

JOSE MARIA GALLARDO FUENTES

Dr. Ingeniero Industrial (31/07/1986)

Catedrático de Universidad (04/02/2000)

Escuela Técnica Superior de Ingenieros Industriales de Sevilla

General indicators of quality of scientific production

Five six-year research periods positively evaluated (last one between 2012-2017). A six-year transfer period positively evaluated (2018 call). 5 doctoral theses supervised in the last ten years.

CV Summary

Prof. Dr.-Ing. Gallardo PhD thesis work was related to super-solidus sintering of HSS water atomized powders. Very soon his interest focused on Mechanical Alloying as a procedure to obtain metastable metallic and non-metallic powders. Several PhD theses were supervised in this context. His connection to Powder Metallurgy Research has continued till nowadays. In this context he chaired the IV (2012) Powder Metallurgy Congress Organizing Committee. In the period 2013/2016, he led the research team at the University of Seville involved in EFFIPRO, FPVII EU Project. In this field, he has published 45 papers and 60 contributions to Meetings and Congresses. He has participated in 10 public funded research projects and has supervised 3 PhD thesis.

He has also had an intense activity in knowledge transfer to the society. This activity has been carried out through a Non-profit Organization linked to the University of Seville, namely AICIA. In this way, Dr. Gallardo has been involved in applied research related to Forensic Engineering and Cultural Heritage preservation. Both mechanical behavior and corrosion issues are the main research topics.

He played a significant role in famous Cultural Heritage objects preservation: the throne of El Rocío Virgin, in Almonte (Huelva), El Giralillo XVI c. Renaissance Statue at the top of La Giralda Tower (Seville) or the marble XIV c. Lions at the Court of the Lions, Alhambra Palace (Granada) are among the objects studied. He contributed to the Organizing Committee of several Meetings and Congresses in this context. 25 book chapters, scientific papers and conference contributions have been authored or co-authored by Dr. Gallardo in this field.

In connection to Forensic Engineering and Materials Selection activities, Dr. Gallardo chaired the XXI (2004) Spanish Fracture Group Meeting Organizing Committee and the XIII (2015) National Non Destructive Testing Congress Scientific Committee. More than 45 scientific papers and conference contributions have been authored or co-authored by Dr. Gallardo.

Broad experience and testing equipment for static corrosion testing have been gathered. Due to NDA signed no diffusion of the results, nor patents have been produced.

Since 01/01/2010 20 articles have been published in journals, of which 15 are indexed. In Scopus, 6 articles appear in Q1, two in Q2 and one in Q4. Dr. Gallardo has participated in 28 communications to Congresses, of which ten have been published in minutes' books with ISBN.

The transfer activity through contracts has been very intense during the 2010/2020 period. He has served as IP in a total of thirty-five projects, participating as a researcher in another fifteen projects.

Relevant Publications

- Gomez Cuevas, Francisco de Paula, Andreouli, Dia, Gallardo Fuentes, Jose Maria, Oikonomou, V, Cintas Fisico, Jesus, et. al.: Ceramic dies selection for electrical resistance sintering of metallic materials. *Ceramics International*. 2019. Vol. 45. Núm. 12. Pag. 14555-14561. Q1 (2/28 Materials Science, Ceramics) 3 cites (Scopus, Dec' 20)
- Díaz, E., Soria, L., Gallardo, J.M., Post-failure life evaluation: A corrosion-fatigue case history, *Engineering Failure Analysis* 2019, 105, pp. 828-836. Q1 (7/33 Materials Science, Characterization and Testing) 1 cite (Scopus, Dec' 20).
- Gallardo Fuentes, Jose Maria, Agote, Iñigo, Astacio, Raquel, Schubert, Thomas, Cintas Fisico, Jesus, et. al.: Hard metal production by ERS: Processing parameter roles in final properties. En: *Metals*. 2019. Vol. 9. Núm. 2. Q1 (18/79 Metallurgy & Metallurgical Engineering) 4 cites (Scopus, Dec' 20).
- Hortigón Fuentes, Beatriz, Gallardo Fuentes, Jose Maria, Nieto García, Enrique José, López: Martínez, José Antonio: Strain hardening exponent and strain at maximum stress: Steel rebar case. En: *Construction and Building Materials*. 2018. Vol. 196. Núm. 53. Pag. 175-184. Q1 (70/293 Materials Science Multidisciplinary) 4 cites (Scopus, Dec' 20)
- J.M. Gallardo, M. Hunt, E. Díaz-Gutiérrez, "Isotopic Composition of Lead used in the El Giralillo Casting" . *TechnoHeritage2017*, Cádiz, 2017, *Conserving Cultural Heritage*, Mosquera & Almoraima Gil (Eds.) 2018 Taylor & Francis Group, London, ISBN 978-1-138-06744-8
- M.A. Lagos, I. Agote, J.M. Gallardo, J.M. Montes, T. Schubert, T. Weissgaerber, L. Prakash, C. Andreouli, V. Oikonomou, D. López, J.A. Calero, "Development of the ERS Process for the Fabrication of Hardmetal Parts" . *World PM2016 Congress and Exhibition*, European Powder Metallurgy Association, Hamburg, 2016. *World PM2016 Proceedings*, ISN 978-1-899072-48-4. ISBN 978-1-899072-47-7 (USB Flash Memory)
- Perez Soriano, Eva Maria, Gallardo Fuentes, Jose Maria: Fabricación de Cuerpos de Acero Inoxidable con Elevada Porosidad a Través de Loose Sintering. Pag. 479-488. En: *Libro de trabajos del V Congreso Nacional de Pulvimetalurgia*. Universitat de Girona. 2015. ISBN 978-84- 606-9427-4
- E.M. Pérez-Soriano, F. Lasagni, J.M. Gallardo, J. Cintas, "Porosity Measurements in Laser Sintered Powder Parts" . *Powder Metallurgy World Congress & Exhibition*, Challenge for the next generation, PM 2012, JPMA/JSPM, Yokohama, Japón, 2012, *Libro de resúmenes*, pp. 89, *Actas del Congreso*, Vol. 1, pp 301-307. *Actas del Congreso (soporte informático)*, ISBN 978-49900214- 9-8
- J.M. Montes, F.G. Cuevas, J. Cintas, E. Romero, J.M. Gallardo, "New theoretical tool to model powder systems under compression" . *International Powder Metallurgy Congress & Exhibition 3*, Euro PM2011, Barcelona, 2011, *EURO PM2011 Proceedings*, Vol.3, pp. 259. ISBN 978-1- 899072-23-1
- Y. Torres, J.M. Gallardo, J. Domínguez, and F. J. Jiménez-Espadafor, "Brittle fracture of a crane hook" . *Eng. Fail. Anal.*, 17 (2010) 38-47. DOI: 10.1016/j.engfailanal.2008.11.011. Q2/T2 (48/122 Engineering, Mechanical). Q2/T2 (12/32 Materials Science, Characterization & Testing). 4 cites (WOS dic' 17). 6 cites (Scopus dic' 17), 9 cites (ResearchGate dic' 17).

Research Projects, Contracts, Technological or Transfer Merits

- FP7-NMP-FOF.NMP.2013-10-608729, Energy Efficient Manufacturing Process of Engineering Materials (EFFIPRO), FPVII EU, 2013, Dr. Iñigo Agote, TECNALIA, 01/01/2013 a 31/12/2016, 4,3 M€, IP US partner.
- MAT2016-76713-P, Fabricación de Materiales Porosos de Base Fe Mediante la Técnica de Solidificación Direccional, Plan Nacional, 2017, Dr. Ranier Sepúlveda, U. Sevilla, 01/01/2018 a 31/12/2020, 74800 €, investigador.
- AICIA 980. “Avanza2. Nuevo concepto de planta de torre con fluidos a muy alta temperatura y mayores rendimientos de ciclo respecto a las actuales” . AZCATEC, José M. Gallardo (IP U.de Sevilla), 2013-2016. 30 months, 285000,00 € + 45000,00 €

Patents

- Montes Martos, Juan Manuel, Cintas Fisico, Jesus, Gallardo Fuentes, José María, et al. EP3208015B1. Method of Sintering Electrically Conducting Powders and an Apparatus for Carrying Out Said Method. EU. 2019/05/01. Fundación Tecnalia Res. & Innovation (70%), Universidad de Sevilla (30%).
Worldwide applications: DK3208015T3 (Denmark, 29/072019), ES2738627T3 (Spain, 2020/01/24), CN107096919A (China, 29/08/2017)
- Montes Martos, Juan Manuel, Gallardo Fuentes, Jose Maria, Perez Soriano, Eva Maria. ES2506490B2. Procedimiento de Fabricación de Material Metálico de Alta Porosidad en Condiciones de Imponderabilidad. España, concesión con examen previo (art. 40.1 lp). 2015/03/31. Universidad de Sevilla (100%).