

CV Date	29/05/2022
---------	------------

Part A. PERSONAL INFORMATION

First Name	Manuel		
Family Name	Arias Pérez de azpeitia		
Sex	Not Specified	Date of Birth	
ID number Social Security, Passport			
URL Web			
Email Address			
Open Researcher and Contributor ID (ORCID)	0000-0002-0897-8594		

A.1. Current position

Job Title	Associate Professor		
Starting date	2016		
Institution	Universidad de Oviedo		
Department / Centre	Ingeniería Eléctrica, Electrónica, de Computadores y Sistemas / Escuela Politécnica de Ingeniería de Gijón		
Country		Phone Number	
Keywords			

A.2. Previous positions (Research Career breaks included)

Period	Job Title / Name of Employer / Country
2017 - 2018	art 45 2.b.1º) Birth of daughter Inés Arias Huidobro
2014 - 2015	art 45 2.b.1º) Birth of son Manuel Arias Huidobro

A.3. Education

Degree/Master/PhD	University / Country	Year
PhD Program on Control, Electronic and Electrical Engineering	Universidad de Oviedo / Spain	2010

Part C. RELEVANT ACCOMPLISHMENTS

C.1. Most important publications in national or international peer-reviewed journals, books and conferences

AC: corresponding author. (nº x / nº y): position / total authors. If applicable, indicate the number of citations

- Scientific paper.** A. L. Antuña; P.F. Miaja; M. Arias; A. Fernández. (3/4). 2022. Circuit proposal of a latching current limiter for space applications based on a SiC N-MOSFET IEEE Journal of Emerging and Selected Topics in Power Electronics.
- Scientific paper.** P. F. Miaja; F. Navarro; D. G. Aller; et al; M.Arias (AC). (13/13). 2021. RoboCrane: A system for providing a power and a communication link between lunar surface and lunar caves for exploring robots Acta Astronautica. Elsevier. ISSN 0094-5765.
- Scientific paper.** F. G. Hernando; J. San-Sebastián; M. Arias; A. Rujas; F. Iannuzzo. (3/5). 2020. Discontinuous PWM for online condition monitoring of SiC power modules IEEE Journal of Emerging and Selected Topics in Power Electronics. IEEE. 8-1, pp.323-330.
- Scientific paper.** A. Vázquez; K. Martín; M. Arias; J. Sebastián. 2020. Variable-width Hysteretic Analog Control for QSW-ZVS and TCM source/sink converters IEEE Transactions on Power Electronics. IEEE. 35-3, pp.3195-3207.

- 5 **Scientific paper.** Castro Álvarez, Ignacio; Vázquez Ardura, Aitor; González Lamar, Diego; Arias Pérez de Azpeitia, Manuel; Hernando Álvarez, Marta María; Sebastián Zúñiga, Francisco Javier. 2019. An electrolytic capacitorless modular three-phase ac-dc LED driver based on summing the light output of each phase IEEE Journal of Emerging and Selected Topics in Power Electronics. IEEE. 1-1, pp.1-1. ISSN 2168-6777.
- 6 **Scientific paper.** Castro Álvarez, Ignacio; Vázquez Ardura, Aitor; García Aller, Daniel; Arias Pérez de Azpeitia, Manuel; González Lamar, Diego; Sebastián Zúñiga, Francisco Javier. 2019. On Supplying LEDs from Very Low dc Voltages with High Frequency AC-LED Drivers IEEE Transactions on Power Electronics. IEEE. 1-1, pp.1-1. ISSN 0885-8993.
- 7 **Scientific paper.** F. González-Hernando; J.San-Sebastián; A. García-Bediaga; M- Arias; F. Iannuzzo; F. Blaabjerg. 2019. Wear-out Condition Monitoring of IGBT and MOSFET Power Modules in Inverter Operation IEEE Transactions on Industry Applications. IEEE. 1-1.
- 8 **Scientific paper.** Castro Álvarez, Ignacio; González Lamar, Diego; López Fernández, Sergio; Martín Díaz, Kevin; Arias Pérez de Azpeitia, Manuel; Sebastián Zúñiga, Francisco Javier. 2018. A family of high frequency AC-LED driver based on ZCS-QRCs IEEE Transactions on Power Electronics. IEEE. 33-10, pp.8728-8740. ISSN 1941-0107.
- 9 **Scientific paper.** Saeed Hazkial Gerges, Mariam; Rodríguez Alonso, Alberto; Arias Pérez de Azpeitia, Manuel; Briz del Blanco, Fernando. 2018. Energization and start-up of CHB based modular three-stage Solid State Transformers IEEE Transactions on Industry Applications. IEEE. 54-5, pp.5483-5492. ISSN 0093-9994.
- 10 **Scientific paper.** Arias Pérez de Azpeitia, Manuel; Castro Álvarez, Ignacio; González Lamar, Diego; Vázquez Ardura, Aitor; Sebastián Zúñiga, Francisco Javier. 2018. Optimized design of a high input-voltage-ripple-rejection converter for LED lighting IEEE Transactions on Power Electronics. IEEE. 33-6, pp.5192-5205. ISSN 0885-8993.

C.2. Conferences and meetings

- 1 Theyllor H. de Oliveira; Manuel Arias; Diego González Lamar; Daniel García Aller; Abraham López Antuña. High Efficiency Bus Provider for VLC Applications Based an Asymmetrical Half Bridge Converter with a Resonant DCX Auxiliary Output. IECON. IEEE. 2021. Canada.
- 2 Daniel García Aller; Diego González Lamar; Manuel Arias; Pablo Fernández Miaja; Javier Sebastián. Design of a high performance VLC-LED driver for Visible Light Communication based on the split of the power. Virtual. IEEE. 2020.
- 3 Daniel García Aller; Diego González Lamar; Manuel Arias; Juan Rodríguez; Pablo Fernández Miaja; Javier Sebastián. Design of a Two Input Buck converter (TIBuck) for a Visible Light Communication LED driver based on splitting the power. APEC. IEEE. 2020. United States of America. Conference.
- 4 María Rodríguez Rogina; Alberto Rodríguez; Aitor Vázquez; Manuel Arias; Diego González Lamar. Efficiency evaluation of a SiC-based bidirectional boost converter using TCM-ZVS with different voltage conversion ratios. APEC. IEEE. 2020. United States of America. Conference.
- 5 Aitor Vázquez; Kevin Martín; Manuel Arias; Diego González Lamar; María Rodríguez Rogina; Javier Sebastián. Small signal model of Triangular Current Mode (TCM) operation for Bidirectional Source/Sink Buck and Boost Power Converters. APEC. IEEE. 2020. United States of America. Conference.
- 6 Mariam Saeed; José María Cuartas; Alberto Rodríguez; Manuel Arias Pérez de azpeitia; Fernando Briz. Flexible and Fault Tolerant Distributed Control Structures for Modular Power Electronic Transformers. APEC. IEEE. 2019. United States of America. Participatory - oral communication.
- 7 Ignacio Castro; Sergio López; Kevin Martín; Manuel Arias Pérez de azpeitia; Diego González Lamar; Javier Sebastián Zúñiga. High frequency dc-dc AC-LED driver based on ZCS-QRCs. ECCE. IEEE. 2018. United States of America. Participatory - oral communication.

C.3. Research projects and contracts

- 1 **Project.** RTI2018-099682-A-I00, Modular Converters for Space Applications. PROYECTOS I+D+i «RETOS INVESTIGACIÓN» DEL PROGRAMA ESTATAL DE I+D+i ORIENTADA A LOS RETOS DE LA SOCIEDAD. Manuel Arias Pérez de Azpeitia. (Universidad de Oviedo). 01/09/2019-31/08/2022. 93.170 €. Principal investigator.
- 2 **Project.** UE-18-POWER2POWER-826417, The next-generation silicon-based power solutions in mobility, industry and grid for sustainable decarbonisation in the next decade.. Universidad de Oviedo. Fernando Briz. (Universidad de Oviedo). 01/07/2019-31/05/2022. 297.133,75 €. Team member.
- 3 **Project.** Health Monitoring of Digitally Controlled Flexible Converters. European Space Agency (ESA). Manuel Arias. (FUNDACION UNIVERSIDAD DE OVIEDO). 13/01/2020-13/01/2022. 300.000 €. Co-ordinator.
- 4 **Project.** CONTRACT N° 4000130860/20/NL/GLC, Robotic crane for wireless power and data transmission between surface and cave. European Space Agency (ESA). Manuel Arias Pérez de Azpeitia. (Universidad de Oviedo). 01/06/2020-30/11/2020. 120.000 €. Co-ordinator.
- 5 **Project.** MINECO-17-DPI2016-75760-R, Diseño de convertidores CC7CC y CA/CC para la transmisión de datos a altos niveles de potencia de luz visible con LEDs. Ministerio de Economía y Competitividad. Javier Sebastián Zúñiga. (Universidad de Oviedo). 30/12/2016-29/12/2019. 137.000 €. Team member.
- 6 **Project.** FP7-NMP3-LA-2013-604057, Silicon Carbide Power Technology for Energy Efficient Devices (SPEED). Comunidad Económica Europea. Fernando Briz Blanco. (Universidad de Oviedo). 01/01/2014-31/12/2017. 531.821 €. Team member.
- 7 **Project.** CI-MINECO-13-DPI2013-47176-C2-2-R, Diseño óptimo y modular de una nano-red de continua. Universidad de Oviedo. Javier Sebastián Zúñiga. (Universidad de Oviedo). 01/01/2014-31/12/2016. 105.000 €.
- 8 **Project.** MICINN-10-DPI2010-21110-C02-01, Arquitecturas para sistemas flexibles de alimentación con múltiples flujos de energía. Ministerio de Economía y Competitividad. Marta Hernando Álvarez. (Universidad de Oviedo). 01/01/2011-31/12/2013. 87.120 €. Team member.
- 9 **Contract.** Study on Direct Drive topologies for Electrical Propulsion European Space Agency (ESA). Manuel Arias Pérez de Azpeitia. 30/09/2020-30/10/2021. 25.000 €.
- 10 **Contract.** PhD Sponsorship – Research Team 2019-2020 United Technologies Research Center, S.L.. 30/09/2019-30/09/2020.
- 11 **Contract.** SiC Latching Current Limiter Study European Space Agency (ESA). Manuel Arias. (University of Oviedo). 03/04/2019-02/12/2020. 30.000 €.
- 12 **Contract.** Regulated Power System Building Block Study European Space Agency (ESA). Manuel Arias Pérez de Azpeitia. (Universidad de Oviedo). 12/03/2018-12/03/2019. 25.000 €.
- 13 **Contract.** Estudio y desarrollo de un filtro activo para la compensación de potencia reactiva en una instalación doméstica monofásica. EFIBAT SERVICIOS TÉCNICOS. Diego González Lamar. (Universidad de Oviedo). 11/12/2015-11/06/2016. 26.925 €.
- 14 **Contract.** Estudio teórico de acciones de mejora del accionador de los motores lineales de un pasillo de aceleración THYSENKRUPP ELEVATOR INNOVATION CENTER. (Universidad de Oviedo). 02/01/2015-02/04/2015. 25.500 €.
- 15 **Contract.** Estudio del sistema de generación, almacenamiento y distribución de energía para la alimentación del sistema de tracción de un ascensor THYSENKRUPP ELEVATOR INNOVATION CENTER. Diego González Lamar. (Universidad de Oviedo). 03/02/2014-03/05/2014. 8.970 €.
- 16 **Contract.** Low Cost Power Supplies for Cass D Audio Amplifiers MARSHALL AMPLIFICATION PLC. (Universidad de Oviedo). 01/01/2014-01/05/2018. 45.000 €.
- 17 **Contract.** Sistemas de equilibrado y convertidores de alta frecuencia (Colaboración 2013) Ikerlan. Marta Hernando Álvarez. 28/05/2013-27/01/2014. 5.000 €.
- 18 **Contract.** Convertidores para el equilibrado de baterías de Ion-Litio ORONA E.I.C., S. COOP. Manuel Arias Pérez de Azpeitia. 14/02/2013-14/12/2013. 15.000 €.