

**Part A. PERSONAL INFORMATION****CV date**

2019/09/05

First and Family name	José Luis Martín González		
Social Security, Passport, ID number	78865001W	Age	54
Researcher numbers	Researcher ID	K-7385-2014	
	Orcid code	0000-0002-5738-6376	

A.1. Current position

Name of University/Institution	University of the Basque Country (UPV/EHU)		
Department	Electronic Technology		
Address and Country	Plaza Ingeniero Torres Quevedo 1, 48013 Bilbao (Spain)		
Phone number	+34946017351	E-mail	joseluis.martin@ehu.eus
Current position	Full Professor	From	2013/09/27
UNESCO code	330703		
Keywords	Circuit design, power electronics, industrial electronics, VHDL, FPGA		

A.2. Education

PhD	University	Year
Electrical Engineer	University of the Basque Country (UPV/EHU)	1992

A.3. JCR articles, h Index, thesis supervised...

1. Research 6-year period recognized: 3 Last year included: 2014
2. PhD thesis supervised in the last 10 years (2009-2019): 8
3. Total cites: 748 (WoS) 1163 (Scopus) Yearly average cites (2014-2018): 79,4 (WoS) 112,4 (Scopus)
4. Papers in Q1: 16
5. h index: 14 (WoS) 18 (Scopus)

Part B. CV SUMMARY (max. 3500 characters, including spaces)

I received the M.Sc. degree in Electrical engineering from the UPV/EHU in 1989. That year, coinciding with my entry into the Faculty of Engineering in Bilbao, a group of researchers created the 'Electronic Design Group'. The main research line was the Design of Digital Architectures for the Hardware Treatment of Information. Within this line, our activity was oriented towards two areas: Design of circuits and systems for hardware processing of images and Design of circuits and systems for monitoring and control of industrial processes in real time. The inexperience and lack of training in research of the group (a single doctor who has just presented his PhD Thesis) and the department in general (made up of 6 lecturers and one recent associated professor, and 3 of them left the University in the next 3 years), produced few results in impact publications, although our activity in projects with both, public and private funding, was important. We also published in national journals and in national and international conferences, although far below what is desirable in comparison with our research activity.

In 2001 I made a stay at the University of Drexel (Philadelphia). During my stay I participated in the project "Prototype Development of the Simultaneous Optical Multiprocessor Exchange Bus Computer (SOME-bus)" directed by Professor C. Katsinis and financed by the National Science Foundation of the United States, a collaboration that I had for some time. This stay helped me to propose a change in the way of doing the research, creating a new research group called 'Applied Electronics Research Team (APERT)' which has been under my direction and coordination since 2002. The group was formed with 5 researchers, two of them with PhD, and currently has 23 people, 2 professors, 11 associated professors and 10 predoctoral researchers. The main research line is Circuit Design and we are working in the following areas: Control and power circuits for power converters and Reconfigurable circuits

and Systems-on-Chip. During these 17 years, the group has achieved consolidation, with the participation in all types of projects and the publication of its research results in journals with a high impact index and in international conferences. The APERT research group has been positively evaluated by the ANEP and also recognized as A grade group since 2010 and ratified in the 2016 Call for Consolidated Groups supported by the Basque Government, receiving funds of 572.000 euro for a period of 6 years (2016-2021). In addition, I have been head of Electronics and Telecommunications Department (1995-2001), Vice-Dean of the Faculty of Engineering (2001-2005), Director of Bizkaia Campus of the UPV/EHU (2005-2013), General Secretary of the UPV/EHU (2013-2017), Vice-president for Research of the UPV/EHU (2017-current position).

Summarizing **my research activity in figures**, during these 30 years I have participated in 83 research projects and contracts, in 35 of them as Main Researcher (MR), I have obtained research grants for infrastructure in 9 calls, in 8 of them as MR, I am co-author of 4 patents, 39 papers in international journals (30 in JCR), 5 book chapters, 77 papers in international conferences, 13 in national journals and 41 in national conferences. I have supervised 14 PhD Theses (2 international), 5 of them extraordinary award and one European award in renewable energies.

Part C. RELEVANT MERITS

C.1. Publications (including books)

1. A. Madariaga, **J. L. Martín**, I. Martínez de Alegría, I. Zamora, S. Ceballos, O. Anaya-Lara. "Effective assessment of electric power losses in three-core XLPE cables". IEEE Trans. on Power Systems. Vol. 28(4), pp. 4488–4495, 2013. JCR: 3,530, Ranking Q1 (20/248).
2. A. Madariaga, **J. L. Martín**, I. Martínez de Alegría, I. Zamora, S. Ceballos. "Technological Trends in Electric Topologies for Offshore Wind Power Plants". Renewable & Sustainable Energy Reviews. Vol. 24, pp. 32-44, 2013. JCR: 5,510, Ranking Q1 (6/83).
3. A. Madariaga, I. Martínez de Alegría, **J. L. Martín**, P. Eguía, S. Ceballos. "Current Facts about Offshore Wind Farms". Renewable & Sustainable Energy Reviews. Vol. 16(5), pp. 3105-3116, 2012. JCR: 5,627, Ranking Q1 (5/81).
4. E. Ibarra, I. Kortabarria, J. Andreu, I. Martínez de Alegría, **J. L. Martín**, P. Ibáñez. "Improvement of the Design Process of Matrix Converter Platforms Using the Switching State Matrix Averaging Simulation Method". IEEE Trans. on Industrial Electronics. Vol. 59(1), pp. 220-234, 2012. JCR: 5,165, Ranking Q1 (4/243).
5. J. Andreu, I. Kortabarria, E. Ormaetxea, E. Ibarra, **J. L. Martín**, S. Apiñaniz. "A Step Forward Towards the Development of Reliable Matrix Converters". IEEE Trans. on Industrial Electronics. Vol. 59(1), pp. 167-183, 2012. JCR: 5,165, Ranking Q1 (4/243).
6. E. Robles, J. Pou, S. Ceballos, J. Zaragoza, **J. L. Martín**, P. Ibáñez. "Frequency Adaptive Stationary Reference Frame Grid Voltage Sequence Detector for Distributed Generation Systems". IEEE Trans. on Industrial Electronics. Vol. 58(9), pp. 4275-4287, 2011. JCR: 5,160, Ranking Q1 (4/245).
7. S. Ceballos, J. Pou, J. Zaragoza, E. Robles, J. L. Villate, **J. L. Martín**. "Fault-Tolerant Neutral-Point-Clamped Converter Solutions Based on Including a Fourth Resonant Leg". IEEE Trans. on Industrial Electronics. Vol. 58(6), pp. 2293-2303, 2011. JCR: 5,160, Ranking Q1 (4/245).
8. E. Robles, S. Ceballos, J. Pou, **J. L. Martín**, J. Zaragoza, P. Ibáñez. "Variable-Frequency Grid Sequence Detector Based on a Quasi-Ideal Low-Pass Filter Stage and a Phase-Locked Loop." IEEE Trans. on Power Electronics. Vol. 25(10), pp. 2552-2563, 2010. JCR: 3,240, Ranking Q1 (10/247).
9. I. Martínez de Alegría, **J. L. Martín**, I. Kortabarria, J. Andreu, P. Ibáñez. "Transmission Alternatives for Offshore Electrical Power". Renewable and Sustainable Energy Review. Vol. 13 (5), pp. 1027-1038, 2009. JCR: 4,842, Ranking Q1 (4/71).
10. J. Andreu, J. M. de Diego, I. Martínez de Alegría, I. Kortabarria, **J. L. Martín**, S. Ceballos. "New Protection Circuit for High Speed Switching and Start-Up of a Practical Matrix Converter". IEEE Trans. on Industrial Electronics. Vol. 55 (8), pp. 3100-3314, 2008. JCR: 5,468, Ranking Q1 (2/229).

C.2. Research projects and grants

1. ENERGIGUNE'12 – R+D+i in Electrochemical and Thermal Energy Storage, and in Marine Energy. (IE12-335). Funded by the Basque Government through the ETORTEK program. Consortium formed by CIC energigUNE (leader of the consortium), IK-4 Ikerlan, IK-4 CIDETEC, TECNALIA R&I, AZTI-TECNALIA, Department of Inorganic Chemistry (UPV/EHU), Institute of Synthesis and Study of Materials (UPV/EHU), Department of Navigation Techniques and Sciences, Machines and Naval Constructions (UPV/EHU), APERT group of the Department of Electronic Technology (UPV/EHU). January 2012 - December 2014. 114.704 Euros. Head Researcher (HR): **J. L. Martin**.
2. Design of electronic power systems for hybrid rail electric vehicles (S-PE12UN003). Funded by the Basque Government through the SAIOTEK program. January 2012 - December 2013. 27,614.74 Euros. HR: **J. L. Martin**.
3. RURALGRID: Feasibility study for the implementation of renewable energies through microgrids in towns of the Pyrenees (CTP11/P7). Funded by the Basque Government through the call for Research and Technological Development Projects of the Pyrenees Working Community. Consortium formed by the San Jorge University Foundation (coordinator), INYCOM, Polytechnic University of Catalonia (TIEH and NHG groups), Ecole Supérieure des Technologies Industrielles Avancées (France), IMS Bordeaux (France), LOREKI (France), Ecole Nationale d'Ingénieurs from Tarbes (France), JEMA ENERGY SA, TECNALIA R&I and the UPV/EHU (Groups GSC, SI+E and APERT). January 2012 - December 2013. 65,000 Euros. HR: **J. L. Martin** (coordinator of the consortium in the Basque Country).
4. Architectures of transmission systems in direct current of marine generation parks (ENE2010-19187-C03-01). Funded by the Ministry of Economy and Competitiveness. January 2011 - December 2013. 193,600 Euros. HR: **J. L. Martin**.
5. CITY-CHARGE: Recharge infrastructures for electric vehicles in urban areas (IPT-370000-2010-28). Funded by the Ministry of Science and Innovation through the subprogram INNPACTO. Consortium formed by ZIV Medida (leader of the project), ZIV I+D Smart Energy Networks, Ormazabal Corporate Technology, AEG Power Solutions Iberian, Robotiker-Tecnalia, Integral Park Systems, Automatismos Maser and UPV/EHU. June 2010 - December 2012. 174,760 Euros. HR: **J. L. Martin**.
6. CITY-ELEC: Systems for the electrification of mobility in urban surroundings (PSE-370000-2009-4). Funded by the Ministry of Science and Innovation through the call for Singular Strategic Projects. Consortium formed by Robotiker-Tecnalia (project leader); AITIIP Foundation, Automatismos Maser S.A., Association for the Promotion of Electric and Non-Polluting Vehicles of Spain (AVELE), Donostia-San Sebastián City Council, Zaragoza City Council, CIDAUT Foundation (Center for Research and Development in Transport and Energy), Company of the Tranvía de San Sebastián S.A., Ente Vasco de la Energía, EXIDE Technologies S.A., Hidroeléctrica del Cantábrico S.A., Instituto de Automática Industrial-CSIC, Inasmet Foundation, Infranor Spain S.L.U., Integral Park Systems S.L.; Labein Foundation, Lear Corporation Holding Spain S.L.U., Luma Industries SA, Motierración Eléctrica Latierro S.A., Ormazabal Corporate Technology, Rücker Lypsa S.L., Saft Baterías S.L., Spanish Association of Manufacturers of Equipment and Components for Automotive, Temper S.A.U., Equipos de Transmisión S.A., Unión Fenosa Distribución, University of Extremadura, Polytechnic University of Catalonia, Usyscom, Tecnología de Comunicaciones S.L., Valeo Térmico S.A., Zytel Automoción S.L. and University of the Basque Country (UPV/EHU). July 2009 - December 2010. 32.958 Euros. HR: **J. L. Martin**.
7. Study of the Application of Matrix Converters to Wind Generators (ENE2007-67033-C03-02/ALT). Funded by the Ministry of Education and Science. Consortium formed by University of the Basque Country, Polytechnic University of Catalonia and Robotiker Technology Center. October 2007 - September 2010. 95,590 Euros. HR: **J. L. Martin**.

C.3. Contracts

1. Design and development of integrated power modules (POWINMOD). Fagor Electronics S. Coop. HR: Jon Andreu (UPV/EHU). December 2015 - May 2018. 241,998.16 Euros.

2. Design and development of position control for an electromechanical actuator in aviation applications. Tecnalia R&I Foundation. HR: Iñigo Kortabarria (UPV/EHU). June 2014 - November 2014. 30,000 Euros.
3. Design and development of an inverter for permanent magnet motor in automotive applications (EVIN). Fagor Electrónica, S. Coop. HR: Iñigo Martínez de Alegría (UPV/EHU). February 2013 - April 2014. 98,000 Euros.
4. OCEAN LEADER: Leaders in oceanic energies. Norvento S. L. (through the CENIT-E program). Consortium formed by 20 companies and 25 research centers led by Iberdrola. HR: **J. L. Martín**. September 2010 - September 2012. 50,025 Euros.
5. Research on new control and power circuits for power converters. ROBOTIKER Foundation. HR: **J. L. Martín**. May 2010 - April 2013. 87,442.37 Euros.
6. Broadband Access Networks Integrated Telecommunication System 2 - PBT module. ROBOTIKER Foundation. HR: **J. L. Martín**. March 2008 - November 2008. 25,334.40 Euros.
7. Applied Research in Electronics associated with Renewable Energies. ROBOTIKER Foundation. HR: **J. L. Martín**. March 2007 - February 2010. 99,240 Euros.

C.4. Patents

1. I. Martínez de Alegría, S. Ceballos, P. Ibañez, **J. L. Martín**, I. Gabiola, J. Andreu, I. Kortabarria. Electrical Transmission Module in Resonant DC with High Frequency Transformer. Patent No. WO2011/135108. Spain. April 27th, 2010 (Publication in the B.O.P.I. on November 3rd, 2011). Owner: UPV/EHU and Robotiker Foundation. Exploited by: Robotiker Foundation
2. J. Andreu, **J. L. Martín**, I. Kortabarria, E. Ibarra, U. Bidarte, I. Martínez de Alegría, P. Ibañez. Matrix Converter. Patent No. 2341693. Spain. October 8th, 2008 (Publication in the B.O.P.I. on June 24th, 2010). Owner: UPV/EHU and Robotiker Foundation. Exploited by: Robotiker Foundation.
3. I. Martínez de Alegría, J. Andreu, **J. L. Martín**, J. L. Villate, I. Gabiola. Method and device for the control of the active and reactive power of doubly fed asynchronous machines. Patent No. 2270675. Spain. November 5th, 2004 (Publication in the B.O.P.I. on April 1st, 2007). Owner: Robotiker Foundation. Exploited by: Robotiker Foundation

C.5. Supervised PhD theses

1. Design and development procedure of HTS superconducting solenoids and their application for microwave sources for fusion and other power devices. Santiago Sanz Castillo. October 3rd, 2013. Qualification: Maximum grade Cum laude and extraordinary doctoral award.
2. Optimización de la extracción de energía en los aerogeneradores de pequeña potencia. Iñigo Kortabarria Iparragirre. June 23rd, 2013. Qualification: Maximum grade cum laude.
3. Aportaciones al diseño del control jerárquico de microrredes eléctricas. Estefania Planas Fullaondo. March 1st, 2013. Qualification: Maximum grade cum laude.
4. Methodology to Evaluate Offshore Wind Power Plant Electric Topologies. Ander Madariaga Alvarez. January 30th, 2013. Qualification: Maximum grade cum laude (International PhD Thesis).
5. Study on Full Direct Current Offshore Wind Farm. Iñigo Martínez de Alegría Mancisidor. June 28th, 2012. Qualification: Maximum grade cum laude (International thesis and award "GL Garrad Hassan Global PhD Award in Renewable Energy 2012").

C.6. Other

1. Member of the AEN/CTN 206/SC114 committee of AENOR on Marine Energies. Wave and current energy converters, from 2008 to the present.
2. Euskoiker Research Award in the 2011 in the area of Engineering and Technology in recognition of achievements and professional merit in the field of Research and Development.
3. Projects reviewer of the VII Framework Program of the European Union, of the National R&D Plan for the National Agency for Evaluation and Prospective (ANEP) and of excellence projects of the Andalusian Evaluation Agency, among others.