



CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

		CV date	14/01/2022
Part A. PERSONAL INFORMATION			
First name	JUAN MANUEL		
Family name	CARRASCO SOLÍS		
Gender (*)	MALE	Birth date (dd/mm/yyyy)	09/09/1965
Social Security, Passport, ID number	32033919W		
e-mail	jmcarrasco@us.es	URL Web	
Open Research and Contributor ID (ORCID) (*)	0000-0003-1994-7416		

(*) *Mandatory*

A.1. Current position

Position	Full Professor		
Initial date	07/05/2010		
Institution	Universidad de Sevilla		
Department/Center	Ingeniería Electrónica		
Country	Spain	Teleph. number	954487362
Key words	Power electronics, renewable energies, energy storage systems		

A.2. Education

PhD, Licensed, Graduate	University/Country	Year
PhD. Industrial Engineering. (Cum laude).	Escuela Superior de Ingenieros. Universidad de Sevilla.	1992
Industrial Engineering (Electric)	Escuela Superior de Ingenieros. Universidad de Sevilla.	1989

Part B. CV SUMMARY (*max. 5000 characters, including spaces*)

Juan M. Carrasco was born in San Roque, Spain. He received the M.S. and Ph.D. degrees in industrial engineering from Seville University, Sevilla, Spain, in 1989 and 1992, respectively. His research area is power electronics for the integration of renewable energy power plants and energy storage systems. Also, he is developing power electronics technology for sustainable mobility and the generation and storage of green hydrogen applications.

He leads a research group focused on power electronics and its applications for the integration of distributed and renewable energy into the grid. In this group, 4 doctors and 10 graduates participate regularly.

Professor Carrasco has more than 120 research papers, of which more than 29 are in international research journals with high impact index. These research works have more than 9750 direct citations (Google Scholar). He is a member of the IEEE Society. Professor Carrasco has more than 15 publications in the IEEE Transaction on Industrial Electronics (TIE) journal of the IEEE Industrial Electronics Society. He is the main author of the paper entitled "Power-Electronic Systems for the Grid Integration of Renewable Energy Sources: A Survey" This article has 4526 direct citations (Google Scholar) and in July 2009 was the paper most downloaded from all papers published in the Society of the IEEE Industrial Electronics.

Carrasco belongs to the list prepared for Stanford University in 2021 that names the top 2% of scientists in all research areas. He is in position 834 over 105.029 researchers of the

Electrical & Electronic Engineering field.
https://www.us.es/sites/default/files/comunicacion/Adjuntos/US-Stanford_%202021.pdf

He is the author of 73 publications in international conferences (IECON, CFSP, EPE ...) and 17 publications in national conferences and seminars. He has participated in the organization of several international conferences such as IECON. In addition, he has organized several special sessions with Professor Jan Bialasiewicz (Denver University, USA) focused on the integration of renewable energy into the grid.

He has been the principal investigator for more than 52 technology industrial research contracts with companies such as Abengoa, Endesa, Gamesa, ACS, ADIF, GPtech, etc. He has participated in 35 research projects (public funding) and was the principal investigator of 24 of them (3 projects, 'Plan Nacional-Retos Sociedad,' TEC2007-61879, ENE2013-45948-R, ENE2016-80025-R). He is responsible for 1 European project H2020 (Grant Agreement 771066).

It is also the author of 8 PCT patents in operation, one of them awarded by the Actualidad Económica Magazine in 2002. He has been director of 7 doctoral theses, two of them European.

In 2002, Carrasco was one of the two founders of a technology-based company called GPtech (www.greenpower.es). GPtech is a pioneering company in next-generation power electronic products that optimize the integration of renewable energy into existing networks and new smart grids. Leaders in the energy sector such as GAMESA, ENEL, ACS, SCATEC, AES, ACCIONA, etc. rely on GPtech to solve complex grid issues, in addition to improving the management of energy assets on a global basis. In 2021, the company's turnover was 45M €, and its products are being sold worldwide, especially in North and South America.

Carrasco was the CEO of GPtech from 2002 until 2007. In addition, he was chairman of its Board of Directors from 2007 to 2020. Since 2020, he has been a partner and technological consultant for new business opportunities of GPtech.

Additionally, he was a member of the Board of Directors of the Andalusian Technological Corporation (CTA) from June 2008 until 2018. The CTA acts as the main promoter of R&D projects in Andalusia. In addition, he belonged to the Executive Committee of the Alliance for Energy Research and Innovation (ALINNE) from 2011 to 2018. This alliance was a great national public-private pact born with the challenge of reinforcing Spain's international leadership in energy innovation. It was promoted by the Ministry of Industry and Competitiveness of the Spanish government.

Five-year research periods	Research 4 + 1 Transference		
	Web of Science	Scopus	Google Scholar
Index H	23	26	32
Total cites	5.432	6.942	9.750
Directed PhD thesis	7	International books chapters	3
International Journal Paper	29		
International Conf. Proceedings	73	National Conf. Proceedings	17
Awards	2	Patents	8
Project Management (PI)	24	UE- 1; National and Regional - 23	
Participation in projects	11	UE- 8; National and Regional - 3	
Company contracts (PI)	52	Company contracts participation	20
Stanford University: World's Top 2% Scientists List (2021)	Position 834 over 105.029 researchers of the Electrical & Electronic Engineering Area		

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

1. L. Galván, P. Gómez, E. Galván, JM Carrasco. Optimization-Based Capacitor Balancing Method with Selective DC Current Ripple Reduction for CHB Converters. **Energies** 2022, 15(1), 243; <https://doi.org/10.3390/en15010243>
2. C. García-Santacruz, L Galván, JM Carrasco and E Galván. Sizing and Management of Energy Storage Systems in Large-Scale Power Plants Using Price Control and Artificial Intelligence. **Energies** 2021, 14(11), 3296; <https://doi.org/10.3390/en14113296>
3. L. Galván, J. Navarro, E. Galván, JM Carrasco and A. Alcántara. Optimal Scheduling of Energy Storage Using A New Priority-Based Smart Grid Control Method. **Energies** 2019, 12(4), 579; <https://doi.org/10.3390/en12040579>
4. D. Herrera, J. Villegas, E. Galván and JM Carrasco. 2019. Synchronous Reluctance Six-Phase Motor Proved based EV Powertrain as Charger/Discharger with Redundant Topology and ORS Control. **IET Electric Power Applications** 2019. 13, pp. 1857-1870.
5. D. Herrera, E. Galván and JM Carrasco. Powertrain EV Synchronous Reluctance Motor Design with Redundant Topology with Novel Control. **IET Electric Power Applications** 2019. 13, pp. 1647-1659.
6. D. Herrera, E. Galván and JM Carrasco. Method for controlling voltage and frequency of the local offshore grid responsible for connecting large offshore commercial wind turbines with the rectifier diode-based HVDC-link applied to an external controller. **IET Electric Power Applications** 2017. 11, pp. 1509-1516.
7. J. Muñoz, J. Villegas, JA Vite-frías, JM Carrasco and E. Galván. "New Low-Distortion Q&f Droop Plus Correlation Anti-Islanding Detection Method for Power Converters in Distributed Generation Systems". **IEEE Transactions on Industrial Electronics** 2015. Vol. 62. Issue 8. Pag: 5072-5081.

C.3. Research projects

1. Sistema de almacenamiento eléctrico portable y conectable para compartir excedentes de energía verde con control on-cloud y certificable mediante Blockchain. Programa Estatal de I+D+i Retos de la Sociedad: Pruebas de Concepto. PDC2021-121278-I00. 2021-2023. 149.500 EUR. **IP JM Carrasco**
2. Sistema para la trazabilidad de la reducción de la huella de carbono en comunidades energéticas basado en la tecnología blockchain. PAIDI 2020 Junta de Andalucía. PYC20 RE 075 USE. 2022-2023. 165.01 EUR. **IP JM Carrasco**
3. Nuevas tecnologías de convertidores bidireccionales inalámbricos de transferencia inductiva para aplicaciones de recarga rápida de vehículos eléctricos con estrategia de control Vehicle To Grid (V2G) para contribuir a una mayor integración en las SG. PAIDI 2020 Junta de Andalucía. P20_00611. 2021-2022. 126.252,40 EUR. **IP JM Carrasco**
4. Smart distribution grid: a market driven approach for the next generation of advanced operation models and services DOMINOES. H2020 EUROPEAN UNION. SI-1737/28/2017. 2017-2021. 281.500 EUR. **IP JM Carrasco**.
5. "New technologies to integrate storage distributed electric network systems through Control infrastructure on-Cloud applied to energy efficiency". Ministry of Economy and Competitiveness. ENE2016-80025-R. 2016-2019. 193.600 EUR. **IP JM Carrasco**
6. Advanced offshore wind farm control system with network optimization HVDC, AEOLUS. Ministry of Economy and Competitiveness. RTC-2016-5488-3. 2014-2016. 261.620 EUR. **IP JM Carrasco**

C.4. Contracts, technological or transfer merits

1. Technologies for the optimization of the strategies of participation of the renewable energies in wholesale markets, SIBILA. GPtech. PI-1701/28/2007. 2017-2018. 26.073,6 EUR. **IP JM Carrasco**
2. Advanced Modular Compensation System for Regulation of High-voltage Transport Networks with Ultra-Capacitors (AMCOS). Cobra-ACS. PI-1657/28/2016. 2016-2021. 52.000 EUR. **IP JM Carrasco**
3. Advanced Modular Compensator System for High-Voltage electricity Transmission Networks Regulation with ultracapacitors, AMCOS". GPtech. PI-1493/27/2015. 2015-2017. 82.333 EUR. **IP JM Carrasco**
4. Advanced System for Isolated Network Management. Development of an Advanced System for Management of Isolated Networks with Distributed Generation and Storage e IoT, SAGRA. PI-1494/27/2015. 2015-2017. 58.424,34 EUR. **IP JM Carrasco**
5. Supply, installation, and start-up of specific equipment for micro-grid laboratories of the National Hydrogen Center (CNH2). PI-1467/2015. 2014-2015.106.590 EUR. **IP JM Carrasco**

C.5. Patents

1. G. Costales, A. Lara, JM Carrasco, E. Galván, LG Franquelo. SYSTEM FOR CONDITIONING AND GENERATING/STORING POWER IN ELECTRICAL DISTRIBUTION NETWORKS IN ORDER TO IMPROVE THE DYNAMIC STABILITY AND FREQUENCY CONTROL THEREOF. Made Tecnologías Renovables, SA (Grupo Gamesa). WO2003023933. 2003.
2. G. Costales, A. Lara, JM Carrasco, E. Galván, LG Franquelo. SYSTEM FOR USING ENERGY STORED IN THE MECHANICAL INERTIA OF THE ROTOR OF A WIND TURBINE. Made Tecnologías Renovables, SA (Grupo Gamesa). WO2003023224. 2003.
3. L. Galván, JM Carrasco, E. Galván and D. Herrera. HIGH VOLTAGE DC LINK FOR WIND PARK. Green Power Technologies S.L. WO2015165517. 2015.
4. A. Mehram, E. Galván, JM Carrasco, L. Galván, C. Veiga, JA Ale and JL Mora. DC/DC CONVERTER. Green Power Technologies S.L. WO2015165516. 2015.
5. L. Galván, P Arévalo, E. Galván and JM Carrasco. MODULAR VOLTAGE CONVERTER AND METHOD FOR MITIGATING THE EFFECTS OF A FAULT ON A DC LINE. Green Power Technologies S.L. WO2015067322. 2015.
6. P. Martín, L. Galván, E. Galván and JM Carrasco. SYSTEM AND METHOD FOR THE DISTRIBUTED CONTROL AND MANAGEMENT OF A MICROGRID. Green Power Technologies S.L. WO2015113637. 2015.
7. E. Galván, FJ Codeseda, JM Carrasco and L. Galván. SYSTEM AND METHOD FOR CONTROLLING AN AC/DC CONVERTER. Green Power Technologies S.L. WO2015117637. 2015.
8. L. Galván, P Arévalo, JM Carrasco and E. Galván. MODULAR VOLTAGE CONVERTER AND METHOD FOR MITIGATING THE EFFECTS OF A FAULT ON A DC LINE. Green Power Technologies S.L. WO2015067322. 2015.