



Curriculum Vitae

DELFIN DUARTE ROLO PEDROSA

Delfim Pedrosa completed on December 2017, the doctoral program in electronics and computers engineering in the scientific area of power electronics and energy (maximum classification of Very Good, approved unanimously) from the University of Minho. The PhD thesis was developed at the group of power electronics and energy (GEPE), that was subordinated to the theme "New Topology of Bidirectional Unified Converter for Traction and Battery Charging Systems in Electric Vehicles". Between September 2016 and February 2017, he was invited Professor at the Industrial Electronics Department of the University of Minho, teaching the curricular units of Electronics for the degree in Physical Engineering and Electrotechnics for the degree in Textile Engineering. Between March 2017 and September 2019, he was invited Professor at the Department of Technology of the Polytechnic Institute of Cávado and Ave, teaching the curricular unit of Power Electronics and Advanced Automation for the degree in Electrotechnical and Computer Engineering. Between November 2017 and June 2019, he was robotics trainer at basic school Lamações, teaching students to start programming robots in the online platform Open Roberta Lab (robot Bot'n Roll ONE A). From July 2019 to present, he is a junior PhD researcher at the Centro ALGORITM of the University of Minho, on the project DAIPSEV - Development of Advanced Integrated Power Electronic Systems for Electric Vehicles. He is member of the Industrial Electronics R&D Line (Centro ALGORITMI) and of the GEPE. His main research interests are related to power electronics solutions applied to Industrial Electronics, Renewable Energy Sources, and powertrain and battery chargers in Electric Vehicles. Related to the developed research in these areas were obtained 11 power electronics prototypes. He is author or co-author of 39 scientific papers, all of them subject to a scientific referee. He is author or co-author of 4 international journal papers, 37 international conference papers, and 1 book chapters. He is the supervisor of 2 MSc student, and he was supervisor of 1 internship student and 7 students that developed 4 projects under MSc studies. He also served as a supervisor of 2 international students during laboratory activities. Since the PhD, he participated as arguing on the jury of 4 MSc dissertations. He participated in the preparation of 6 national project applications (FCT and Portugal Ventures). In the SCOPUS database, he has: 23 papers, 123 citations, h-index 5. In the Publons database, he has: 38 papers, 61 citations, h-index 3. In the Google Scholar database, he has: 42 papers, 272 citations, h-index 9. Regarding activities as Editor, he is Journal Topic Editor of MDPI Electronics and MDPI Energies. Since the PhD, he reviewer 20 journal papers, and 9 conference papers. He participated in the organization of 8 conferences and symposiums. He is 2 Workshops Chair (Conference and European RoboCupJunior) and 1 session chair.

Identification

Personal identification

Full name

DELFIN DUARTE ROLO PEDROSA

Gender

Male

Birth date

1986/07/02

Citation names

Delfim Pedrosa

Author identifiers

Ciência ID

C51A-AD25-D728

ORCID iD

0000-0003-2113-3606

Google Scholar ID
 pIAycTcAAAAJ&hl
 Scopus Author Id
 36697043100

Email addresses

dpedrosa@dei.uminho.pt (Professional)
 delfimpedrosa@gmail.com (Personal)

Telephones

Telephone
 (+351) 253510392 (Professional)

Addresses

Universidade do Minho - Alameda da Universidade, 4804-533 Guimarães, Braga, Portugal (Professional)

Websites

<http://delfimpedrosa.pt/> (Personal)
<https://www.gepe.dei.uminho.pt/index.html> (Professional)

Languages

Language	Speaking	Reading	Writing	Listening	Peer-review
Portuguese (Mother tongue)					
English	Intermediate (B1)	Intermediate (B1)	Upper intermediate (B2)	Upper intermediate (B2)	Intermediate (B1)

Education

	Degree	Classification
2019/02/02 Concluded	Processos de Eficácia Pessoal e de Relacionamento Humano [Processes of Personal Effectiveness and Human Relationship] (14h) (Outros) TecMinho Associação Universidade-Empresa para o Desenvolvimento, Portugal	
2018/11/21 Concluded	Conduzir e operar com o trator em segurança [Drive and Operate Farm Tractors Safely] (35h) (Outros) earth consulters, Portugal	

<p>2018/09/01 Concluded</p>	<p>Manobrador de Máquinas Agrícolas e Florestais [Agricultural and Forest Machinery Operator] (16h) (Outros)</p>	
<p>Consultua, Portugal</p>		
<p>2018/07/12 Concluded</p>	<p>Formação Inicial Acelerada para Pesados de Passageiros [Quick Initial Qualification Course for Drivers of Heavy Passenger Vehicles] (35h) (Outros)</p>	
<p>Formação Saraiva, Portugal</p>		
<p>2018/05/14 Concluded</p>	<p>Formação Inicial Acelerada para Pesados de Mercadorias [Quick Initial Qualification Course for Drivers of Heavy Goods Vehicles] (140h) (Outros)</p>	
<p>Formação Saraiva, Portugal</p>		
<p>2018/01/29 - 2018/02/01 Concluded</p>	<p>Curso Europeu de Primeiros Socorros - CEPS [European First Aid] (Outros)</p>	
<p>Cruz Vermelha Portuguesa, Portugal</p>		
<p>2018 Concluded</p>	<p>Metodologia TRIZ - Resolução criativa de problemas e inovação sistemática num contexto Lean [TRIZ Methodology - Creative problem solving and systematic innovation in a Lean context] (24h) (Outros)</p>	
<p>TecMinho Associação Universidade-Empresa para o Desenvolvimento, Portugal</p>		
<p>2018 Concluded</p>	<p>Segurança de Máquinas - Diretiva Máquinas [Machine Safety - Machinery Directive] (21h) (Outros)</p>	
<p>Centro de Apoio Tecnológico à Indústria Metalomecânica, Portugal</p>		
<p>2013/04/01 - 2017/12/19 Concluded</p>	<p>Doctoral Program in Electronics and Computers Engineering (Doutoramento) Major in Power Electronics and Energy</p>	<p>Very Good</p>
<p>Universidade do Minho Escola de Engenharia, Portugal <i>"New Topology of Bidirectional Unified Converter for Traction and Battery Charging Systems in Electric Vehicles" (THESIS/DISSERTATION)</i></p>		
<p>2017 Concluded</p>	<p>MFMEA - Análise Modal de Falhas e Efeitos Potenciais em Ferramentas e Equipamentos [MFMEA - Modal Failure Analysis and Potential Effects on Tools and Equipment] (12h) (Outros)</p>	
<p>TecMinho Associação Universidade-Empresa para o Desenvolvimento, Portugal</p>		

2017 Concluded	Veículos com Propulsão Híbrida [hybrid Propulsion System] (16h) (Outros)	
	CEPRA – Centro de Formação Profissional da Reparação Automóvel , Portugal	
2016 Concluded	Filtros de Partículas [Particle Filter] (16h) (Outros)	
	CEPRA – Centro de Formação Profissional da Reparação Automóvel , Portugal	
2010/12/14 Concluded	Língua inglesa - técnicas de escrita [English language - writing techniques] (25h) (Outros)	
	TecMinho Associação Universidade-Empresa para o Desenvolvimento, Portugal	
2004/09/01 - 2010/07/26 Concluded	Industrial Electronic Engineering and Computers (Mestrado integrado) Major in Power Electronics and Energy	15
	Universidade do Minho Escola de Engenharia, Portugal <i>"Development of an Electric Vehicle"</i> (THESIS/DISSERTATION)	

Affiliation

Science

2019/07/01 - Current	Contracted Researcher (Research) Universidade do Minho Centro ALGORITMI, Portugal
2010/09/01 - 2013/03/31	Researcher (Research) Universidade do Minho Centro ALGORITMI, Portugal

Positions / Appointments

2017/11/01 - 2019/06/30	Robotics Trainer Escola Básica 2,3 de Lamações, Portugal
-------------------------	---

Others

2017/11/01 - 2019/06/30	Engineer Itec Iberiana Technical, Portugal
-------------------------	---

Projects

Contract

	Designation	Funders
2019/07/01 - 2021/12/31	DAIPESEV - Development of Advanced Integrated Power Electronic Systems for Electric Vehicles PTDC/EEI-EEE/30382/2017 Other Universidade do Minho Centro ALGORITMI, Portugal	Associação para a Inovação e Desenvolvimento da FCT, Portugal
2019/02/22 - 2019/06/30	NextLink - Nova Geração de Condensador DC-Link para Veículos Eléctricos [New Generation of DC-Link Capacitors for Electric Vehicles] POCI-01-0247-FEDER-039688 Technical development Itec Iberiana Technical, Portugal	
2010/09/01 - 2013/03/31	MOBI-MPP - Laboratory Implementation and Testing of the Traction and Energy Management Systems MIT - Pt/EDAM-SMS/0030/2008 Research Fellow Universidade do Minho, Portugal	

Other

	Designation	Funders
2012 - Current	Programming a PLC and HMI for a pallet machine Pallet machine Principal investigator	
2014 - 2014	Conversion of a 4 wheels motorcycle to electric 4 wheels motorcycle Principal investigator	
2014 - 2014	Development of a program for electric roller shutters Electric roller shutters Principal investigator	
2013 - 2013	Development of a program for the automatic start of an emergency generator Emergency generator Principal investigator	

2012 - 2013	<p>Conversion of an Ford KA into an electric vehicle</p> <p>Ford KA</p> <p>Principal investigator</p> <p>Fafediesel, Portugal</p>
2012 - 2013	<p>Electric Motor glider</p> <p>Motor glider</p> <p>Principal investigator</p> <p>Eurosportaircraft, Portugal</p>
2012 - 2012	<p>Development a PLC program to control the thickness of the wooden planks</p> <p>Chariot</p> <p>Principal investigator</p>
2010 - 2010	<p>Development of home security systems</p> <p>Home security systems</p> <p>Principal investigator</p>
2008 - 2009	<p>Conversion of an VW Polo into an electric vehicle</p> <p>VW Polo</p> <p>Principal investigator</p> <p>Universidade do Minho Escola de Engenharia, Portugal</p>
2007 - 2007	<p>Development of a hydraulic press</p> <p>Hydraulic press</p> <p>Researcher</p>
2006 - 2006	<p>Development of a tower crane</p> <p>Tower crane</p> <p>Principal investigator</p>
2006 - 2006	<p>Development of a universal series motor</p> <p>Universal series motor</p> <p>Principal investigator</p>
2006 - 2006	<p>Development of a shopping cart</p> <p>Shopping cart</p> <p>Researcher</p>

Outputs

Publications

- | | | |
|------------------|---|---|
| Book chapter | 1 | J. Martins; F. P. Brito; Pedrosa, Delfim; Vítor Monteiro; J. L. Afonso. "Real-life comparison between diesel and electric car energy consumption". edited by Carla Silva, 209-232. Nova Science Publisher, 2013.

Published |
| <hr/> | | |
| Conference paper | 1 | Tiago J. C. Sousa; Vítor Monteiro; Sérgio Coelho; Luís Machado; Delfim Pedrosa; João L. Afonso. "Battery Charging Station for Electric Vehicles based on Bipolar dc Power Grid with Grid-to-Vehicle, Vehicle-to-Grid and Vehicle-to-Vehicle Operation Modes". Paper presented in <i>EAI SESC 2020 – International Conference on Sustainable Energy for Smart Cities, 2020</i> . |
| | 2 | Ana Rodrigues; Cátia Oliveira; Tiago J. C. Sousa; Pedrosa, Delfim; Vítor Monteiro; João L. Afonso. "Unified Three-Port Topology Integrating a Renewable and an Energy Storage System with the Grid-Interface Operating as Active Power Filter". Paper presented in <i>14th International Conference on Compatibility, Power Electronics and Power Engineering, Setúbal, 2020</i> .

Published |
| | 3 | Tiago J. C. Sousa; Luís Machado; Pedrosa, Delfim; Carlos Martins; Vítor Monteiro; João L. Afonso. "Comparative Analysis of Vehicle-to-Vehicle (V2V) Power Transfer Configurations without Additional Power Converters". Paper presented in <i>14th International Conference on Compatibility, Power Electronics and Power Engineering, Setúbal, 2020</i> .

Published |
| | 4 | Vítor Monteiro; Cátia Oliveira; Ana Rodrigues; Tiago J. C. Sousa; Pedrosa, Delfim; Luís Machado; João L. Afonso. "A Novel Topology of Multilevel Bidirectional and Symmetrical Split-Pi Converter". Paper presented in <i>14th International Conference on Compatibility, Power Electronics and Power Engineering, Setúbal, 2020</i> .

Published |
| | 5 | Tiago J. C. Sousa; Luís Machado; Pedrosa, Delfim; Vítor Monteiro; João L. Afonso. "Unified Traction and Battery Charging Systems for Electric Vehicles: A Sustainability Perspective". Paper presented in <i>EAI International Conference on Sustainable Energy for Smart Cities - SESC 2019, Braga, 2019</i> .

Published |
| | 6 | Luís Machado; Tiago J. C. Sousa; Vítor Monteiro; Pedrosa, Delfim; João L. Afonso. "A Three-Phase Bidirectional Variable Speed Drive: An Experimental Validation for a Three-Phase Induction Motor". Paper presented in <i>EAI International Conference on Sustainable Energy for Smart Cities - SESC 2019, Braga, 2019</i> .

Published |
| | 7 | J. G. Pinto; Vítor Monteiro; Pedrosa, Delfim; João L. Afonso. "Economic Assessment of a Public DC Charging Station for Electric Vehicles with Load Shift Capability". Paper presented in <i>3rd International Conference on Energy and Environment: bringing together Economics and Engineering - ICEE 2017, Porto, 2017</i> .

Published |
| | 8 | Jose A. Afonso; Ruben A. Sousa; Joao C. Ferreira; Vítor Monteiro; Pedrosa, Delfim; João L. Afonso. "IoT System for Anytime/Anywhere Monitoring and Control of Vehicles' Parameters". Paper presented in <i>IEEE International Workshop on IoT applications in Intelligent Transportation Systems and Logistics, Bari, 2017</i> .

Published |

- 9 Monteiro, V.; Ferreira, J.C.; Pedrosa, D.; Sepúlveda, M.J.; Aparício Fernandes, J.C.; Afonso, J.L.. "Comprehensive analysis and comparison of digital current control techniques for active rectifiers". Paper presented in *12th Portuguese Conference on Automatic Control - CONTROLO 2016, Guimarães, 2016*.
Published · 10.1007/978-3-319-43671-5_55
- 10 Pedrosa, D.; Gomes, R.; Monteiro, V.; Afonso, J.A.; Afonso, J.L.. "Model predictive current control of a slow battery charger for electric mobility applications". Paper presented in *12th Portuguese Conference on Automatic Control - CONTROLO 2016, Guimarães, 2016*.
Published · 10.1007/978-3-319-43671-5_54
- 11 Afonso, J.A.; Rodrigues, F.J.; Pedrosa, D.; Afonso, J.L.. "Mobile sensing system for cycling power output control". Paper presented in *12th Portuguese Conference on Automatic Control - CONTROLO 2016, Guimarães, 2016*.
Published · 10.1007/978-3-319-43671-5_65
- 12 Pedrosa, D.; Gomes, R.; Monteiro, V.; Aparício Fernandes, J.C.; Monteiro, J.; Afonso, J.L.. "Model predictive control of an on-board fast battery charger for electric mobility applications". Paper presented in *12th Portuguese Conference on Automatic Control - CONTROLO 2016, Guimarães, 2016*.
Published · 10.1007/978-3-319-43671-5_57
- 13 Monteiro, V.; Afonso, J.A.; Pedrosa, D.; Martins, J.S.; Afonso, J.L.. "Digital control of a novel single-phase three-port bidirectional converter to interface renewables and electric vehicles with the power grid". Paper presented in *12th Portuguese Conference on Automatic Control - CONTROLO 2016, Guimarães, 2016*.
Published · 10.1007/978-3-319-43671-5_56
- 14 Afonso, J.A.; Rodrigues, F.J.; Pedrosa, D.; Afonso, J.L.. "Automatic control of cycling effort using electric bicycles and mobile devices". Paper presented in *World Congress on Engineering 2015, London, 2015*.
Published
- 15 Exposto, B.; Rodrigues, R.; Pinto, J.G.; Monteiro, V.; Pedrosa, D.; Afonso, J.L.. "Predictive control of a current-source inverter for solar photovoltaic grid interface". 2015.
10.1109/CPE.2015.7231058
- 16 Exposto, B.; Monteiro, V.; Pinto, J.G.; Pedrosa, D.; Meléndez, A.A.N.; Afonso, J.L.. "Three-phase current-source shunt active power filter with solar photovoltaic grid interface". 2015.
10.1109/ICIT.2015.7125262
- 17 Bruno Exposto; J. G. Pinto; Vítor Monteiro; Pedrosa, Delfim; João L. Afonso. "The Impact of Poor Power Quality in Solar Photovoltaic Microgeneration: Technical Problems and Losses of Revenue". Paper presented in *ICEE International Conference on Energy and Environment: Bringing Together Engineering and Economics, Guimarães, 2015*.
Published
- 18 Vítor Monteiro; J. G. Pinto; Bruno Exposto; Pedrosa, Delfim; João L. Afonso. "Multifunctional Converter to Interface Renewable Energy Sources and Electric Vehicles with the Power Grid in Smart Grids Context". Paper presented in *ICEE International Conference on Energy and Environment: Bringing Together Engineering and Economics, Guimarães, 2015*.
Published
- 19 Pedrosa, D.; Monteiro, V.; Gonçalves, H.; Martins, J.S.; Afonso, J.L.. "A case study on the conversion of an internal combustion engine vehicle into an electric vehicle". Paper presented in *11th Vehicle Power and Propulsion Conference - VPPC'2014, Coimbra, 2014*.

- 20 Pedrosa, D.; Peixoto, H.; Goncalves, H.; Martins, J.S.; Couto, C.; Afonso, J.L.. "FPGA field oriented control of an Axial Flux motor-in-wheel". 2014.
10.1109/IECON.2014.7048561
- 21 Pedrosa, D.; Carvalho, J.; Goncalves, H.; Monteiro, V.; Fernandes, A.; Afonso, J.L.. "Field oriented control of an axial flux permanent magnet synchronous motor for traction solutions". 2014.
10.1109/IECON.2014.7048695
- 22 Rodrigues, T.; Pinto, J.G.; Monteiro, V.; Pedrosa, D.; Afonso, J.L.. "Renewable energy system for an isolated micro grid". 2014.
10.1109/IECON.2014.7048811
- 23 Pinto, J.G.; Monteiro, V.; Goncalves, H.; Exposto, B.; Pedrosa, D.; Couto, C.; Afonso, J.L.. "Bidirectional battery charger with Grid-to-Vehicle, Vehicle-to-Grid and Vehicle-to-Home technologies". 2013.
10.1109/IECON.2013.6700108
- 24 Exposto, B.; Pinto, J.G.; Goncalves, H.; Monteiro, V.; Pedrosa, D.; Couto, C.; Afonso, J.L.. "Evaluation of a Shunt Active Power Filter with energy backup capability". 2013.
10.1109/IECON.2013.6700113
- 25 Pedrosa, Delfim; Vítor Monteiro; Henrique Gonçalves; Bruno Exposto; J. G. Pinto; João L. Afonso. "Conversion of an Internal Combustion Engine Vehicle into an Electric Vehicle". Paper presented in *Seminário Anual de Automação, Eletrónica Industrial e Instrumentação 2012 - SAAEI'12, Guimarães, 2012*.
Published
- 26 Pedrosa, Delfim; Rui Pereira; Henrique Gonçalves; Bruno Exposto; Vítor Monteiro; J. G. Pinto; João L. Afonso. "Development of a Digital Controller with Data Acquisition to a Test Bench for Electric Motors". Paper presented in *Seminário Anual de Automação, Eletrónica Industrial e Instrumentação 2012 - SAAEI'12, Guimarães, 2012*.
Published
- 27 Vítor Monteiro; Pedrosa, Delfim; Bruno Exposto; João C. Ferreira; João L. Afonso. "Smart Charging System of the Electric Vehicle CEPIUM". Paper presented in *Seminário Anual de Automação, Eletrónica Industrial e Instrumentação 2012 - SAAEI'12, Guimarães, 2012*.
Published
- 28 Bruno Exposto; J. G. Pinto; Vítor Monteiro; Pedrosa, Delfim; H. Gonçalves; João L. Afonso. "Experimental and Simulation Results of a Current-Source Three-Phase Shunt Active Power Filter using Periodic-Sampling". Paper presented in *Seminário Anual de Automação, Eletrónica Industrial e Instrumentação 2012 - SAAEI'12, Guimarães, 2012*.
Published
- 29 Vítor Monteiro; João C. Ferreira; J. G. Pinto; Bruno Exposto; Pedrosa, Delfim; João L. Afonso. "Comparison of Charging Systems for Electric Vehicles and Their Impact on Electrical Grid". Paper presented in *Seminário Anual de Automação, Eletrónica Industrial e Instrumentação 2012 - SAAEI'12, Guimarães, 2012*.
Published

- 30 Bruno Exposto; Nuno Manuel; J. G. Pinto; Vítor Monteiro; Pedrosa, Delfim. "Experimental Results of a Developed Single-Phase Thyristor Switched Capacitor". Paper presented in *Seminário Anual de Automação, Eletrónica Industrial e Instrumentação 2012 - SAAEI'12, Guimarães, 2012*.
Published
- 31 Pedrosa, D.; Goncalves, H.; Exposto, B.; Martins, J.S.; Afonso, J.L.. "A simplified methodology for parameters measurement of an Axial Flux Permanent Magnet motor without neutral point". 2012.
10.1109/IECON.2012.6388730
- 32 Exposto, B.; Pinto, J.G.; Pedrosa, D.; Monteiro, V.; Goncalves, H.; Afonso, J.L.. "Current-source shunt active power filter with periodic-sampling modulation technique". 2012.
10.1109/IECON.2012.6388555
- 33 Monteiro, V.; Ferreira, J.C.; Pinto, G.; Pedrosa, D.; Afonso, J.L.. "iV2G charging platform". 2010.
10.1109/ITSC.2010.5625255
- 34 Pedrosa, Delfim; Patrício Teixeira; Joel Crespo; Daniel Costa; João Sena Esteves. "Foldable slewing crane". Paper presented in *Selected Papers on Hands-on Science, 2008*.
Published
- 35 Pedrosa, Delfim; João Sena Esteves. "Handmade series direct current motor". 2008.
Published
- 36 Pedrosa, Delfim; Patrício Teixeira; João Sena Esteves. "Electromagnet and Switchboard for Slewing Crane". Paper presented in *3rd International Conference on Hands on Science, Braga, 2006*.
Published
- 37 Pedrosa, Delfim; João Sena Esteves. "Handmade series direct-current motor". Paper presented in *3rd International Conference on Hands on Science, Braga, 2006*.
Published
- 38 Pedrosa, Delfim; Joel Crespo; Daniel Costa; João Sena Esteves. "Slewing crane with electromagnet". Paper presented in *3rd International Conference on Hands on Science, Braga, 2006*.
Published

Journal article

- 1 Machado, Luis; Sousa, Tiago J. C.; Pedrosa, Delfim; Monteiro, Vitor; Pinto, J.; Afonso, Joao. "Experimental Validation of a Three-Phase Induction Motor Operating with a Three-Phase Bidirectional Variable Speed Drive". *EAI Endorsed Transactions on Energy Web* 8 34 (2021): 168137. <http://dx.doi.org/10.4108/eai.14-1-2021.168137>.
10.4108/eai.14-1-2021.168137
- 2 Sousa, Tiago J. C.; Monteiro, Vítor; Pedrosa, Delfim; Machado, Luís; Afonso, João. "Unified Systems for Traction and Battery Charging of Electric Vehicles: A Sustainability Perspective". *EAI Endorsed Transactions on Energy Web* 8 34 (2021): 170557. <http://dx.doi.org/10.4108/eai.23-7-2021.170557>.
10.4108/eai.23-7-2021.170557
- 3 Pedrosa, Delfim; Monteiro, Vitor; Sousa, Tiago J. C.; Machado, Luis; Afonso, Joao L.. "Unified Power Converter Based on a Dual-Stator Permanent Magnet Synchronous Machine for Motor Drive and Battery Charging of Electric Vehicles". *Energies* 14 11 (2021): 3344. <http://dx.doi.org/10.3390/en14113344>.

10.3390/en14113344

- 4 Pedrosa, Delfim. "A Review on Power Electronics Technologies for Electric Mobility". *Energies* 13 23 (2020): 6343-6343. <https://doi.org/10.3390/2Fen13236343>.

Published · 10.3390/en13236343

Thesis /
Dissertation

- 1 Pedrosa, Delfim. "Nova Topologia de Conversor Bidirecional Unificado para Sistema de Tração e Carregamento de Baterias em Veículos Elétricos [New Topology of Bidirectional Unified Converter for Traction and Battery Charging Systems in Electric Vehicles]". PhD, Universidade do Minho Escola de Engenharia, 2017.
- 2 Pedrosa, Delfim. "Desenvolvimento de um Veículo Eléctrico [Development of an Electric Vehicle]". Master, Universidade do Minho Escola de Engenharia, 2010.

Website

- 1 Pedrosa, Delfim. *Development of a DAIPESSEV project website*. 2020. <https://www.gepe.dei.uminho.pt/daipesev/index.html>.
- 2 Pedrosa, Delfim. *Development of a personal website*. 2017. <http://delfimpedrosa.pt/>.

Other

Other output

- 1 Pedrosa, Delfim. 2017. Development of a 50 kW unified power converter. Development of a 50 kW unified power converter to drive a BLDC (Brushless DC) motor. The converter was developed within the scope of my PhD thesis subordinated to the theme "Nova Topologia de Conversor Bidirecional Unificado para Sistema de Tração e Carregamento de Baterias em Veículos Elétricos - New Topology of Bidirectional Unified Converter for Traction and Battery Charging Systems in Electric. <http://delfimpedrosa.pt/electronics.html>.
- 2 Pedrosa, Delfim. 2009. Development of a 40 kW power converter. Development of a 40 kW power converter to drive a permanent magnet synchronous motor (PMSM). The converter was developed within the scope of my master dissertation, entitled "Desenvolvimento de um Veículo Eléctrico - Development of an Electric Vehicle". It also developed the analogue and digital signal conditioning circuits and respective printed circuit boards.. <http://delfimpedrosa.pt/electronics.html>.

Activities**Oral presentation**

	Presentation title	Event name Host (Event location)
2021/06/30	Percurso Profissional: do MIEEIC à Investigação [Professional Career: from MIEEIC to Research]	X SIMPÓSIO DO GRUPO DE ELETRÓNICA DE POTÊNCIA E ENERGIA
2020/07/20	Soluções de Eletrónica de Potência para a Conversão de Veículos Convencionais em Veículos Elétricos [Power Electronics Solutions for the Conversion of Conventional Vehicles into Electric Vehicles]	IX SIMPÓSIO DO GRUPO DE ELETRÓNICA DE POTÊNCIA E ENERGIA (Guimarães, Portugal)
2016/09/15	Model Predictive Control of an On-Board Fast Battery Charger for Electric Mobility Applications	12th Portuguese Conference on Automatic Control - CONTROLO 2016 (Guimarães, Portugal)
2016/06/15	Veículo Elétrico: O Desafio [Electric Vehicle: The Challenge]	V SIMPÓSIO DO GRUPO DE ELETRÓNICA DE POTÊNCIA E ENERGIA (Guimarães, Portugal)
2015/09/15	Model Predictive Current Control of a Slow Battery Charger for Electric Mobility Applications	12th Portuguese Conference on Automatic Control - CONTROLO 2016 (Guimarães, Portugal)
2014/10/28	A Case Study on the Conversion of an Internal Combustion Engine Vehicle into an Electric Vehicle	11th Vehicle Power and Propulsion Conference - VPPC'2014 (Coimbra, Portugal)
2012/07/12	Development of a Digital Controller with Data Acquisition to a Test Bench for Electric Motors	Seminário Anual de Automação, Eletrónica Industrial e Instrumentação 2012 (Guimarães, Portugal)
2012/07/12	Conversion of an Internal Combustion Engine Vehicle into an Electric Vehicle	Seminário Anual de Automação, Eletrónica Industrial e Instrumentação 2012 (Guimarães, Portugal)
2012/06/28	Conversão de um Veículo de Combustão em Veículo Elétrico - CEPIUM [Conversion of an Internal Combustion Engine Vehicle into an Electric Vehicle - CEPIUM]	I SIMPÓSIO DO GRUPO DE ELETRÓNICA DE POTÊNCIA E ENERGIA (Guimarães, Portugal)
2012/03/07	Conversão de um VW Polo em Elétrico [Conversion of a VW Polo into an Electric Vehicle]	Criatividade e Mobilidade (Guimarães, Portugal)
2011/11/27	Alteração de um Carro para Homologação Como Elétrico - CEPIUM [Alteration of a Car for Homologation as Electric Vehicle - CEPIUM]	1.as Jornadas da Mobilidade Elétrica (Guimarães, Portugal)

Supervision

	Thesis Title Role	Degree Subject (Type) Institution / Organization
2020 - Current	Desenvolvimento de um Sistema de Carregamento Interno Bidirecional para Veículos Elétricos [Development of a Bidirectional On-board Charging System for Electric Vehicles] Co-supervisor	(Master)
2019 - Current	Traction and Charging Systems for an Electric Motorcycle Co-supervisor	(Master)
2019 - 2020	Desenvolvimento de um conversor de Eletrónica de Potência CC-CC [Development of a DC-DC Power Electronics Converter] Co-supervisor	(Other)
2019 - 2020	Desenvolvimento de Eletrónica de Potência para a Conversão de uma Bicicleta Convencional em Bicicleta Elétrica [Development of Power Electronics for the Conversion of a Conventional Bicycle into an Electric Bicycle] Co-supervisor	(Other)
2019/01/01 - 2019/07/10	Máquina CNC Router [CNC Router Machine] Supervisor	Engenharia Electrotécnica e de Computadores (Degree) Instituto Politécnico do Cávado e do Ave, Portugal

Event organisation

	Event name Type of event (Role)	Institution / Organization
2020 - Current	Workshops Chair 3rd European RoboCupJunior 2022 (2020) Workshop (Member of the Organising Committee)	3rd European RoboCupJunior 2022, Portugal
2020/12/03 - 2020/12/03	Workshops Chair EAI SESC 2020 - 2nd EAI International Conference on Sustainable Energy for Smart Cities (2020 - 2020) Conference (Co-organisor)	
2020/07/20 - 2020/07/20	Participation in the organization of the "IX Simpósio do Grupo de Eletrónica de Potência e Energia" (2020/07/20 - 2020/07/20)	

Symposium (Co-organisor)

2016/06/15 - 2016/06/15	Participation in the organization of the "V Simpósio do Grupo de Eletrónica de Potência e Energia" (2016/06/15 - 2016/06/15)
	Symposium
2015/07/16 - 2015/07/16	Participation in the organization of the "IV Simpósio do Grupo de Eletrónica de Potência e Energia" (2015/07/16 - 2015/07/16)
	Symposium
2014/07/03 - 2014/07/03	Participation in the organization of the "III Simpósio do Grupo de Eletrónica de Potência e Energia" (2014/07/03 - 2014/07/03)
	Symposium (Co-organisor)
2013 - 2013	Participation in the organization of the "II Simpósio do Grupo de Eletrónica de Potência e Energia" (2013/06/26 - 2013/06/26)
	Symposium (Co-organisor)
2012 - 2012	Participation in the organization of the "I Simpósio do Grupo de Eletrónica de Potência e Energia" (2012/06/28 - 2012/06/28)
	Symposium (Co-organisor)

Event participation

	Activity description Type of event	Event name Institution / Organization
2019/03/07 - 2019/03/09	Volunteer at 13th edition of RoboParty	RoboParty
2018/03/22 - 2018/03/24	Volunteer at 12th edition of RoboParty	RoboParty
2017/03/02 - 2017/03/04	Volunteer at 11th edition of RoboParty	RoboParty
2016/06/30 - 2016/07/02	Volunteer at RoboCamp (Leipzig, Germany)	RoboCup
	Festival	

2016/03/17 - 2016/03/19	Volunteer at 10th edition of RoboParty	RoboParty
2015/03/19 - 2015/03/21	Volunteer at 9th edition of RoboParty	RoboParty
2014/09/19 - 2014/09/21	IV edição da Feira Afonsina [IV edition of the Afonsina Fair] Other	Câmara Municipal de Guimarães, Portugal
2008 - 2008	Collaborator at Interactive Science and Technology Exhibition Exhibition	Mostra Interativa de Ciência e Tecnologia
2006 - 2006	Volunteer at 6th edition of the National Robotics Festival Festival	6ª edição do Festival Nacional de Robótica

Jury of academic degree

	Theme Role	Candidate name (Type of degree) Institution / Organization
2021/06/21	Desenvolvimento dos Conversores de Eletrónica de Potência para a Interface com a Rede Elétrica de um Sistema de Transferência de Energia Sem Fios para Mobilidade Elétrica (Thesis) Arguer	Carlos Miguel Gomes Mendes (Master) Universidade do Minho Centro ALGORITMI, Portugal
2021/06/21	Carregador de Baterias Para Veículos Elétricos com Modo de Operação Vehicle-to-Vehicle (V2V) (Thesis) Arguer	Carlos Filipe Vilaça Martins (Master) Universidade do Minho Centro ALGORITMI, Portugal
2021/02/24	Sistema de Sensorização Móvel Aplicado ao Ciclismo (Mobile Sensing System Applied to Cycling) (Thesis) Arguer	Miguel Martins (Master) Universidade do Minho Escola de Engenharia, Portugal
2020/09/29	Desenvolvimento de uma bancada de ensaios para a otimização da operação de um gerador para micro eólica [Development of a test bench to optimize the operation of a generator for micro wind] (Thesis) Arguer	João Queirós (Master) Universidade do Minho Departamento de Engenharia Mecânica, Portugal

Conference scientific committee

	Conference title	Conference host
2020 - Current	A Reviewer of the International Conference on Smart Energy Systems and Technologies	

2019 - Current	A Reviewer of the International Conference on Sustainable Energy for Smart Cities	
2020 - 2020	A Reviewer of the International Conference on Compatibility, Power Electronics and Power Engineering	Setubal, Portugal

Course / Discipline taught

	Academic session	Degree Subject (Type)	Institution / Organization
	2019/03/01 - 2019/09/30	Power Electronics (Licenciatura)	Instituto Politécnico do Cávado e do Ave Escola Superior de Tecnologia, Portugal
	2018/10/01 - 2019/02/28	Advanced Automation (Mestrado)	Instituto Politécnico do Cávado e do Ave Escola Superior de Tecnologia, Portugal
	2017/03/01 - 2017/08/31	Power Electronics (Licenciatura)	Instituto Politécnico do Cávado e do Ave Escola Superior de Tecnologia, Portugal
	2016/09/01 - 2017/02/28	Electronics (Licenciatura)	Universidade do Minho Departamento de Física, Portugal
	2016/09/01 - 2017/02/28	Engineering and Electrotechnics (Licenciatura)	Universidade do Minho, Portugal

Journal scientific committee

	Journal title (ISSN)	Publisher
2021 - Current	A Reviewer of the Journal: MDPI Sustainability	
2021 - Current	A Reviewer of the Journal: MDPI Applied Sciences	
2020/01 - Current	Journal Topic Editor: MDPI Electronics	
2020/01 - Current	Journal Topic Editor: MDPI Energies	
2020 - Current	A Reviewer of the Journal: World Electric Vehicle Journal	
2019 - Current	A Reviewer of the Journal: EAI Endorsed Transactions on Energy Web	
2019 - Current	A Reviewer of the Journal: MDPI Energies	

Distinctions

Award

2020	Best paper award on 2nd EAI International Conference on Sustainable Energy for Smart Cities EAI International Conference on Sustainable Energy for Smart Cities, Portugal
2015	TOP20 in the Texas Instruments Innovation Challenge: Europe Analog Design Contest 2015 Texas Instruments Inc, United States