

Part A. Personal Information

DATE	05-2019
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Surname(s)	Rodríguez González	
Forename	Cristina	
Social Security, Passport, ID number	32867772J	
Sex	Female	
Age	54	
Researcher codes	WoS Researcher ID (*)	L-5008-2014
	SCOPUS Author ID(*)	
	Open Researcher and Contributor ID (ORCID)	0000-0003-1130-9591

(*) At least one of these is mandatory

A.1. Current position

Post/ Professional Category	Professor	
UNESCO Code	2205, 3312, 3316	
Key Words	Mechanical behaviour, fracture, fatigue, welded joints, structural integrity	
Name of the University/Institution	University of Oviedo	
	Department/Centre	Construc. e ing. Fabricación
	Full Address	Edificio Departamental Oeste. 7.1.17. Campus de Gijón. 33203 Gijón
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Start date	December 2011	

A.2. Education (title, institution, date)

Year	University	Degree	Title
1989	Oviedo	First degree	Industrial (Mechanical) Engineering
1992	Oviedo	PhD	Engineering

A.3. Indicators of Quality in Scientific Production (See the instructions)

Authorship of more of 100 articles in scientific-technical journals (more than 60 in journals indexed in SCI and 35 in journals with a relative quality index). 39 Q1 papers. Authorship of more than 40 articles in indexed journals in the last 10 years. Total cites: 470. Number cites / year (5 last years) > 50. Index h = 14 (JCR). Index h = 25 (Google Scholar).

Supervision of 9 Ph thesis, 6 of them in the last 10 years.

Participation in a total of 32 research grants projects and in more than 40 important contracts with technological companies. Founding member of a university Spin-Off. Positive evaluation of 4 research stretch: 1994-1999, 2000-2005, 2006-2011, 2012-2017.

Part B. Free Summary of CV (Max. of 3.500 characters, including spaces)

My research career (1991-1996) started as responsible for the star-up of the mechanical testing Laboratory, and later, that the fracture mechanics and Fatigue Area of the Technological Institute of Materials of Asturias (ITMA), having participated in more than 400 technical and research reports whose quality is supported by the Mieres del Camino research award. From then until now, as a full professor at the University of Oviedo, I have participated

in multiple research projects whose quality is supported by almost 57 publications in indexed journals, 32 of them in the first quartile. The main research line that I have followed has been focused on the analysis and simulation of the mechanical behaviour of materials and mechanical elements, especially in the field of fracture and fatigue. I am the author of the design and developed of several test devices that are currently being used in several national and international universities (SPT devices). As a professor of the University of Oviedo, I'm member of the SIMUMECAMAT research group (www.simumecamat.com), a consolidated research group with more than 30 years of experience developing research projects, and in which also stands out a great vocation in the training of young researchers, with almost 30 supervised Ph theses.

Point out my participation in the management team of the University Institute of Industrial Technology of Asturias (IUTA), first as vice chair and then as chair.

I have participated in more than 200 Scientific Conferences and Meetings and I have been invited to participate as a speaker in several of them. Member of the Publications Committee of the University of Oviedo until June 2014. Chair of the PhD Program in "Design, Construction and Manufacturing in Engineering" at the University of Oviedo until June of 2016. Regular reviewer of several scientific journals and research projects of ANEP. Member of the ANECA C10 Committee in Mechanical Engineering since 2011. Since 2016 I'm vice-president of the Spanish Group of Fracture, society that awarded me with the honorary medal in 2015.

Part C. Relevant accomplishments

C.1. Publications

Mechanical properties characterization of heat affected zones using the small punch test. C. Rodríguez, J. García Cabezas, E. Cárdenas, F.J. Belzunce, C. Betegón. Welding Journal, 88: (2009) 188s-192s

Fracture characterization of steels by means of the Small Punch Test. C. Rodríguez, E. Cárdenas, F.J. Belzunce y C. Betegón. Experimental Mechanics, 53, 2013, 385-392. Indice de impacto: 1.567. Mechanics: Q1.

Estimation of the mechanical properties of metallic materials by means of the small punch test. T.E. García, C. Rodríguez, F.J. Belzunce y C. Suárez. Journal of Alloys and Compounds, 582, 2014, 708-717. I.F: 2.726 (2013). Metal. & Metal. Engineering: Q1.

Influence of the target material constitutive model on the numerical simulation of a shot peening process. P.P. Sanjurjo, C. Rodríguez, I. Peñuelas, T.E. García, F.J. Belzunce. Surface & Coatings Technology. 258 (2014) 822-831. MATERIALS SCIENCE, COATINGS & FILMS (4/18) Q1

Development of a new methodology for estimating the CTOD of structural steels by means of the small punch test. T.E. García, C. Rodríguez, F.J. Belzunce e II. Cuesta. Engineering failure analysis, 50, 2015, 88-99 I.F: 1.13 (2013). Mater. Sci., Characterization&Testing: Q1.

Development of a methodology to study the hydrogen embrittlement of steels by means of the small punch test. Autores T.E. García, C. Rodríguez, F.J. Belzunce I. Peñuelas, B. Arroyo. Materials Science & Engineering, A626, 2015 342-351. I.F: 2.409 (2013). Metal. & Metal. Engineering: Q1.

Fracture toughness characterization through notched small punch test specimens. E. Martínez Pañeda, T.E. García, C. Rodríguez. Materials Science & Engineering A 657 (2016) 422-430. I.F: 2.567 (2014). Metal. & Metal. Engineering: Q1.

Effect of hydrogen embrittlement on the tensile properties of CrMoV steels by means of the small punch test. T.E. García, C. Rodríguez, F.J. Belzunce, I.I. Cuesta *Publicación:* Materials Science & Engineering A 664 (2016) 165-176. I.F: 2.567 (2014). Metal. & Metal. Engineering: Q1.

The use of the small punch test to solve practical engineering problems. Autores: Rodríguez C., Fernández M., Cabezas J., García T.E., Belzunce F.J. *Publicación:* Theoretical and Applied Fracture Mechanics 86 (2016) 109-116. I.F: 2.37(2015). Metal. & Metal. Engineering: Q1.

Fatigue behaviour improvement on notched specimens of two different steels through deep rolling, a surface cold treatment. S. Blasón, C. Rodriguez, J. Belzunce, C. Suárez. Theoretical and Applied Fracture Mechanics. 92 (2017) 223-228. Engineering: Q1

Effect of hydrogen on the tensile properties of 42CrMo4 steel quenched and tempered at different temperatures. A. Zafra, L. B. Peral, J. Belzunce, C. Rodríguez. International Journal of Hydrogen Energy. 43 (2018) 9068–9082. ENERGY and FUELS: Q1

Effect of hydrogen on the fatigue crack growth rate of quenched and tempered CrMo and CrMoV steels. L. B. Peral, A. Zafra, S. Blasón, C. Rodríguez, F.J. Belzunce. International Journal of Fatigue. 120 (2019) 201–214. ENGINEERING: Q1

Effect of hydrogen on the fracture toughness of CrMo and CrMoV steels quenched and tempered at different temperatures. L. B. Peral, A. Zafra, F.J. Belzunce, C. Rodríguez. International Journal of Hydrogen Energy (2019) IN PRESS. ENERGY and FUELS: Q1

C.2. Research Projects and Grants

MAT2014-58738-C3-1-R. Hydrogen effect on fatigue and fracture toughness of medium and high strength steels used in the transport and storage of pressurized hydrogen. Spanish national funding (DGICYT). Cristina Rodríguez González. University of Oviedo. January 2015-September 2018. 140.000 €. (Main Researcher)

W09S03. Residual stress generation processes for high strength steels fatigue life improvement. Regional funding (Junta de Castilla y León). Jesús Manuel Alegre Calderón. Universidad de Burgos. March2016/June2018. 37.700€. Researcher.

MAT2011-28796-C03-03. Evaluation of the structural integrity of pipeline steels and their welded joints with acid gas presence. Spanish National Funding (DGICYT). Cristina Rodríguez González. University of Oviedo. 2012-2015. 70.248 €. (Main Researcher)

PEST08-16. New materials and processes for the manufacture of reactors to ensure the supply of petroleum fuels. Cristina Rodríguez González y Alfonso Fernández Canteli. University of Oviedo. Asturian Regional funding (FICYT). 2009-2011. (Main Researcher)

IB08-112 C2. Numerical and experimental analysis -applying micromechanical damage models- in the fracture behavior of HSS welded structures highly constructed. Asturian Regional funding (FICYT). Covadonga Betegón Biempica, University of Oviedo. 2008-2010. 57.500,80 €. (Researcher)

MAT2008-06879-C03-01. Application of a punching test methodology in the evaluation of the structural integrity of steel pipelines. National funding (DGICYT). Covadonga Betegón Biempica, University of Oviedo. 2009-2012. 179.080 €. (Researcher)

C60/2006. Improving fatigue behaviour of duplex stainless steel rebar by shot peening process optimization. “Mejora del comportamiento a fatiga de barras de refuerzo de acero inoxidable dúplex mediante el uso y optimización de procesos de shot-peening”. Spanish Ministry of Development. Cristina Rodríguez González. University of Oviedo. 2006-2009. 66.959 €. (Main Researcher)

MAT-2004-06992-C02-01. Study and validation of the small punch test for obtaining mechanical properties and fracture toughness of metallic materials. “Estudio y validación del ensayo Small Punch (SP) para la obtención de las propiedades mecánicas y la tenacidad a fractura de materiales metálicos”. National funding (DGICYT). Covadonga Betegón Biempica, University of Oviedo 2004-2008. 165.800 €. (Researcher)

C.3. Contracts

1- Advanced characterization an structural integrity of complex structural elements. Company: KHIS group, S.L. 70.000 € (2016-2018). Main researcher

2- Research in new proccess and microalloyed steels for hot forging of automobile crankshafts. Company: CIE GALFOR S.A.U. (2014-2015). CDTI funding (Programa INTERCONECTA) 50.000 €. Main researcher.

3- Research in global thermal and superficial treatments for the prolongation of in-service life of tools subjected to high wear for use in hot forging of crankshafts. CIE GALFOR S.A.U. (2012-2014). CDTI funding: 64.900 €. Main researcher.

4- In-service behavior of new types of welded joints for fuel storage tanks. Company: General Dynamics-Santa Bárbara Sistemas S.A. (Asturias) (2010-2011) Company funding 30.000 €. (Main researcher)

5- Fracture characterization of the ASTURFER steel: Triaxiality effect. Fusion technology program "TECNO-FUS" (CSD2008-00079). Company: ITMA. Nacional funding program (Prog. CONSOLIDER INGENIO 2010). 2010-2012. (Main researcher)

C.4. Patents and other IPR

Founding member of a Spin-off company (Khis group, S.L)

C.5, C.6, C.7... Other

HONORS AND AWARDS

2015 Medal of Honor, Spanish Fracture Group

2010 Mauricio Riosalido Award, Spanish Society of Orthopaedic Surgery and Traumatology

2002, 2006 Distinguished Guest of Honor, National University of Trujillo, Trujillo, Perú

1994 Mieres del Camino Award, City Council of Mieres del Camino

Membership of: the Spanish Welding Society, the Spanish Fracture Group, European Structural Integrity Society (ESIS), The University Institute of Industrial Technology of Asturias (IUTA), SIMUMECAMAT research group, University of Oviedo.

- Member of the National Accreditation Commission of University Professors. Spanish National agency for evaluation and prospective (ANECA).

- Member of the Ramon y Cajal and Juan de la Cierva Mechanical Engineering Committee (2005-2007).

- Member of the Publications Committee of the University of Oviedo until (2010-2014)

- Chair of the PhD Program in "Design, Construction and Manufacturing in Engineering" at the University of Oviedo (2011- 2016)

Reviewer: Fatigue and Fracture of Engineering Materials and structures, Journal of Testing and evaluation, Revista de Metalurgia de Madrid, Materiales de construcción, Engineering Fracture Mechanics, Engineering failure analysis, Theoretical and applied fracture mechanics, Materials Science & Engineering, Strain...

-Co-organizer of the XIV Meeting of the Spanish Group of Fracture, Ribadesella, Spain, 1997

-Co-organizer, XXVII Meeting of the Spanish Group of Fracture, Ribadesella, Spain, April 2011

-Co-organizer, I Asturian companies-Research Groups meeting, University of Oviedo, 2011

- Organizer of Scientific and technological Conferences:

- Nanomaterials and their technological applications. IUTA, March 2005

- Results of Prospective study on training needs in the metal sector, IUTA, May 2007

- Undertaking from the University: The Academic Spin-off, IUTA, December 2008

- Technological applications of graphic simulation, IUTA, December 2008

- Renewable energies and energy sustainability in buildings, IUTA, December 2008

- Technological applications of numerical methods in engineering, IUTA, May 2009

- Electronic Leisure and Business in Asturias, GAMELAB, July 2009

- Patents and intellectual property, IUTA, October 2009

- Firms in difficulty recovery, IUTA, November 2009

- Sustainable construction, new materials used in construction, IUTA, December 2009

- Cycle " Technological breakfast 2010", IUTA, 2010

- Artificial vision in the industry, IUTA, September 2010

- Renewable energies: Progress and challenges, November 2010

- Cycle " Technological breakfast 2011", IUTA, 2011

- Biogas plants and membrane technology in water purification, IUTA, July 2011

- Forensic engineering, IUTA, November 2011

- Cycle " Technological breakfast 2012", IUTA, 2012

- Engineering and Medicine, IUTA 2012

Instructions

Important Announcement

Following the Call for Proposals, **ONLY CVS SUBMITTED IN THIS FORMAT WILL BE TAKEN INTO CONSIDERATION. CVs presented in other formats WILL BE DISMISSED with no possibilities for modifications.**

GENERAL CONSIDERATIONS

Following the call it is mandatory to use the following format when filling the document: Font Times New Roman / Arial (minimum size 11), single interlineal space, lateral margins of 2.5 cm and top and bottom margins of 1.5 cm.

Max. length of the whole document (Part A, B and C) cannot exceed four pages.

PART A. PERSONAL INFORMATION

Researcher ID is a unique identifier that consists of alphanumeric characters that enable researchers to manage their publication lists, track their times cited counts and h-index, identify potential collaborators and avoid author misidentification. It is hosted by Web of Science.

Access: Web of Science > My Tools > Researcher ID.

Author ID is a unique identifier that consists of alphanumeric characters that enable researchers to manage their publication lists, track their times cited counts and h-index, identify potential collaborators and avoid author misidentification. It is assigned automatically by SCOPUS. You can find an author identifier by running a search for that author. It will appear underneath the author details.

Access: SCOPUS > Author Feedback Wizard> Researcher name.

Open Researcher and Contributor ID (ORCID) provides a persistent digital identifier that distinguishes the researcher from every other person and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized.

Access: www.orcid.org

A.3. Indicators of Quality in Scientific Production

Please add information on a) total number of citations, average number of citations during the last five years, b) total number of publications in the first quartile (Q1) and first decile (D1), c) h-index, d) thesis supervised, and e) any other indicators that you may consider relevant.

To calculate these values, use default data collected in the Web of Science or Scopus. When this is not possible, other indicators may be used, specifying the reference database.

PART B. FREE SUMMARY OF CV *(Max. of 3.500 characters, including spaces)*

Describe briefly your scientific career, the main scientific-technical achievements, and the mid-to-long term scientific-technical interests and objectives of your research agenda. Indicate any other aspects that you may consider important to understand your career path.

PART C. ACCOMPLISHMENTS **(Order by typology)**

Given the limitations in number of characters, please mention the most relevant achievements sorted by the typology that best suits your scientific profile. Please be clear and avoid ambiguities.

Use reverse chronological order within each section. Limit your merits over the past 5 years, except for those which have an extraordinary importance for your CV.

C.1. Publications

Include a full review of relevant 5 to 10 publications.

In case of an article, please include authors in order of signature, year of publication, title of the article, name of the journal, volume, start page to end page.

If it's a book or chapter of a book, include its publisher and ISBN also.

If there are many authors, please indicate the total number of signatories and the position of the researcher (total number/ position of researcher) as for example 95/18.

C.2. Participation in Research, Development and Innovation Projects

Indicate the most important projects in which you have participated (maximum 5 to 7 projects), including a) its reference, b) title, c) funding body and call for proposals, d) name of the principal investigator and his/her institution affiliation, e) date of start and end of the project, f) amount of subsidy, and g) your type of participation, e.g.: researcher, principal investigator, European project coordinator, etc..

C.3. Participation in Research, Development and Innovation Contracts

Indicate the most important contracts in which you have participated (maximum 5 to 7 contracts), including a) title, b) company or entity, c) name of principal investigator and his/her institution affiliation, d) date of start and end of the contract, and e) amount of funding.

C.4. Patents

Indicate the most important patents and other intellectual property in which you have collaborated. Give a) the order of signing authors, b) reference, c) title, d) priority countries, e) date, f) holder entity and companies that are exploiting the patents.

C.5, C.6, C.7... Other

By sequential numbering (C.5, C.6, C.7 ...) please include any other achievements that you deem necessary, such as for example: direction of works, participation in assessment or advisory tasks, membership of international committees, management of scientific activity, editorial boards, scientific awards, etc.

FINAL CONSIDERATIONS

Please remember that all the submitted achievements must be presented concisely, including dates or periods for each performance.

The short CV aims to facilitate, organize and streamline the evaluation process. The use of the individual researcher identifier facilitates access to the published scientific papers and information on the impact of each of them.

Remember that only CVs submitted either in this format or in CVN abridged version will be taken into consideration.