CURRICULUM VITAE ABREVIADO (CVA)

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

Part A. PERSONAL INFORMATION

First name	María Reyes		
Family name	Sánchez Herrera		
Gender (*)	Female	Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail	reyes.sanchez@die.uhu.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)		0000-0003-3099-7262	

(*) Mandatory

A.1. Current position

Position	Associated Professor		
Initial date	10/11/2010		
Institution	University of Huelva		
Department/Center	Electrical Engineering	Engineering High Technical Shool	
Country	Spain	Teleph. number	959217589
Key words	Smartgrids, electric power quality, distributed generation, renewable energy		

A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
1995-96	Researcher/National institute of aerospace technology/Spain
1996	Assistant/Andersen Consulting/Spain
1996-2001	Process metallurgist/Atlantic Copper/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD	University of Huelva/Spain, Award	2007
Licensed	Industrial Engineering/Spain	1995
Graduated	Business/Spain	2000

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

- Six-year terms: 3 (2002-2007, 2008-2013, 2014-2019).
- Number of articles indexed with relative quality index in scientific journals: 37
- Number of articles in Q1/Q2: 25
- Total appointments: 1189 (scopus), 1851 (google scholar)
- h index: 15 (scopus), 19 (google scholar). i10 index: 34

I am Industrial Engineering PhD with Extraordinary Award and Business Graduated. Before engaging with the University of Huelva I was almost a year at the National Institute of Aerospace Technology. Then, after a short period of time at Andersen Consulting, I worked as a Process Control Metallurgist at Atlantic Copper for 5 years. I started working at the University of Huelva in 2001 and in 2010 I got the associated professor level in the area of Electrical Engineering.

I am the coordinator of the TEP964 Applied Multidisciplinary Engineering Group, in the lines of integration of renewable energies into the electrical grid, microgrids and industrial IoT. In addition, I am promoter of Nebulous Systems (https://www.nebsyst.com), a technology-based company from the University of Huelva. I have 37 impact publications, 35 of them with JCR index, 52 contributions to international conferences and 13 national, 3 Spanish patents (2 of them PCT), 4 utility models, three of which are being commercially exploited, and two intellectual inventions. I have coordinated /coordinate 4 research contracts with private companies and have participated in 20 research projects at regional, national and international levels in different disciplines, among which the monitoring/control of electrical microgrids stands out. I am / have been the main researcher in 7 of those 20. Among them, the international H2020 Reffect Africa project (I am researcher), the POPTEC GREENER (I am researcher), HEI4S3-RM (I am coordinator), and the National PID2020-117828RB-I00 (I am coordinator), can be highlighted. I have directed 1 PhD Theses and I am currently directing other 4, two of which will be finished in months.

I am also a regular participant in the scientific dissemination activities organized by my University, such as Science Week, Researchers' Night, YouTube Science or Research Centres Month, among others. From all these activities, I would like to highlight those proposed to promote STEM degrees among pre-university students.

With respect to management, I was Secretary of the Higher Technical School of Engineering of my University for 4 years and Deputy Director for another 6 years. I have coordinated different degrees and the Industrial Engineering Master during several year. In addition, I have been Director of Transfer and Campus of Excellence during almost 5 years and currently I am Vice-Rector of Knowledge Transfer and Territorial Deployment at the University of Huelva.

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications.

1. Jesus Clavijo-Camacho, Gabriel Gomez-Ruiz, Reyes Sanchez-Herrera and Nicolás Magro, Remote Real-Time Monitoring and Control of Small Wind Turbines Using Open-Source Hardware and Software, Appl. Sci., 15.12 (2025) 6887; Q1 https://doi.org/10.3390/app15126887
2. José Antonio Hernández-Torres, Daniel Sánchez Lozano, Reyes Sánchez-Herrera, David Vera Candeas, Juan P. Torreglosa. Integrated Multi-Criteria Decision-Making Approach for Power Generation Technology Selection in Sustainable Energy Systems. Renewable Energy, Available online (2025) 122481. Q1. https://doi.org/10.1016/j.renene.2025.122481
3. Nicolás Magro, Jesús R. Vázquez and Reyes Sánchez-Herrera. Design and Practical Implementation of Microgrid Inverter Control Using TMS320F28335 Microcontroller with Improvement in Electrical Power Quality. Electronics 14.2 (2025) 319. Q2 https://doi.org/10.3390/electronics14020319.
4. Jesus Clavijo-Camacho, Francisco J. Ruiz-Rodríguez, Reyes Sánchez-Herrera and Alvaro C. Alamo, Advanced Distribution System Optimization: Utilizing Flexible Power Buses and Network Reconfiguration, Appl. Sci. 14.22 (2024) 10635. Q1 https://doi.org/10.3390/app142210635
5. José Antonio Hernandez-Torres, Juan P. Torreglosa, Reyes Sanchez-Herrera, Aldo Bischi and Andrea Baccioli, Development of an Optimized Non-Linear Model for Precise Dew Point Estimation in Variable Environmental Conditions, Appl. Sci.14.22 (2024) 10508. Q1. https://doi.org/10.3390/app142210508.
6. Gabriel Gómez-Ruiz, Reyes Sánchez-Herrera, Jesús Clavijo-Camacho, Juan M. Cano, Francisco J. Ruiz-Rodríguez and José M. Andújar, A Versatile Platform for PV System Integration into Microgrids, Electronics 13.20 (2024) 3995. Q2. https://doi.org/10.3390/electronics13203995.
7. Gabriel Gómez-Ruiz, Reyes Sánchez-Herrera,Aránzazu D. Martin and José M. Andújar. Optimum System for Diagnosing Power Quality in Electrical Microgrids. Appl. Sci. 14.17 (2024) 7666. Q1. https://doi.org/10.3390/app14177666.
8. Jesus Clavijo-Camacho, Gabriel Gomez-Ruiz , Francisco J. Ruiz-Rodriguez , Reyes Sanchez-Herrera, A modular IGBT power stack − based and open hardware framework

for small wind turbines assessment Sustainable Energy Technologies and Assessments 66 (2024) 103804. Q1. https://doi.org/10.1016/j.seta.2024.103804.

9. Gabriel Gomez-Ruiz, Reyes Sanchez-Herrera, Jose M Andujar, Juan Luis Rubio Sanchez. Simulation-Based Education Tool for Thermostatically Controlled Loads Understand. Sustainability 19, 999 (2024). Q2. https://doi.org/10.3390/su16030999.
10. Reyes Sánchez-Herrera, Jesús Clavijo-Camacho, Gabriel Gómez-Ruiz and Jesús R. Vázquez, Identification of Both Distortion and Imbalance Sources in Electrical Installations: A Comparative Assessment, Energies 17.11 (2024) 2536; Q3. https://doi.org/10.3390/en17112536.
11. Sánchez-Herrera, Reyes, Márquez, Marco y Torre, Luis de la; Secure and Private Internet of Things for Industry, Training, and Homes; IEEE Industrial Electronics Magazine 17.3 (2023) 14-21, Q1, 10.1109/MIE.2022.3232896
12. Toledano, N., Gessa, A. and Sánchez-Herrera, R.; Rethinking the Resources and Responsibilities of University Spin-Offs: Critical Factors in Times of Global Crisis, Sustainability 14.19 (2022) 12628, Q2; https://doi.org/10.3390/su141912628
13. Cano, J.M., Sánchez-Herrera, R., Martin, A.D., Vazquez, J.R., Complete and versatile remote controller for PV systems, International Journal of Electrical Power & Energy Systems, 142.B (2022), 108324. Q1. https://doi.org/10.1016/j.ijepes.2022.108324
14. Sánchez-Herrera, Reyes; Andujar, Jose M.; Marquez, Marco; Mejias, Andrés and Gomez-Ruiz, Gabriel, Self-tuning PLL. A new, easy, fast and highly efficient phase-locked loop algorithm, IEEE Transaction on Energy Conversion 2022, 37(2), 1164 – 1175, Q1, doi: 10.1109/TEC.2021.3126807.
15. R. Sanchez-Herrera, A. Mejías, M.A. Márquez, J.M. Andújar, A fully integrated open solution for the remote operation of pilot plants, IEEE transactions on Industrial Informatics 15.7 (2019) 3943 – 3951. Q1, doi: 10.1109/TII.2018.2889135
16. Mejías, R.S. Herrera, M.A. Márquez, A.J. Calderón, I. González and J.M. Andújar, Easy Handling of Sensors and Actuators over TCP/IP Networks by Open Source Hardware/Software, Sensors 17.1 (2017) 1-23. Q1, doi: https://doi.org/10.3390/s17010094
17. D. Martín, R. S. Herrera, J. R. Vázquez, P. Crolla, G. M. Burt, Unbalance and Harmonic Distortion Assessment in an Experimental Distribution Network, electric Power Systems Research 127 (2015) 271-279. Q2, doi: https://doi.org/10.1016/j.epsr.2015.06.005
18. R.S. Herrera and P. Salmerón, Instantaneous Reactive Power Theory: a Reference in the Non Linear Loads Compensation, IEEE Trans. on Ind. Electronic 56.6 (2009) 2015-2022. Q1, doi: 10.1109/TIE.2009.2014749
19. R.S. Herrera, P. Salmerón, H. Kim, Instantaneous reactive power theory applied to active power filter compensation. Different aproaches assessment and experimental results, IEEE Transaction on Industrial Electronic 55 (2008) 184-196. Q1, doi: 10.1109/TIE.2007.905959

C.3. Research projects.

1. 0314_GREENER_5_E. Fortalecimiento del mercado laboral de la industria auxiliar para el impulso del sector de la Energía Verde en el Territorio AAA. Funding: Cooperación Transfronteriza Interreg VI A España-Portugal (POCTEP). Duration: 01/01/2024 a 30/06/2026. Budget: 740.221,62 € (123.625,51 € UHU). Contribution: researcher.
2. CCMM_00024. Experiencia piloto de aprovechamiento de corrientes mareales en la costa de Huelva (TidUtil). Funding: Unión Europea fondos Next Generation, Consejería de Universidad, Investigación e Innovación. Duration: 01/01/2023-31/03/2026. Budget: 249780€. Contribution: **main researcher**.
3. AT21_00137. Fomento de la investigación, la innovación y la internacionalización en Huelva y su entorno. Entidad/es financiadora/s: PAIDI. Duration: 01/03/2022-28/02/2023. Budget: 82050 €. Contribution: **main researcher**.
4. HEI4S3-RM Building Ecosystem Integration Labs at HEI to Foster Smart Specialization and Innovation on Sustainable Raw Materials. Funding: Horizon 2020. Call: EIT HEI. Duranción: 2022/07/01 – 2024/06/30. Budget Huelva: 129942,25 €. Contribution: **main researcher**.

5. UHU-202023. Desarrollo de un sistema basado en Industrial IoT para el análisis de la potencia eléctrica en sistemas de potencia. Funding: Comisión Europea (UE); Universidad de Huelva (Q7150008F); Junta de Andalucía (S4111001F). Duration: 01/01/2022-30/06/2023. Budget: 32.653,06 € Contribution: **main researcher**.
6. REFFECT-AFRICA. Renewable energies for africa: effective valorization of agri-food wastes. Funding: Horizon 2020. Call: H2020-LC-GD-2020. Duranción: 01/11/2021-31/10/2026. Budget Huelva: 271467,5 €. Contribution: researcher.
7. PID2020-117828RB-I00. Title: Sistema de control integral para optimizar la demanda energética de microrredes eléctricas (SOSGED). Funding: Plan Estatal de Investigación Científica y Técnica y de Innovación 2017-2020. Duration: 01/09/2021-31/08/2024. Budget: 89540 €. Contribution: **main researcher**.
8. A1122062E0_ITEAZUL. CEIMAR-UCA 2019. Proyecto Singular de Actuaciones de Transferencia del Conocimiento ITEAzul "CEI MAR. Campus de Excelencia Internacional. Innovación y Transferencia para la Economía Azul"- Funding: Unión Europea en el marco del Programa Operativo FEDER 2014-2020 y por la Consejería de Universidad, Investigación e Innovación de la Junta de Andalucía. Duration: 09/01/2020 – 30/06/2023. Budget: 112500 €. Contribution: **main research**.
9. 07-2018. Creación de una Red de Expertos en Energías Marinas en la zona AndalucíaAlgarve (REEMAA). Entidad/es financiadora/s: Sociedad para el fomento de la cooperación Transfronteriza en la eurorregión Alentejo-Algarve-Andalucía. Duration: 01/09/2018-31/07/2019. Budget: 4906 €. Contribution: **main researcher**.

C.4. Contracts, technological or transfer merits,

Contracts.

1. Title: Diseño y construcción del sistema de refrigeración para un recipiente de poliestireno expandido. Type: 68/83. Company: Inversiones Plásticas Onubenses, SLU (POLISUR 2000 SLU) Duration 15/10/2024 – 14/04/2025. Budget: 4604,05 €. Contribution: main researcher.
2. Title: Estudio de viabilidad de la implementación de almacenamiento de energía en una planta de generación de electricidad con biomasa. Type: 68/83. Company: ENCE Energía y Celulosa S.A. Duration 21/1/2022 – 30/09/2022. Budget: 4448,53 €. Contribution: main researcher.

Patents.

1. Invention/patent: Sistema y método para el acceso a redes de datos seguras. Number of application: U202032575 - PCT/ES2020/070643. Grant date: 23-03-2021. Operating contract with Nebulous Systems.
2. Invention/patent: Sistema optimizador de demanda energética de microrredes eléctricas. Number of application: P202230562/U202400247. Priority country: España.
3. Invention/patent: Sistema y método de monitorización de la calidad de onda en microrredes eléctricas. Number of application: P202330379. Priority country: España.
4. Invention/patent: Sistema robotizado en asistencia para salvamento marítimo-costero. Number of application: P201430450 - PCT/ES2015/000040. Grant date: 20-05-2016.
5. Invention/patent: Inversor monofásico de salida programable adaptada a su aplicación e independiente a su entrada. Number of application: U201931985. Priority country: España. Grant date: 20-08-2020.
6. Invention/patent: OPRERES v.0: Optimal Reconfiguration of Radial Electrical Systems. Number of application: H-72-24, 202499908203296. Priority country: España.