

Part A. PERSONAL INFORMATION		CV date	23/10/2022
First and Family name	FERNANDO LÓPEZ GAYARRE		
Social Security, Passport, ID number		Age	
Researcher codes	WoS Researcher ID	I-8885-2014	
	SCOPUS Author ID	26321770400	
	Open Researcher and Contributor ID (ORCID)	0000-0002-9552-6931	

A.1. Current position

Name of University/Institution	UNIVERSIDAD DE OVIEDO		
Department	CONSTRUCCIÓN E INGENIERÍA DE FABRICACIÓN		
Address and Country	CAMPUS DE GIJÓN, 33203 GIJÓN		
Phone number	E-mail	gayarre@uniovi.es	
Current position	Full Professor	From	28/10/2021
Keywords	Sustainable construction, recycled concrete, recycled aggregates, steel joints, mining technology		

A.2. Education

Doctor Ingeniero Industrial	University of Oviedo	2008
Ingeniero Industrial	University of León	2005
Ingeniero Técnico Industrial	University of Oviedo	1983

A.3. JCR articles, h Index, thesis supervised...

6-Year research periods: 2 (Last granted 10/06/2017- Period 2011-2016)

Total citations (**Web of Science**): 937

Total citations (**Scopus**): 1145

Total citations (**Google Scholar**): 1574

Average citations last 5 years (**2017-2021**) (**Web of Science**): 125

Average citations last 5 years (**2017-2021**) (**Scopus**): 152

Average citations last 5 years (**2017-2021**) (**Google Scholar**): 195

h-index (**Web of Science**): 14

h-index (**Scopus**): 16

h-index (**Google Scholar**): 19 (index i10: 31)

Ph.D. thesis supervised: 3

JCR articles (**Q1**): 26

JCR articles (**total number**): 57

Patents (**total number**): 5 (with previous examination)

Part B. CV SUMMARY (max. 3500 characters, including spaces)

Assistant professor (TEU) 1990-2010. Assistant professor (TU) 2010-2021. Full Professor at Department of Construction and Manufacturing Engineering of the University of Oviedo and head of the Concrete Technology Laboratory. He received a PhD in Industrial Engineer from the University of Oviedo in 2008. He has participated in 12 competitive national and international projects. He has been the principal researcher in 3 competitive national projects related to waste recycling. Currently, is the principal researcher of a competitive national project related to recycled concrete and numeric simulation. Author of 57 scientific articles in journals indexed within the Journal Citation Report of Science. Author of 45 papers at international conferences related to research activity and teaching innovation. Co-author of two books to promote the use of Eurocodes in Spain into the design of metal and mixed structures. Co-author of the Spanish Guide of Recycled Aggregates. Speaker invited in 2007 to the II International Meeting of Ready-mix Concrete organized by the Venezuelan Concrete Association. Author of 5 patents with previous examination related to the ground engineering and mining. Reviewer of scientific journals related to concrete technology and teaching innovation. Member of the PhD commission of the Department of Construction and Manufacturing Engineering of the University of Oviedo. Member of the University Institute of



Industrial Technology of Asturias (IUTA). Final Degree Award at the end of the Industrial Technical Engineering studies.

Main lines of research: Sustainable construction, special concrete technology, structural joints, mining technology.

Part C. RELEVANT MERITS

C.1. Publications (including books)

Tamayo P., Rico J., López-Gayarre F., Fiol F., Panzera T.H., Thomas C., Effect of siderurgical aggregates on concrete exposed to saline environments, *Construction and Building Materials*, Volume 352, 2022, 129061.

Martínez-García, R., Sánchez de Rojas, M. I., Jagadesh, P., López-Gayarre, F., Morán-del-Pozo, J. M., & Juan-Valdes, A. (2022). Effect of pores on the mechanical and durability properties on high strength recycled fine aggregate mortar. *Case Studies in Construction Materials*, 16 doi:10.1016/j.cscm.2022.e01050.

Properties and Novel Applications of Recycled Aggregates. *Materials Special issue ISSN 1996-1944*. Book edited by Fernando López Gayarre. <https://doi.org/10.3390/books978-3-03943-165-6>.

Jesús Suárez González, Ínigo López Boadella, Fernando López Gayarre, Carlos López-Colina Pérez, Miguel Serrano López and Flavio Stochino. Use of Mining Waste to Produce Ultra-High-Performance Fibre-Reinforced Concrete, *Materials*, 2020, 13, 2457.

Fernando López Gayarre, Jesús Suárez González, Carlos López-Colina Pérez, Miguel A. Serrano López, Rafat Siddique, Chapter 16 - Performance of concrete based on recycled brick aggregate, Editor(s): Fernando Pacheco-Torgal, Yining Ding, Francesco Colangelo, Rabin Tuladhar, Alexander Koutamanis, In *Woodhead Publishing Series in Civil and Structural Engineering, Advances in Construction and Demolition Waste Recycling*, Woodhead Publishing, 2020, 321-337, ISBN 9780128190555

Fernando López Gayarre, Jesús Suárez González, Carlos López-Colina Pérez, Miguel A. Serrano López, Pedro Serna Ros, Gonzalo Martínez-Barrera (2019). Shrinkage and creep in structural concrete with recycled brick aggregates, *Construction and Building Materials*, 2019, 228, 116750.

Fernando López Gayarre; Jesús Suárez González; Carlos López-Colina Pérez; Miguel A. Serrano López; Pedro J. Fernández Arias. Mechanical properties of prestressed joists made using recycled ceramic aggregates. *Construction and Building Materials*. 194, 2019, 132 - 142.

Jesús Suárez González; Fernando López Gayarre; Carlos López-Colina; Pedro Serna Ros; Miguel A. Serrano-López. Influence of recycled brick aggregates on properties of structural concrete for manufacturing precast prestressed beams. *Construction and Building Materials*. 149, 2017, 507 - 514.

Fernando López Gayarre; José González Pérez; Carlos López-Colina; Miguel A. Serrano-López; Alfonso López Martínez (2016). Life cycle assessment for concrete kerbs manufactured with recycled aggregates. *Journal of Cleaner Production*, 113, 2016, 41-53.

Fernando López Gayarre; Rubén Blanco Viñuela, Carlos López-Colina; Miguel A. Serrano-López; Alberto Domingo Cabo. Influence of water/cement ratio variation on the mechanical properties of recycled concrete for pre-stressed precast components. *Construction and Building Materials*, 94, 2015, 844-850.

Fernando López Gayarre; Carlos López-Colina; Miguel A. Serrano-López; Alberto Domingo Cabo. The effect of curing conditions on the compressive strength of recycled aggregate concrete. *Construction and Building Materials*, 53, 2014, 260–266 .



Fernando López Gayarre; Carlos López-Colina Pérez; Miguel A. Serrano López; Alfonso López Martínez. Manufacture of concrete kerbs and floor blocks with recycled aggregate from C&DW. *Construction and Building Materials*, 40, 2013, 1193–1199.

Fernando López Gayarre; Carlos López-Colina Pérez; Miguel Ángel Serrano López; Emilio García Taengua; Alfonso López Martínez. Assessment of properties of recycled concrete by means of a highly fractions factorial design of experiment. *Construction and Building Materials*, 25, 2011, 3802-3809.

Alberto Domingo Cabo; Carlos Lázaro Fernández; Fernando López Gayarre; M. Ángel Serrano López; Carlos López-Colina Pérez. Long term deformations by creep and shrinkage in recycled aggregate concrete. *Materials and Structures*, 43, 2010, 1147-1160.

C.2. Research projects and grants

Project Reference: BIA2016-78460-C3-2-R. Title: Sostenibilidad de las estructuras de hormigón de muy alto rendimiento (HMAR) a lo largo de su vida útil. Financier entity: Ministerio de Economía y Competitividad. Principal researcher: Fernando López Gayarre, Universidad de Oviedo. Duration: 30/12/2016 – 29/12/2020. Type of participation: Investigador principal. Subsidized amount: 108900 €. Project status: Finished.

Project Reference: UE- OPTIMORE-642201. Title: Increasing yield on Tungsten and Tantalum ore production by means of advanced and flexible control on crushing, milling and separation process. Financier entity: European Community. Principal researcher: Juan María Menéndez Aguado, Universidad de Oviedo. Duration: 01/12/2014 – 30/11/2017. Subsidized amount: 471312,50 €. Type of participation: Researcher. Project status: Finished.

Project Reference: MINECO-13-BIA 2012-30915. Title: Prefabricación sostenible: reutilización de residuos de construcción y demoliciones en prefabricados de hormigón estructural y no estructural (PRESOSCON). Financier entity: Ministerio de Economía y Competitividad. Principal researcher: Fernando López Gayarre, Universidad de Oviedo. Duration: 01/01/2013 – 31/12/2015. Type of participation: Principal researcher. Subsidized amount: 71370 €. Project status: Finished.

Project Reference: 202/PC-08/3-03.2. Title: Guía Española de Áridos Reciclados (GEAR). Financier entity: Ministerio de Medio Ambiente Rural y Marino. Principal researcher: Fernando López Gayarre, Universidad de Oviedo. Duration: 01/10/2008 – 30/09/2011. Type of participation: Principal researcher. Subsidized amount: 99600 €. Project status: Finished.

Project Reference: CENIT 2007, BOE nº 40, 15/02/2008, pág. 8529. Title: Construcción limpia, eficiente y amigable con el medio ambiente (CLEAM). Financier entity: C.D.T.I. Ministerio de Ciencia e Innovación. Principal researcher: Alberto Domingo Cabo, Universidad Politécnica de Valencia. Duration: 01/07/2007 – 31/12/2010. Subsidized amount: 55600 €. Type of participation: Researcher. Project status: Finished.

C.3. Contracts

Project: Diseño y estudio de hormigones y morteros utilizando distintos residuos procedentes de minas de mineral de hierro. Ensayos físicos, mecánicos y de durabilidad. Degree of contribution: Coordinator and principal researcher. Principal researcher: Fernando López Gayarre. Researcher number: 3. Financier entity: ArcelorMittal, Innovación, Investigación e Inversión S.L. Amount: 18000 €. Initial date: 03/10/2018 Duration: 14 month.

Project: Estudio de dosificación de hormigones y morteros empleando residuos de mina. Degree of contribution: Principal researcher and coordinator. Principal researcher: Fernando López Gayarre. Researcher number: 3. Financier entity: ArcelorMittal, Innovación, Investigación e Inversión S.L. Amount 9000 €. Initial date: 23/03/2018 Duration: 5 month



Project: Diseño y evaluación estructural de un sistema logístico para almacenaje automático autoportante. Degree of contribution: Principal researcher and Coordinator. Researcher number: 3. Financier entity: Noega Systems S.L. Amount: 18000 €. Initial date: 04/07/2014 Duration: 1 year - 3 month

Project: Asistencia técnica para evaluar la calidad del hormigón de una estructura de 15 pisos situada en Casablanca (Marruecos). Degree of contribution: Principal researcher and Coordinator. Researcher number: 1. Financier entity: Estudios y Proyectos para la Construcción y el Almacenaje S.L. Amount: 2000 €. Initial date: 01/02/2014 Duration: 1 month.

Project: Investigación enfocada al estudio de la influencia de voladuras en estructuras circundantes a la corta y su modelización. Degree of contribution: Researcher Principal researcher: Celestino González Nicieza. Researcher number: 3. Financier entity: Hunosa. Initial date: 18/05/2011 Duration: 7 month.

C.4. Patents

Authors: María Inmaculada Álvarez Fernández; Arturo Álvarez Vigil; Fernando López Gayarre; Carmen Covadonga García Fernández; Celestino González Nicieza. Título: Dispositivo y método par la realización de ensayos que determinan el mecanismo de rotura sobre muestras de roca empleando discos de corte (Invention patent with previous examination). Titular entity: Universidad de Oviedo. Reference: 2 387 277. Date: 17/01/2013.

Authors: Celestino González Nicieza; Arturo Álvarez Vigil; María Inmaculada Álvarez Fernández; Fernando López Gayarre. Título: Dispositivo para la medida de la convergencia en túneles (Invention patent with previous examination). Titular entity: Universidad de Oviedo. Reference: 2 380 256. Date: 04/12/2012.

Authors: Fernando López Gayarre; María Inmaculada Álvarez Fernández; Celestino González Nicieza; Arturo Álvarez Vigil. Título: Procedimiento para determinar in situ el coeficiente de Poisson en macizos rocosos mediante tres sondeos no colineales (Invention patent with previous examination). Titular entity: Universidad de Oviedo. Reference: 2 375 769 Date: 20/06/2012.

Authors: Arturo Álvarez Vigil; Inmaculada Álvarez Fernández; Fernando López Gayarre; Celestino González Nicieza. Título: Método y sistema para la realización de ensayos "in situ" y caracterización de terrenos heterogéneos o macizos rocosos intensamente fracturados. (Invention patent with previous examination). Titular entity: Universidad de Oviedo Reference: 2351498. Date: 05/07/2011.

Authors: Celestino González Nicieza; M. Inmaculada Álvarez Fernández; Arturo E. Álvarez Vigil; Fernando López Gayarre; Consuelo Pizarro García. Título: Dispositivo y Método para la Extracción, el Transporte y el Ensayo de Gases en Muestras de Rocas Blandas. (Invention patent with previous examination). Titular entity: Universidad de Oviedo Reference: 2336067. Date: 08/10/2010.

C.5, C.6, C.7... (e. g., Institutional responsibilities, memberships of scientific societies)

Final Degree Award at the end of the Industrial Technical Engineering studies.

Member of the GT 1.6 Hormigón de Muy Alto Rendimiento (HMAR) de la Comisión 1 de ACHE.

Supervisor and tutor of more than 190 Final Degree and Master Projects.

Regular, reviewer of the following journals:

ACI Materials Journal, Construction and Building Materials, Journal of Cleaner Production, Cement and Concrete Composites, Journal of Materials in Civil Engineering, International Journal of Smart and Nano Materials, Materials and Structures, Sustainability, Waste Management, Engineering Failure Analysis and Materials.