012

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Authors: A. Cano, **J. L. Lázaro**, A. Infante, P. Fernández, Y. Pompa, F. Espinosa.

Title: Using the std. deviation of a region of interest in an image to estimate camera to emitter distance

Journal: Sensors Volume: 12 (5), 5687 Apr/ 2012

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Authors: P. R. Fernández, **J. L. Lázaro**, A. Gardel, I. Bravo, A.E. Cano, C. Luna

Improving the calibration of imag. sensors based on IOFBS, using differential gray-code space encoding

Journal: Sensors Volumen: 12 (7), 9006 .Jul/ 2012

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- Authors: **J. L. Lázaro**, A. Gardel, I. Bravo  
Title: Sensorial systems applied to intelligent spaces  
Journal: Sensors Volumen: 12 (8), 10707 Aug/2012
- 
- Authors: J. García, A. Gardel, I. Bravo, **JL Lázaro**  
Title: "Tracking People Motion Based on Extended Condensation Algorithm"  
Journal: IEEE Trans Systems, Man, Cybernetics (A) Vol. 43 (3). Pág 606-618. May, 2013
- 
- Authors: J. García; A. Gardel; I. Bravo; **J. Lázaro**; M. Martínez; D. Rodríguez  
Title: "Directional People Counter Based On Heads Tracking"  
Journal: IEEE Trans. Industrial Electronics Vol 60-9. Pags: 3391- 4000 Date: Sep, 2013.
- 
- Authors: A. Cano, **J. L. Lázaro**, A. Infante, P. Fernández, Y. Pompa.  
Title: Decoupling intensity radiated by the emitter in distance estimation from camera to ir emitter.  
Journal: SensorsVolumen: 13 (6), 7184. Jun/2013
- 
- Authors: J. García, A. Gardel, I. Bravo, **JL Lázaro**  
Title: Multiple View Oriented Matching Alg. for People Re-identification  
Journal: IEEE. Trans Industrial Informatics ISSN:1551-3203 Vol.10 (3) 1841- 1851 Aug/2014
- 
- Authors: P. López; R. Fernández-Recio; I. Bravo; A. Gardel; **J.L. Lázaro**; E. Rufo  
Title: "Computational Burden from Image Recognition of High Resolution Radar Sensors"  
Journal: Sensors MDPI ISSN: 1424-8220 Vol: 13, Nº 4 pp 5381-5402 April/2013
- 
- Authors: J. García; A. Gardel; I. Bravo; **J. Lázaro**; M. Martínez; D. Rodríguez  
Title: " Directional People Counter Based on Heads Tracking "  
Journal: Industrial Electronics, IEEE Trans. ISSN: 0278-0046 Vol: 60(9). 3391- 4000 Sep/2013
- 
- Authors: G. Calandrini; A. Gardel; I. Bravo; P. Revenga; **J.L. Lázaro**; F.J. Toledo  
Title: "Power Measurement Methods for Energy Efficient Applications"  
Journal: Sensors MDPI – ISSN: 1424-8220 Vol: 13, 6 pp 7786-7796 Jun/2013
- 
- Authors: J. García; A. Gardel; I. Bravo; **J.L. Lázaro**;  
Title: Multiple View Oriented Matching Algorithm for People Re-Identification  
Journal: IEEE Trans. Industrial Informatics. /2014
- 
- Authors: I. Bravo, C. Vázquez, A. Gardel, **J.L. Lázaro**, E. Palomar.  
Title: High level synthesis: FPGA implementation of the Jacobi algorithm to solve the Eigen problem  
Journal Mathematical Problems in Engineering. Vol: 2015, 1. Mar/2015
- 
- Authors: F. Domingo, **J. L. Lázaro**, A. Wieser, E. Martín, D. Salido, A. de la Llana  
Title: Sensor placement determination for range-difference positioning using evolutionary multi-objective optimization  
Journal: Expert Systems with Applications, Elsevier Vol: (47), 95. Nov/2016
- 
- Authors: D. Rodríguez, **J.L. Lázaro**, I. Bravo, A. Gardel, G. Tsigotis  
Title: Analysis and Calibration of Sources of Electronic Error in PSD Sensor Response  
Journal: Sensors (MDPI) - ISSN: 1424-8220 Vol: 16(9) Apr/2016
- 
- Authors: D Rodríguez, **J L Lázaro**, IBravo, A Gardel, F Domingo and G. Tsigotis  
Title: Math. Model and Calibration Procedure of a PSD Sensor Used in Local Positioning Systems  
Journal: Sensors 2016, Vol 16(9), 1484 Sep/2016
- 
- Authors: F. Domingo, **J.L. Lázaro**, I. Bravo, A. Gardel, D. Rodríguez  
Title: "Optimization of the Coverage and Accuracy of an Indoor Positioning System With a Variable Number of Sensors"  
Journal: Sensors (MDPI) - ISSN: 1424-8220 Vol: 16(11) Jun/2016
- 
- Authors: David Salido, Francisco J. Meca, Ernesto Martín and **José L. Lázaro**  
Title: SNR Degradation in Undersampled Phase Measurement Systems  
Journal: Sensors 2016, Vol 16(10), 1772 Oct/2016
- 
- Authors: Bravo-Muñoz, I.; **Lázaro-Galilea**, J.L.; Gardel-Vicente, A.  
Title:FPGA and SoC Devices Applied to New Trends in Image/Video and Signal Processing Fields. Journal Electronics 2017, Vol (6), 25. Mar/2017
- 
- Authors: A. Llana, **J.L. Lázaro**, A. Gardel, D. Rodríguez, I. Bravo, G. Tsigotis, J. Iglesias-  
Title: "Modeling Infrared Signal Reflections to Characterize Indoor Multipath Propagation"  
Journal: Sensors (MDPI) - ISSN: 1424-8220 Vol 17(4) Apr/2017
- 
- Authors: Bravo, Ignacio and Palomar, Esther and Gardel, Alfredo and **Lázaro, José**  
Title:Trusted and Secure Wireless Sensor Network Designs and Deployments.  
Journal Sensors, 17 Vol (8). p. 1787 Aug/2017
- 
- Authors: A. Llana, **J.L. Lázaro**, A. Gardel, D. Rodríguez, I. Bravo, G. Tsigotis, J. Iglesias  
Title: "Modeling to Effect of Optical Signal Multipath"  
Journal: Sensors (MDPI) - ISSN: 1424-8220 Vol 17(9). Sep/2017
- 
- Authors: D. Rodríguez, **J.L. Lázaro**, A. Llana, I. Bravo, A. Gardel, G. Tsigotis, J. Iglesias

Title: "IPS based on PSD Detector, Precise Positioning of Agents in Motion using AoA"

Journal: Sensors (MDPI) - ISSN: 1424-8220 Vol 17(9)Sep/2017

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Authors: A. Llana, **J.L. Lázaro**, A. Gardel, D. Rodríguez, I. Bravo, F. Espinosa

Title: "Characterization Multipath Effects in IPS by AoA and PoA Based on Optical Signals"

Journal: Sensors (MDPI) - ISSN: 1424-8220 Vol 19(4). Feb/2019

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Authors: J Berián, I Bravo, A Gardel, **JL Lázaro**, S Hernández

Title: A Wearable Closed-Loop Insulin Delivery System Based on Low-Power SoCs

Journal: Electronics 2019, Vol 8 (6), 612 May/2019

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Authors: A. Llana, **J.L. Lázaro**, A. Gardel, D. Rodríguez, B. Rubiano, I. Bravo

Title: Analysis of Multiple-Access Discrimination Tech. for the Development of PSD-based VLP System"

Journal: Sensors (MDPI) - ISSN: 1424-8220 Vol 20(6) Mar/2020

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Authors: B Rubiano-Muriel, **JL Lázaro-Galilea**, A Gardel-Vicente, Á De-La-Llana-Calvo, , I Bravo-Muñoz Title:

Development of an Optical Signal-Based IPS from an MCU-SoC

Journal Electronics Vol 9 (5), 782 May/2020

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Authors: A. Llana, D. Salido, **J.L. Lázaro**, A. Gardel, I. Bravo, B. Rubiano

Title: "Accuracy and Precision Assessment of AoA-based Indoor Positioning Systems using Infrastructure Lighting and a Position Sensitive Detector"

Journal: Sensors (MDPI) Vol 20(18) Mar/2020

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Authors: Bravo-Muñoz, I.; Gardel-Vicente, A.; **Lázaro-Galilea, J.L.**

Title: New Applications and Architectures Based on FPGA/SoC.

Journal *Electronics*, Vol 9 (11), 1789.Oct/2020

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Authors: Rodríguez-Sánchez, M.C.; Fernández-Jiménez, L.; Jiménez, A.R.; Vaquero, J.; Borromeo, S.; **Lázaro-Galilea, J.L.**

Title: HelpResponder—System for the Security of First Responder Interventions.

Journal Sensors 2021, 21, 2614. Vol 21(11) Jun/2021

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Authors: Álvaro de la Llana Calvo; **José Luis Lázaro Galilea**; Alfredo Gardel Vicente; David Salido Monzú; Ignacio Bravo Muñoz; Andreea Iamnitchi; Rubén Gil Vera

Title: Weak Calibration of a Visible Light Positioning System Based on a Position-Sensitive Detector: Positioning Error Assessment.

Journal Sensors *Sensors* **2021**, 21(11), 3924; doi.org/10.3390/s21113924

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Authors: J. Berian, I.Bravo, A.Gardel, **J.L. Lázaro**, M. Rigla

Title: "Dynamic Insulin Basal Needs Estimation and Parameters Adjustment for Closed-Loop Control in Type 1 Diabetes"

Journal: Sensors (MDPI) - ISSN: 1424-8220 Vol 21(15) Aug/2021

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## **Research projects**

**(EU → Europeo, NAC → Nacional, REG → Regional)**

**Project Name: (EU):** Enhancing Skills Intel. And Integration Into Existing Phd Programmes By Providing Transferable Skills Training Through An Open Online Platform Funding Entity:UE H2020 SwafS-2019-1.

Duration, From: 01/01/2020 to: 31/12/2022 Funding Amount: 44.410 € (Total: 990 558,16 €)

Main Researchers: A. Gardel / I. Bravo

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**Project Name: (EU):** "PALAEMON A holistic passenger ship evacuation-rescue ecosystem "

Funding Entity: UE H2020 RIA. UAH Funding Amount: € 152.000 € (Total: 1 M €)

Duration, From: 01/06/2019 to: 31/05/2022

Main Researchers: A. Gardel / I. Bravo

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**Project Name: (EU):** "Promoting Internationalization of Research Through Establishment And Operationalization of Cycle 3 Quality Assurance System In Line With to European Integration" C3QA Funding Entity: European Commission Erasmus+: Higher Education - International Capacity Building

Duration, From: 01/12/2016 to: 30/11/2019 Amount: UAH: 44008 € (total 888.433,33 €)

Main Researcher at UAH: A. Gardel

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**Project Name: (EU):** "European PhD Hub" PHDHUB Funding Entity: Erasmus+ Erasmus+ KA2

Funding Amount: UAH: 102.942 € (total 255.485 €)

Duration, From: 01/09/2017 to: 31/08/2021

Main Researcher at UAH: I. Bravo

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**Project Name (REG)** Indoor Guidance and Location System Using Building Illumination

Funding Entity: Junta de Comunidades de Castilla-La Mancha SBPLY/19/180501/000049

Duration, From: 01/01/2020 to: 31/03/2023 Amount: 91943,00 €

Main Researcher: **José Luis Lázaro** /Alfredo Gardel

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**Project Name: (REG)** Rapid virological diagnosis of Sars-Cov-2 using optoelectronic processes.

Funding Entity: UAH Ref: COVID-19 UAH 2019/00003/016/001/012

Duration, From: 01/06/2020 to 31/12/2020

Participating Entities: Electronic Dept. - UAH Amount: 6900,00 €

Main Researcher: **José Luis Lázaro**

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**Project Name: (REG)** Event-based location and estimation support system for prevention, evacuation and intervention in emergency situations.

Funding Entity: UAH 2018/00231/001

Duration, From: 09/06/2018 to: 08/06/2019

Participating Entities: Electronic Dept. - UAH Amount: 6000,00 €

Main Researcher: **José Luis Lázaro**

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**Project Name: (REG)** Smart-lighting system with security and surv. capabilities, an alternative for smart-cities

Funding Entity: CEISEP Program. Campus of International Excellence URJC-UAH Ref: 2016/CEISEP-001

Duration, From: 01-12-2016 to: 31-12-2017

Participating Entities: Universidad de Alcalá, Universidad Rey Juan Carlos Amount: 51720,00 €

Main Researcher (Coordinator): **José Luis Lázaro**

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**Project Name: (NAC)** Red de posicionamiento y navegación en interiores y exteriores delimitados

Funding Entity: MINECO REDES DE EXCELENCIA Ref. TEC2017-90808-REDT

Duration, From: 01-07-2018 to: 30-06-2021 Amount: 22000,00 €

Participating Entities: UAH, CSIC, UOC, UJI, UGR, UEx, GRADIANT, Deusto Tech, UAB, UM

Main Researcher (Coordinator): **José Luis Lázaro**

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**Project Name: (NAC)** Red de posicionamiento y navegación en interiores

Funding Entity: MINECO REDES DE EXCELENCIA Ref. (TEC2015-71426-REDT)

Duration, From: 01-2016 to: 12-2017 Amount: 30000,00 €

Participating Entities: UAH, CSIC, UEx, UD, UOC, UGr, UJI, GRADIANT

Main Researcher (Coordinator): **José Luis Lázaro**

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**Project Name: (NAC)** Optimization of Wireless Sensor Network and Control Systems Network for Cooperation of Mobile Units in Intelligent Environments. ALCOR.

Funding Entity: MINECO DPI 2013-47347-C2-1-R

Duration: From 01/01/2014 to: 12/31/2017 Amount: € 145200,00 €

Main Researchers: **José Luis Lázaro** F. Espinosa

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**Project Name: (NAC)** Contribution to Intelligent Spaces through the Development and Integration of Positioning Sensors Based on Infrared and Specific Processing Architectures

Funding Entity: Ministry of Science and Innovation Ref Proy: DPI2009-10143

Participating Entities: Electronic Dept. - UAH

Duration, From: 01/01/2010 to: 12/31/2012 Amount: 142780,00 €

Main Researcher: **José Luis Lázaro**

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**Project Name: (NAC)** Training for electronic product development and prototyping

Funding Entity: MINECO (PEJ-2014-A-38020)

Duration, From: 01-09-2019 to: 31-08-2021 Amount: 98532,00 €

Main Researcher **José Luis Lázaro Galilea**

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**Project Name: (NAC)** Training for electronic product development and prototyping

Funding Entity: MINECO (PEJ-2018-004019)

Participating Entities: Universidad de Alcalá

Duration, From: 01-09-2019 to: 31-08-2021 Amount: 42660,00 €

Investigador responsable: **José Luis Lázaro**

**Project Name:** "Development of a Management System of Electric Vehicles"

Funding Entity: Micinn. Ref Proy: INNPACTO IPT-440000-2010-0020

Participating Entities: Going-Green SL, DAS SL, UAH UAH

Duration, From: 01/12/2010 to: 31/10/2012 Amount: 199,428 €

Main Researcher: **Dr. A Gardel**

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**Project Name:** "Application of Adaptive Sampling Techniques to Remote Control of Mobile Units in Intelligent Spaces."

Funding Entity: CAM-UAH. Participating Entities: UAH.

Duration, From: 02/12/2013 to: 01/12/2014 Amount: € 6,000

Main Researcher: **A. Gardel**

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**Project Name:** "Rangefinder-Camera System for Detection of Parking (Teca). "

Funding Entity: Cam-UAH. Participating Entities: UAH. Amount: € 3,000  
Duration, From: 05/12/2015 to: 01/12/2016  
Main Researcher: **A. Gardel**

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**Project Name:** "Design of an Efficient Hardware Architecture for the Acquisition and Processing of Ultrasonic Images of High Definition In Real Time (Sarus)"

Funding Entity: Cam-UAH. Participating Entities: UAH. Amount: € 40,550  
Duration, From: 01/01/2020 to: 31/12/2021  
Main Researcher: C.J. Martín

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**Project Name:** "GUIA project"

Funding Entity: JCCM. Participating Entities: UAH, Parque Científico-Tecnológico Guadalajara.  
Duration, From: 01/01/2020 to: 31/12/2022 Amount: € 91,950  
Main Researchers: JL. Lázaro, **A. Gardel**

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## **Participation in technology/knowledge transfer activities - exploitation of results**

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**Title:** Inhibition signal generation using FPGAs

Company / Financing Administration: INDRA SISTEMAS SA

Participating entities: University of Alcalá

Duration, from: 04- 2018 to: 09-2018. Amount € 15,125

**Researcher responsible:** A. Gardel, JL. Lázaro, I. Bravo

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**Title:** FW Migration for VIRTEX-SPARTAN of CH53 design

Company / Financing Administration: INDRA SISTEMAS SA

Participating entities: University of Alcalá

Duration, from: 04- 2018 to: 09-2018. Amount € 19,360

**Researcher responsible:** A. Gardel, JL. Lázaro, I. Bravo

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**Title:** Development of model for quality test of industrial equipment

Company: SONIBETICA SL

Participating entities: University of Alcalá

Duration, from: 01/09/2013 to: 01/09 / 2014 Amount: € 20 570 €

**Responsible researcher:** A. Gardel, JL. Lázaro, I. Bravo

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**Title:** Development of digital systems and electronic design over reconfigurable HW

Company: INDRA SISTEMAS SA

Participating entities: University of Alcalá

Duration, from: 01/02/2013 to: 01/10 2014 Amount: € 27,830

**Researcher in charge:** A. Gardel, JL. Lázaro, I. Bravo

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**Title:** Research Chair: Smart Things Lab

Company: Advanticsys

Participating entities: University of Alcalá

Duration, from: 01/02/2012 to: 31/01/2015 Amount: € 180,000

**Researcher in charge:** A. Gardel, I. Bravo

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**Title:** Image recognition software

Company: Siemens Spain SA

Participating entities: University of Alcalá

Duration, from: 01/03/2012 to: 01/06/2012 Amount: 11,800 €

**Responsible researcher:** A. Gardel, JL. Lázaro, I. Bravo

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**Title:** Development of test equipment using virtual instrumentation.

Company: INDRA Sistemas S. A

Participating entities: Universidad de Alcalá

Duration, from: 01/11/2011 to: 01/02/2012. Amount: 10 620 €

**Responsible researcher:** A. Gardel, JL. Lázaro, I. Bravo

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**Title:** Implementation of Core PC And Code Migration to Spartan-6

Company / Financing Administration: INDRA SISTEMAS SA

Participating entities: University of Alcalá

Duration, from: 03/11 / 2010 to: 03/02/2011 Amount € 22,500

**Responsible researcher:** A. Gardel, JL. Lázaro, I. Bravo

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**Patent Inventors** (by signature): A. Gardel; J.L. Lázaro; I. Bravo; F. Espinosa

Title: Sistema Y Procedimiento Para La Detección De La Ocupación En Aparcamientos.

Nº de Solicitud: España / Es 2 680 993 B1 Fecha De Concesión: 20.03.2019

Pais De Prioridad: España Entidad Titular: Universidad De Alcalá