CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

First name	Jose Maria		
Family name	Sanchez Amaya		
Gender (*)	Male		
Open Researcher and Contributor ID (ORCID)		0000-0002-4575-5103	

A.1. Current position

Position	University Professor (Catedrático de Universidad)
Initial date	July 2025
Institution	University of Cadiz
Department/Center	Dept: Materials Science and Metallurgical Engineering and Inorganic Chemistry / Center: School of Engineering, SPAIN
Key words	Hybrid Laser Welding, Laser welding, Microstructure, Material properties, Steel, aluminium and titanium alloys, Industrial welding innovations

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

Academic Background:

Degree in Chemistry (1994-1999, 8.08/10). MSc Thesis (DEA) (1999-2001). Doctoral Thesis with FPU scholarship of the Ministry of Education, Culture and Sports (2002-2006). Marie Curie Fellowship of the European Union for a 3-month stay in Manchester (2003). Extraordinary Doctorate Award in Chemistry, UCA (2006). Selected as one of the 100 best doctoral students in Spain by the National Agency for Evaluation and Prospective (ANEP) (2005). Research Award for the best scientific work published in 2009 at UCA.

Summary of Scientific Production:

- H Index: 26. Total Citations (Scopus, Nov 2025): 2122. Scopus Author ID: 6506141012; ORCID: 0000-0002-4575-5103. Web of Science ResearcherID: L-3317-2017. Dialnet: 250571.
- Publication of 58 scientific articles indexed in “Scimago Journal & Country Rank” (SJR: 37 Q1; 13 Q2; 4 Q3; 4 Q4), among them, 56 scientific articles are indexed in JCR journals (included in “Science Citation Index”): JCR: 30 Q1, 14 Q2, 7 Q3, 5 Q4. Publications in the first decile (D1): 12. First author of 19 articles, 15 of them indexed (JCR). “Corresponding author” of 24 JCR publications. 14 JCR publications in 2021-2025 (7 Q1, 6 Q2, 1 Q3). 15 JCR publications with international experts (international collaborations). Publication of 1 book and 2 book chapters (one of them, in “Handbook of Laser Welding Technologies”). 22 publications in congresses proceedings (with ISBN). 83 contributions to scientific congresses.

Leadership: Research projects and contracts:

- Leader in University of Cadiz of Hybrid Laser Arc Welding process.
- Coordinator/responsible of Scientific-Technical equipment: Advanced Center of laser welding (CASOL) in UCA. Global Budget: 957.426,42 €. Reference: EQC2019-006235-P.
- Coordinator of 3 Research projects (74737€), coordinator of 5 Research Contracts with companies (budget: 166060€). Participation as researcher in 7 Research Projects (budget: 455529 €). Participation as member of working group in 9 Research Projects.
- Participation as researcher in 13 contracts of technological innovation with companies (budget: 1120448 €). Leader of Research line (Laser Welding) of the Joint Innovation Unit (UIC) between UCA and NAVANTIA.

Main Research Lines:

Member of the TEP231 research group from 1999. From the beginning of my scientific career, working on projects aimed at solving problems of the industry and society, facing real challenges demanded by our surrounded companies and social institutions. The objective of most projects developed is related to reduction of environmental impact. Main research lines:

- Current research line: Development of advanced joining technologies. Laser welding of metallic alloys with industrial applications, as aluminium, titanium and naval steel alloys. It includes hybrid laser welding, autogenous laser welding, laser surface processing, and laser

hardening. This is currently my main research line, being the responsible researcher of the group for this topic.
- Previous research lines: Corrosion and Protection investigation. Assessment of corrosion activity and corrosion mechanisms by electrochemical techniques. Development and evaluation of environmentally friendly surface treatments for corrosion protection.

Contribution to the formation of researchers and management positions:

- Technical evaluator, supervisor, and coordinator of Postdoctoral Researcher of UCA Talent Attraction Program – ASECTI program (Dra. Mariane Chludzinski). 2018-2022.
- Supervisor of 3 PhDs on joining technologies: 1st defended in 2016 (Dra. M.R. Amaya-Vazquez, about Laser Welding of light alloys), 2nd defended in 2022 (Dra. C. Churiaque, about Hybrid Laser Welding in shipbuilding), 3rd defended in 2023 (Ms. M. Ortega, about Adhesives in naval industry).
- Supervisor of 32 graduate research-type projects from 2016: Master projects (TFMs) and degree projects (TFGs) at School of Engineering of UCA. Professional supervisor of working training practices, and tutor of research collaborating students at UCA.
- Member of the academic commission of doctorate program in Manufacturing, Materials and Environmental Engineering (8212) of UCA. March 2021 -up to date.
- Coordinator of Master in Industrial Engineering at UCA. From Nov 2020 - Sept 2025. Coordinator of Degree in Engineering in Industrial Technologies at UCA. Nov 2020 - July 2021.

Research International Leadership:

- Organization and Chairman of international congresses.
- Scientific reviewer of articles in JCR journals. Guest Editor of Journal "Metals" (JCR T1) for 2 Special Issues: "Laser Welding of Industrial Metal Alloys" and "Laser Welding Innovations".

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

C.1. Publications (recent publications)

1. J. M. Sánchez-Amaya, M. Chludzinski, A. Sambruno, A. Gómez-Parra. 2025. Understanding the influence of different HLAW parameters to increase the welding speed of 8 mm thick structural steel, Journal of Materials Research and Technology, Volume 39, Pages 7217-7230. https://doi.org/10.1016/ j.jmrt.2025.11.058. JCR Q1.
2. J. M. Sánchez-Amaya, A. Gómez-Parra, C. Churiaque, S. R. Fernández-Vidal, and A. J. Gámez. 2023. Fatigue behavior of 8mm thick steel butt joints performed with hybrid laser arc welding. J. Laser Appl. 2023, Vol.35, Issue 4, pp. 1-10. JCR Q3
3. M. Chludzinski, R.E. dos Santos, M. Ortega-Iguña, C. Churiaque, M. Porrúa-Lara, J.M. Sánchez-Amaya. 2022. Low-Energy Pulsed-Laser Welding as a Root Pass in a GMAW Joint: An Investigation on the Microstructure and Mechanical Properties. Materials, 15, 7741.JCR Q1
4. M. Chludzinski, R. E. dos Santos, C. Churiaque, M. Ortega-Iguña, J.M. Sánchez-Amaya. 2022. Effect of process parameters on pulsed laser welding of AA5083 alloy using response surface methodology and pulse shape variation. Int J Adv Manuf Tech, 120, Issue 7-8, 4635 - 4646. (JCR Q2, 4 cites)
5. A. Hammad, Y. Abdel-Nasser, C. Churiaque, J. M. Sánchez-Amaya. 2021. Rationally-Based Structural Design of Welded Plate Panels. Metals, Volume: 11, 1381; Pages 1-17. JCR Q2
6. C. Churiaque, J.M Sánchez-Amaya, Ö. Üstündağ, M. Porrúa-Lara, A. Gumenyuk, M. Rethmeier. 2021. Improvements of hybrid laser arc welding for shipbuilding T-joints with 2F position of 8 mm thick steel. Optics and Laser Technology. 143,107284. (JCR Q1, 13 cites).
7. M. Chludzinski, R. E. Dos Santos, C. Churiaque, M. Ortega-Iguña, J.M. Sánchez-Amaya. 2021. Pulsed laser welding applied to metallic materials—a material approach. Metals 11(4), 640. (JCR Q2, 15 cites).
8. C. Churiaque, J.M Sánchez-Amaya, M. Porrúa-Lara, A. Gumenyuk and M. Rethmeier. 2021 The effects of HLAW parameters for one side t-joints in 15 mm thickness naval Steel. Metals. 11(4), 600. (JCR Q2, 2 cites).
9. M. Chludzinski, R.E. dos Santos, C. Churiaque, S.R. Fernández-Vidal, M. Ortega-Iguña, J.M. Sánchez-Amaya. 2021. Pulsed laser butt welding of AISI 1005 steel thin plates. Optics and Laser Technology. 134,106583. (JCR Q1, 18 cites).
10. A. Hammad, C. Churiaque, J. M. Sánchez-Amaya, Y. Abdel-Nasser. 2021. Experimental and numerical investigation of hybrid laser arc welding process and the influence of welding sequence on the manufacture of stiffened flat panels. Journal of Manufacturing Processes 61, pp. 527-538. (JCR Q2, 35 cites).

11. C. Churiaque, M. Chludzinski, M. Porrua-Lara, A. Dominguez-Abecia, F. Abad-Fraga, J. M. Sánchez-Amaya. 2019. Laser Hybrid Butt Welding of Large Thickness Naval Steel. Metals. Volume: 9, Issue: 100, pp 2-30. (JCR Q1, 28 cites).

C.2. Congresses (recent contributions)

1. Á. Artero-Real, J.M. Sanchez-Amaya, J. Justo, J. Cañas. Comparativa de macrografías y propiedades mecánicas a través de diferentes configuraciones de parámetros en soldadura híbrida arco-láser LAHW. 24th Technical Sessions on Welding and Joining Technologies. Oral. Sevilla, España. June 2025.
2. A. Gómez-Parra, A. Sambruno, A. Rodríguez-Pericacho, J.M. Sanchez-Amaya. Metodología para el cálculo computacional de ensayos de fatiga de elementos unidos por soldadura híbrida arco láser. 24th Technical Sessions on Welding and Joining Technologies. Oral. Sevilla, España. June 2025.
3. J.M. Sanchez-Amaya, A. Sambruno, A. Gómez-Parra. Validación de procedimiento de soldadura híbrida láser arco a alta velocidad de acero en posición 1G. 24th Technical Sessions on Welding and Joining Technologies. Oral. Sevilla, España. June 2025.
4. J. M. Sánchez-Amaya, A. Gómez-Parra, C. Churiaque, S.R. Fernández-Vidal, A. J. Gámez. Fatigue behavior of 8 mm thick steel butt joints performed with hybrid laser arc welding. ICALEO – 42nd International congress on Applications of Lasers and Electro-optics. Oral presentation by J. M. Sánchez-Amaya. Contribution MAC 202. Chicago,IL,USA. October 2023.
5. M. Chludzinski, R.E. dos Santos, M. Ortega, C. Churiaque, J. M. Sánchez-Amaya. Mitigación de grietas en soldadura laser de aleación de aluminio AA5083 H111 mediante variación del perfil de pulso aplicado en láser de Nd:YAG. 23rd Technical Conference on Welding and Joining Technologies -CESOL. Irún, Spain. March 2023
6. Ö. Üstündağ*, A. Gumenyuk, M. Rethmeier, C. Churiaque, J. M. Sánchez-Amaya. High-power hybrid laser arc welding of thick materials with electromagnetic weld pool support. 23rd Technical Conference on Welding and Joining Technologies -CESOL. Irún, Spain. March 2023
7. C. Churiaque, Ö. Üstündağ, J. M. Sánchez-Amaya*, M. Chludzinski, M. Porrua, A. Gumenyuk, M. Rethmeier. Influence of parameters of hybrid laser arc welding process on T joints of naval steel. 23rd Technical Conference on Welding and Joining Technologies -CESOL. Oral presentation by J. M. Sánchez-Amaya. Irún, Spain. March 2023.
8. C. Churiaque, J. M. Sánchez-Amaya, Ö. Üstündağ, A. Gumenyuk, M. Rethmeier. One side and double sided HLAW on butt T-joints 15 mm thickness of EH36 steel. AJP 2021 - 2nd International Conference on Advanced Joining Processes. Oral presentation by J. M. Sánchez-Amaya. Contribution AJP21_87. Sintra, Portugal. 21-22 October 2021.
9. M. Chludzinski, R.E. Santos, C. Churiaque, M. Ortega-Iguña, J.M. Sánchez-Amaya. Microstructure and mechanical properties of low carbon steel pulsed laser welded. AJP 2021 - 2nd International Conference on Advanced Joining Processes. Oral presentation by J. M. Sánchez-Amaya. Contribution AJP21_86. Sintra, Portugal. 21-22 October 2021.
10. C. Churiaque, M. Chludzinski, R. E. dos Santos, M. Porrua-Lara, F. Abad-Fraga, and J.M. Sánchez Amaya. Laser Hybrid Welding in Shipbuilding. Marine Design 2020 International Congress (RINA). Oral, Contribution S5.T-13. Puerto Real, Cádiz / Spain. 15-16 January 2020.
11. A. J. Sánchez-Sotano, M. Ramírez, C. Churiaque, F. Abad, J.M. Sánchez Amaya, J. Salguero. Análisis del rendimiento de una línea de fabricación de unidades planas incorporando tecnologías de soldadura láser híbrida. VII Congreso Nacional de I+D en Defensa y Seguridad, 2019.Oral, ref163, p 267. San Fernando, Cádiz / Spain. 19-21 Nov 2019.
12. C. Churiaque, M.R. Amaya-Vazquez, F.J. Botana, J.J Alba-Galvín, J. M. Sanchez-Amaya. Simulation and experimental validation of laser welding under conduction mode of Ti6Al4V alloy. Euromat 2015 - European Congress and Exhibition on Advanced Materials and Processes (FEMS). Warsaw, Poland. 20-24 September 2015.

C.3. Research projects and contracts

1. Proyecto SoldWind - Hybrid laser arc welding of 20 mm thick steel for wind towers. Contract UCA-GRI Renewable Industries, S.L. Project responsible (IP): J.M. Sánchez Amaya. 2024. 12039 €
2. Análisis experimental de adhesivos para favorecer la economía azul en la industria offshore (BlueOffshore). Research Project developed between Universidad de Cádiz and Dragados

Offshore S.A. funded by Campus De Excelencia Internacional Del Mar - CEI·MAR. Project responsible (IP): J.M. Sánchez Amaya. Budget: 13900€. 01/02/2021-31/01/2022.
3. Estudio experimental de adhesivos aplicados en estructuras metálicas (Admetal). Research project funded by Program for the Promotion and Impulse of Research and Transfer of the University of Cadiz (Ref: IRTP02_UCA). Project responsible (IP): J.M. Sánchez Amaya. Budget: 15000€. 01/01/2021-31/12/2023.
4. Centro Avanzado de Soldadura Laser (CASOL). Proyecto de adquisición de equipamiento Científico-Técnico. Funded by Ministerio de Ciencia, Innovación y Universidades and European Union (FEDER). Project responsible (IP): J.M. Sánchez Amaya. Universidad de Cádiz. Global Budget: 957.426,42 €. Reference: EQC2019-006235-P.
5. UNIDAD DE INNOVACIÓN CONJUNTA NAVANTIA-UCA. Collaborative project between Navantia and UCA. 2018-2021. UCA responsible (IP) for Laser Welding research line.
6. Optimización y viabilidad industrial del proceso de preparación de capas de conversión basadas en Cerio sobre aleaciones de aluminio de uso aeroespacial (VINCE). Ministerio de Economía y Competitividad. 2015-2018. 58685 €. Ref: MAT2014-60857-R. Researcher.
7. Soldadura Laser de Aleaciones de Titanio de Interes Aeronautico (SOLDATIA). Consejería de Innovación, Ciencia y Empresa - Junta de Andalucía. 2011-2016. 220439 €. Ref: TEP-6180. Participation: researcher.
8. Diseño y Evaluación de Métodos Avanzados de Procesado Láser para la Fabricación con Titanio y Aluminio (DELATIAL). Ministerio de Educación y Ciencia. 2009-2011. 121000 €. Ref: MAT2008-06882-C04-02. Participation: researcher.
9. Microbiologically induced corrosion of steel structures in port environments (MICSIPE, European Project). Research Fund for Coal and Steel. 2008-2011. 120894 EUR. Ref: RFSR-CT-2008-00018. Participation: researcher.