

CV Date	25/10/2022
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Part A. PERSONAL INFORMATION

First Name	Domingo		
Family Name	Morales Palma		

A.1. Current position

Job Title	Profesor Titular de Universidad		
Starting date	2022		
Institution	Universidad de Sevilla		
Department / Centre	Ingeniería Mecánica y Fabricación / Escuela Técnica Superior de Ingeniería		
Country	Spain		
Keywords			

A.2. Previous positions (Research Career breaks included)

Period	Job Title / Name of Employer / Country
2012 - 2022	Profesor Contratado Doctor / Universidad de Sevilla
2011 - 2012	Profesor Ayudante Doctor / Universidad de Sevilla
2006 - 2011	Ayudante / Universidad de Sevilla
2005 - 2006	Prof.Univ.Asimilado Colaborador Interino / Universidad de Sevilla

A.3. Education

Degree/Master/PhD	University / Country	Year
Fundamentos para el diseño en ingeniería mecánica	Universidad de Sevilla	2011
Ingeniero Industrial	Universidad de Sevilla	2003

Part B. CV SUMMARY

Research activity focuses on two lines: sheet metal forming, and ontology-based design and methodologies applied to manufacturing. The first line concentrates most of its scientific production, mainly in the assessment of formability and failure in sheet metal forming processes with high stress/strain gradients, such as incremental sheet forming, which has been analysed both experimentally and numerically/analytically. This line has received continuous funding in the last 10 years through competitive projects of the National Research funding framework (6 projects, 1 as PI) and the Andalusian Research Funding Call (2 projects, 1 as PI) as well as 11 research contracts "arts. 68/83 LOU" (2 as PI). In the second research line, he is an active member of a multidisciplinary research group formed by doctors from the "Dpt. Industrial Organization" and the "Dpt. Computer Languages and Systems" of the US and of the companies Airbus DS and Mecanizados y Montajes Aeronáuticos S.A. (MyM).

As a researcher, he regularly contributes to international prestigious media. He has published more than 40 papers in international journals, 18 of them in journals indexed in the JCR, a book chapter in the prestigious Woodhead/Elsevier publishing series and more than 30 contributions in international conferences. He accumulates 396 citations (57.2 cites/year in the last 5 years) and has an h-index of 11 (source: Scopus). He is a co-author of a patent. He has carried out 2 postdoctoral research stays (6 months) in research centers of recognized international prestige.

He has as recognized merits: 2 six-year research periods ("sexenios de investigación" up to 2017), 1 six-year technology period ("sexenio de transferencia" up to 2017) and 4 regional periods ("tramos autonómicos"). He has participated as a member of the scientific committee of two international conferences in various editions (MESIC 2015, 2017, 2019, 2021 and PLM 2017, 2018) and as a reviewer of papers in several journals indexed in the JCR. He has supervised a doctoral thesis with an international mention, on incremental sheet metal forming.

He has more than 16 years of university teaching experience with active participation in 1st, 2nd and 3rd cycle and in several master's degrees with a mention of quality and/or excellence. He has been participating in studies of Aerospace and Industrial Engineering. Since the 2011/12 academic year, he has been the coordinator of various core subjects for Bachelor's and Master's degrees. He has supervised more than 30 final degree projects and tutored several student internships in companies. He has supervised 3 teaching innovation projects and participated as a speaker and co-author in various papers presented at teaching conferences. The main lines of the final degree project management focus on the analysis and simulation of sheet metal forming processes and practical CAM applications such as CNC machining with 3DExperience/CATIA and process planning of aeronautical assembly with 3DExperience/DELMIA.

Regarding to university management, during the academic years 2016/17 and 2017/18 he was a member of the Quality Assurance Commission of the Center for the Aerospace Engineering Degree and the University Master's Degree in Aeronautical Engineering.

Part C. RELEVANT ACCOMPLISHMENTS

C.1. Most important publications in national or international peer-reviewed journals, books and conferences

AC: corresponding author. (nº x / nº y): position / total authors. If applicable, indicate the number of citations

- 1 **Scientific paper**. Rebeca Arista; Fernando Mas Morate; Domingo Morales Palma; Carpóforo Vallengano Martín. 2022. Industrial Resources in the design of Reconfigurable Manufacturing Systems for aerospace: A systematic literature review Computers in Industry. Elsevier. 142, pp.103719.
- 2 **Scientific paper**. Borrego, Marcos; Morales-Palma, Domingo (AC); Vallengano, Carpóforo. (2/3). 2021. Analysis of flangeability by single-stage SPIF and press-working in AA7075-O sheet JOURNAL OF MANUFACTURING SCIENCE AND ENGINEERING-TRANSACTIONS OF THE ASME. ASME. 143-1, pp.1-17. ISSN 1087-1357. <https://doi.org/10.1115/1.4047997>
- 3 **Scientific paper**. López-Fernández, J. A.; Centeno, G.; Martínez-Donaire, A. J.; Morales-Palma, D.; Vallengano, C.(4/5). 2021. Stretch-flanging of AA2024-T3 sheet by single-stage SPIF THIN-WALLED STRUCTURES. ELSEVIER SCI LTD. 160. ISSN 0263-8231. <https://doi.org/10.1016/j.tws.2020.107338>
- 4 **Scientific paper**. Borrego, M.; Morales-Palma, D. (AC); Martínez-Donaire, A. J.; Centeno, G.; Vallengano, C.(2/5). 2020. Analysis of formability in conventional hole flanging of AA7075-O sheets: punch edge radius effect and limitations of the FLC INTERNATIONAL JOURNAL OF MATERIAL FORMING. SPRINGER. 13-2, pp.303-316. ISSN 1960-6206. <https://doi.org/10.1007/s12289-019-01487-2>
- 5 **Scientific paper**. Martínez-Donaire, Andrés Jesús; Morales-Palma, Domingo; Vallengano, Carpóforo. (2/3). 2020. On the use of strain path independent metrics and critical distance rule for predicting failure of AA7075-O stretch-bend sheets MATERIALS. MDPI. 13-17. ISSN 1996-1944. <https://doi.org/10.3390/ma11102029>

- 6 **Scientific paper.** Martínez-Donaire, A. J.; Borrego, M.; Morales-Palma, D.; Centeno, G.; Vallengano, C.(3/5). 2019. Analysis of the influence of stress triaxiality on formability of hole-flanging by single-stage SPIF INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES. PERGAMON-ELSEVIER SCIENCE LTD. 151, pp.76-84. ISSN 1879-2162. <https://doi.org/10.1016/j.ijmecsci.2018.11.006>
- 7 **Scientific paper.** Lopez-Fernandez, JA; Centeno, G; Martinez-Donaire, AJ; Morales-Palma, D; Vallengano, C. (4/5). 2019. Critical evaluation of the formability of AA2024-T3 sheet deformed by single-point incremental forming DYNA. FEDERACION ASOCIACIONES INGENIEROS INDUSTRIALES ESPANA;Publicaciones DYNA. 94-5, pp.523-529. ISSN 0012-7361. <https://doi.org/10.6036/9141>
- 8 **Scientific paper.** Morales-Palma, Domingo; Borrego, Marcos; Martínez-Donaire, Andrés Jesús; Centeno, Gabriel; Vallengano, Carpofo. 2018. Optimization of Hole-Flanging by Single Point Incremental Forming in Two Stages Materials. 11-2029. <https://doi.org/10.3390/ma11002029>
- 9 **Scientific paper.** Centeno, Gabriel; Morales-Palma, Domingo; González-Pérez-Somarriba, B.; Bagudanch, I.; Egea-Guerrero, J. J.; Gonzalez-Perez, L. M.; García Romeu, M. L.; Vallengano, Carpofo. (2/8). 2017. A Functional Methodology on the Manufacturing of Customized Polymeric Cranial Prostheses from CAT using SPIF Rapid Prototyping Journal. Emerald. 23-4, pp.771-780. ISSN 1355-2546. <https://doi.org/10.1108/RPJ-02-2016-0031>
- 10 **Scientific paper.** Morales-Palma, Domingo (AC); Martínez-Donaire, Andrés J.; Vallengano, Carpofo. (1/3). 2017. On the Use of Maximum Force Criteria to Predict Localised Necking in Metal Sheets under Stretch-Bending Metals. MDPI. 7-11, pp.469. ISSN 2075-4701. <https://doi.org/10.3390/met7110469>
- 11 **Scientific paper.** Centeno, Gabriel; Martínez-Donaire, Andrés J.; Bagudanch, Isabel; Morales-Palma, Domingo; Garcia-Romeu, María Luisa; Vallengano, Carpofo. (4/6). 2017. Revisiting Formability and Failure of AISI304 Sheets in SPIF: Experimental Approach and Numerical Validation Metals. MDPI. 7-12, pp.531. ISSN 2075-4701. <https://doi.org/10.3390/met7120531>
- 12 **Scientific paper.** Borrego, Marcos; Morales-Palma, Domingo; Martínez-Donaire, Andrés J.; Centeno, Gabriel; Vallengano, Carpofo. (2/5). 2016. Experimental study of hole-flanging by single-stage incremental sheet forming Journal of Materials Processing Technology. Elsevier. 237, pp.320-330. ISSN 0924-0136. <https://doi.org/10.1016/j.jmatprotec.2016.06.026>
- 13 **Scientific paper.** Morales-Palma, Domingo (AC); Vallengano, Carpofo; Garcia-Lomas, Francisco Javier. (1/3). 2013. Assessment of the effect of the through-thickness strain/stress gradient on the formability of stretch-bend metal sheets Materials & Design. 50, pp.798-809. ISSN 0264-1275. <https://doi.org/10.1016/j.matdes.2013.03.086>

C.2. Conferences and meetings

- 1 Domingo Morales Palma; Manuel Oliva; Rebeca Arista; Carpofo Vallengano; Fernando Mas. Enhanced Metamodels Approach Supporting Models for Manufacturing (MfM) Methodology. 12th International Workshop on Formal Ontologies meet Industry (FOMI22). OntoCommons H2020 project, École Nationale d'Ingénieurs de Tarbes (ENIT). 2022. France.
- 2 Domingo Morales Palma; Oliva, Manuel; JESÚS RACERO MORENO; IGNACIO EGUÍA SALINAS; FERNANDO MAS MORATE. Metamodels approach supporting Models for Manufacturing (MfM) methodology. IFIP 18th International Conference on Product Lifecycle Management. 2021. Conference.
- 3 Domingo Morales Palma; Marcos Borrego Puche; López-fernández, José Andrés; ANDRÉS JESÚS MARTÍNEZ DONAIRE; GABRIEL CENTENO BAEZ; Carpofo Vallengano Martín. Numerical analysis of necking in stretch-bending based on modified maximum force criteria. 9th Manufacturing Engineering Society International Conference. 2021. Conference.

- 4 Marcos Borrego Puche; Domingo Morales Palma; López-fernández, José Andrés; ANDRÉS JESÚS MARTÍNEZ DONAIRE; GABRIEL CENTENO BAEZ; Carpóforo Vallengano Martín. Revisiting flangeability in hole-flanging by single-stage incremental forming and conventional process. 24th International Conference on Material Forming. 2021. Conference.
- 5 Marcos Borrego Puche; Domingo Morales Palma; López-fernández, José Andrés; ANDRÉS JESÚS MARTÍNEZ DONAIRE; GABRIEL CENTENO BAEZ; Carpóforo Vallengano Martín. Hole-flanging of AA7075-O sheets: conventional process versus SPIF. The 18th International Conference on Metal Forming 2020. 2020. Conference.

C.3. Research projects and contracts

- 1 **Project.** Experimental and numerical characterization of the conventional and incremental flangeability of aeronautical aluminium alloys formed during natural aging (FLANGEAGING). Ministerio de Ciencia e Innovación. Domingo Morales Palma. 01/01/2022-31/12/2025. 181.500 €.
- 2 **Project.** Desarrollo de procesos de fabricación de prototipado rápido para la producción de prótesis individualizadas cráneo-maxilofaciales en materiales biocompatibles con validación geométrica y funcional en entornos in vitro y post mortem (FABRAP-PROTEBIO). Junta de Andalucía (Consejería de Economía y Conocimiento). Centeno Báez, Gabriel. 01/01/2020-31/12/2022. 102.268 €.
- 3 **Project.** Nuevas Técnicas Experimentales para la Caracterización de los Límites de Estricción y Fractura en Conformado de Chapa. Ministerio de Ciencia, Innovación y Universidades. Vallengano Martín, Carpóforo. 01/01/2019-30/09/2022. 77.440 €.
- 4 **Project.** Conformado de tubos para su aplicación en procesos de fabricación de componentes aeronáuticos y de prótesis médicas (Confotubo-Aeromed). Junta de Andalucía (Consejería de Economía y Conocimiento). Morales Palma, Domingo. 01/02/2020-30/04/2022. 88.000 €.
- 5 **Project.** DPI2015-64047-R, Proceso de Conformado Incremental para el Rebordeado de Chapas de Aluminio de Ductilidad Reducida y Láminas Poliméricas: Mejora de la Conformabilidad y Capacidades Geométricas. Ministerio de Economía y Competitividad. Gabriel Centeno Báez. 01/01/2016-31/12/2018. 151.250 €.
- 6 **Project.** DPI2012-32913, Análisis del Proceso de Conformado Incremental Mono-Punto de Chapa y su Aplicación al Rebordeado de Agujeros (Hole Flanging). Ministerio de Economía y Competitividad. Carpóforo Vallengano Martín. From 01/01/2013. 155.610 €.
- 7 **Contract.** Jigless Techniques & Flexible Tooling for Assembly Applications (NÉBULA+) Fundación Corporación Tecnológica de Andalucía. 01/06/2018-31/12/2020. 128.000 €.
- 8 **Contract.** Digital Manufacturing and Virtual factory in the Aeronautical Industry using 3DExperience LE FOND DE DOTATION DASSAULT SYSTÈMES. Domingo Morales Palma. 01/01/2018-01/01/2021. 30.000 €.
- 9 **Contract.** Nuevos Desarrollos Industriales de Tecnologías de Conformado de Chapa Metálica Airbus Defence and Space S.A.. 01/01/2018-01/01/2020. 110.800 €.
- 10 **Contract.** Nueva generación de sistemas de ensamblaje flexibles ultraligeros (NÉBULA) Feder Innterconecta - AIRBUS DS. Andrés Jesús Martínez Donaire. 01/01/2016-01/01/2018. 171.550 €.
- 11 **Contract.** Value Chain: From IDMU to LEAN documentation for assembly (Ariadne) Airbus Defence and Space S.A.. Domingo Morales Palma. 01/01/2016-01/01/2018. 58.000 €.
- 12 **Contract.** Manufacturing Industrial-means Emerging from validated Automation (MINERVA) AIRBUS MILITARY. Jaime Domínguez Abascal. 22/01/2015-29/10/2016. 210.000 €.

C.4. Activities of technology / knowledge transfer and results exploitation

Patent of invention. Cala Romero, Antonio; Gil Báez, Pedro; Beltran Calero, Juan Javier; Domingo Morales Palma; Carpóforo Vallengano Martín; Andrés Jesús Martínez Donaire; Gabriel Centeno Báez. ES2552589. Arandela para establecer continuidad eléctrica ES2552589 B2 Spain. 03/11/2017. AIRBUS DEFENCE AND SPACE, S.A.U..