CV date	13/01/2023

Part A. PERSONAL INFORMATION

First name	María del Pilar
Family name	Mercader Moyano

A.1. Current position

Position	Tenured professor at the University of Sevilla		
Initial date	6th November 2018		
Institution	University of Seville (US)		
Department/Center	Building Construction I	Higher Technical School of Architecture	
Country	Spain	Teleph. number	954557086
Key words	Sustainable Construction and Refurbishment, Eco-efficient constructive solutions, construction and demolition waste (CDW) management and valorisation, energy efficiency, Building Information Modelling (BIM), poverty energy, social vulnerability		

A.2. Previous positions (research activity interuptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
13/12/2012-10/06/2013 (1year/baby)	PhD /University of Seville/Seville/maternity leave

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Architecture	US/Spain	2010
Master in Expert Report and Building Retrofit	US/Spain	2008
Master in Architecture and Historic Heritage	US/Spain	2008
Doctoral program of Architectural and Urban Refurbishment	US/Spain	2002
Degree in Architecture	US/Spain	2001

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

Research six-year term: 2 (2014-19); thesis supervised: 12 (3 industrial mention), 7 co-tutored with UNLP (Argentina) and UAT (Mexico); Total citations: 205; 10 Q1; h-index: 8.

My academic and research training is enriched by professional practise in Refurbishment and Social Housing: Municipal architect in Fuente Palmera (Cordoba, 3 years), Architect at the Municipal Planning of Seville (8 years), Architect for the Andalusian Agency of Housing and Refurbishment, and Regional Refurbishment Counselling of Public Works and Housing (Seville and Cordoba, 6 years). Currently, I`m Vice-dean of Quality and Sustainable Habitat at the School of Architecture, US. This has allowed me to know the actual needs and to contact with companies, linking them to the US by business and research collaboration agreements. I presented my thesis in 2010, in the doctoral programme: *Theory and practise of Architectural and Urban Refurbishment* (Cum Laude), titled *Quantification of the consumed resources and the CO2 emissions produced in the Andalusian Building Stock and its implications in the Kyoto Protocol*. I belong to ARDITEC research group, which has got funding of 1.800.000 € (2014-21), has organized R+D+i activities and transferred know-how to the production sector. I have published the results in international congresses (59), scientific journals (36), books, book chapters and monographies (12) invited conferences (13); they sum 120 contributions (100 in 2016-21), about Sustainable Construction and Refurbishment, Eco-Efficient Solutions, Climate Change, CDW Management and Valorisation and its implementation in BIM, energy poverty and social vulnerability. I have benefited from several stays in international research centres as the Faculty of Architecture, Design & Urbanism in Buenos Aires, Argentina (6 months), resulting in a Framework and Specific Agreement research in CDW management and valorisation in Argentina and its applicability to eco-efficient products. I have directed 5 editions of the International Congress in Sustainable Construction & Eco-efficient Solutions (CICSE) (http://congreso.us.es/sostenible), with high international scientific repercussion, resulting in the monograph: *Sustainable Development and Renovation in Architecture, Urbanism and Engineering*, Springer 2017, awarded for being top seller. I have edited 2 Special Issues in Sustainability 2020 (MDPI), *Decarbonisation and Circular Economy in the Sustainable Development and Renovation of Buildings and Neighbourhoods* and *Urban and Buildings*

Regeneration Strategy to Climatic Change Mitigation, Energy, and Social Poverty after a World Health and Economic Global Crisis. I am coordinator of the Doctoral Programme in Architecture of the US, linked to the National University of La Plata (Argentina), Autonomous University of Mexico and the Pontifical Catholic University (Chile). I have evaluated several international research projects and articles for JCR journals. I created the International Master: *Eco-efficient Refurbishment of Buildings and Neighbourhoods*, pioneer in training on-line, directing and coordinating its 6 editions (http://www.master.us.es/mastereeb).
I have helped more than 20 masters' graduates to be employed in the companies where they undertook the job placement. I highlight my phD students with the industrial mention: J. Roldán Porras, predoctoral hired in Ferrovial Agromán S.A, nowadays the Managing Director in Andalusia; in his thesis (2017) *Disaggregated Models for Environmental Impact Assessment in Singular Foundations Interfered by Underground Transportation Infrastructures*, innovated with a foundation that supported a heritage building over a metro line in Seville. M. Ramos Martín (2020), *Integrated methodology for evaluating the sustainability of regenerative actions on the envelope of urban cells in temperate climates*, predoctoral hired in Martinez de Aspe & Asociados Architecture Studio, where currently, he performs as BIM manager; he created a tool for rehabilitation of buildings and neighborhoods from a holistic perspective, including user's needs and boosting the execution process. E.Cózar-Cózar (2017) *Modeling and measurement in BIM following the criteria of the Andalusian construction cost base*, linked construction cost bases and environmental costs to modeling tools in BIM (REVIT); he was hired by BIM IBERICA S.A. They were the background of the project that I lead, CIRCULARBIM, creating the tool OpenBIMquantities http://open-bim-quantities.cype.es/, to estimate environmental costs, with the partner CYPE. The thesis (co-superved with Mexico) by M. Flores García (2019) *The Attractiveness of Housing to Promote Aging in the Place: Meavel Model*, paved the way after the COVID-19 pandemic, showing how to adapt the place for elderly people with reduced mobility. She completed her internship at EMVISESA S.A., Seville, rehabilitating social housing eco-efficiently, nowadays she`s a professor at Zacatecas College of Architects, Mexico.

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

C.1. Publications *(see instructions)*

1. Camporeale, Patricia Edith; Mercader-Moyano, Pilar. A GIS-BASED METHODOLOGY TO INCREASE ENERGY FLEXIBILITY IN BUILDING CLUSTER THROUGH DEEP RENOVATION: A NEIGHBORHOOD IN SEVILLE. Energy and Buildings, V.231. DOI: 10.1016/j.enbuild.2020.110573.

2. Mercader-Moyano, Pilar; Morat, Oswaldo; Serrano-Jiménez, Antonio. URBAN AND SOCIAL VULNERABILITY ASSESSMENT IN THE BUILT ENVIRONMENT: AN INTERDISCIPLINARY INDEX-METHODOLOGY TOWARDS FEASIBLE PLANNING AND POLICY-MAKING UNDER A CRISIS CONTEXT. 2021. Sustainable Cities and Society, V. 73. DOI: 10.1016/j.scs.2021.103082.

3. Mercader-Moyano, Pilar; Flores-García, Mariana; Serrano-Jiménez Antonio. HOUSING AND NEIGHBOURHOOD DIAGNOSIS FOR AGEING IN PLACE: MULTIDIMENSIONAL ASSESSMENT SYSTEM OF THE BUILT ENVIRONMENT (MASBE). 2020. Sustainable Cities and Society, V. 62. DOI: 10.1016/j.scs.2020.102422.

4. Mercader-Moyano, Paula; Esquivias, P.M.; Muntean, R. 2020. ECO-EFFICIENT ANALYSIS OF A REFURBISHMENT PROPOSAL FOR SOCIAL HOUSING. Sustainability (Switzerland) 12(17),6725. DOI: 10.3390/su12176725

5. Mercader-Moyano, Pilar; Ramos-Martin, Manuel. 2020. COMPREHENSIVE SUSTAINABILITY ASSESSMENT OF REGENERATIVE ACTIONS ON THE THERMAL ENVELOPE OF OBSOLETE BUILIDNGS UNDER CLIMATE CHANGE PERSPECTIVE. Sustainability (Switzerland) 12(12),5495. DOI.10.3390/su12145495.

6. Camporeale Patricia; Mercader-Moyano Pilar. 2019. A HOLISTIC APPROACH TOWARDS NEARLY ZERO ENERGY BUILDINGS: SHAPE OPTIMIZATION OF TYPICAL HOUSING TYPOLOGIES IN IBERO-AMERICAN CITIES FROM A HOLISTIC PERSPECTIVE. Solar Energy, pp. 738-775. DOI: 10.1016/j.solener.2019.09.091.

7. Garrido-Piñero, Julia; Mercader-Moyano, Pilar. 2017. EIAMUO METHODOLOGY FOR ENVIRONMENTAL ASSESSMENT OF THE POST-WAR HOUSING ESTATES RENOVATION: PRACTICAL APPLICATION IN SEVILLE (SPAIN). Environmental Impact Assessment Review. 67, pp. 124-133. DOI: 10.1016/j.eiar.2017.09.004
8. Camporeale, Patricia Edith; Mercader-Moyano, Pilar; Czajkowski, Jorge Daniel. 2017. MULTI-OBJECTIVE OPTIMISATION MODEL: A HOUSING BLOCK RETROFIT IN SEVILLE. Energy and Buildings. 153, pp. 476-484. DOI: 10.1016/j.enbuild.2017.08.023
9. Villoria-Sáez, Paola; Santa Cruz-Astorqui, Jaime; Del Río, Mercedes; Mercader-Moyano, Pilar; Rodríguez-Sánchez, Antonio. 2016. ESTIMATION OF CONSTRUCTION AND DEMOLITION WASTE IN BUILDING ENERGY EFFICIENCY RETROFFITING WORKS OF THE VERTICAL ENVELOPE. Journal of Cleaner Production. pp. 2978-2985. DOI: 10.1016/j.jclepro.2017.11.113
10. Mercader-Moyano, Pilar; Yajnes, Marta.; Caruso, Susana. 2016. EXPERIMENTAL CHARACTERISATION OF CEMENT-BASED COMPOUND WITH RECYCLED AGGREGATES AND EPS FROM REHABILITATION WORK. Revista de la Construcción. 15, pp. 97-106. DOI: 10.4067/S0718-915X2016000300010.

C.2. Congress

1. Presidenta, directora, coordinadora y organizadora de las 4 ediciones del Congreso Internacional de Construcción Sostenible y Soluciones Ecoeficientes (CICSE), última edición 26,27 y 28 abril 2021, Buenos Aires, Argentina. https://congreso.us.es/sostenible/. Ref. PP2016-6758 III ed. Ref. CCPA2014/005 II ed. y ref. SCCNAIN/2013/005 I ed)
2. Conferencia invitada "El reto de la rehabilitación ecoeficiente de edificios y barrios", Mercader Moyano, P. I Congreso Internacional de Arquitectura con Énfasis en Vivienda: Necesidades materiales, políticas públicas y problemas actuales, 17octubre-7 noviembre 2020, Tampico, Tamaulipas, México.
3. Conferencia invitada "CircularBIM", Mercader Moyano, P. II Congreso Virtual BIM de Centro América y el Caribe "BIM 2020", 25-27 marzo 2020, Honduras, Centro América.
4. Conferencia invitada "Energy Rating Systems", Mercader Moyano, P. I Encuentro Nacional sobre Ciudad, Arquitectura y Construcción Sustentable, Universidad Nacional de La Plata, 23-27 mayo 2016, La Plata, Argentina.
5. Conferencia invitada "Redes de Investigación y Docencia", Mercader Moyano, P. X Encuentro Regional de Investigación. XXVIII Jornadas de Investigación FADU-UBA, 25 y 26 de septiembre de 2014, Buenos Aires, Argentina.

C.3. Research projects

1. 2019-1-ES01-KA203-065962. CircularBIM, 2019: Educational Platform focused on advanced strategies of reinstatement of building materials in the industrial value chain to promote the transition to the circular economy through the use of BIM Learning Technologies". European Union. P.Mercader (Main Research-MR). 01/09/2019-31/08/2021. 224.240,00 €.
2. 2020-1-RO01-KA203-080223. RecoverIND, 2020: Ecological and Innovative technologies for recovering industrial areas from LCA and Energy Efficiency point of view. European Union. Erasmus+KA2. Radu Muntain (Universitatea Transilvania din Brasov, Rumania. 01/12/2020-30/11/2022. 179.082 €.
3. **2018-1-RO01-KA203-049458. UrbanBIM**: 2018: Educational integration of urban planning based on BIM-GIS technologies and focused on circular economy challenges. European Union. Erasmus+KA2. Madelyn Marrero Meléndez (MR) (University of Seville). 01/09/2017-31/08/2019. 229.955,00 €.
4. 2016-1-ES01-KA203-025422. OERCO2: Open Educational Resource CO2: Online service resource center for the innovative study of building material Life Cycle Assessment. European Union. Jaime Solís-Guzmán (US). 2016-2018. 242.491,00€
5.(CCPI2015/006). Eco-efficient rehabilitation of buildings and neighborhoods: waste management of Construction and Demolition wastes (CDW) in Argentina and application of

ecoeffcient products of CEP to Spanish regulations. Universidad de Buenos Aires (UBA), Argentina. International Agreement. Pilar Mercader Moyano (MR). 2015-2020. 18.000,00 €.
6. (Ref. 15BP-45346) ABACO Project: Platform for the economic costs and environmental indicators dissemination for integrated management of building projects in Chile. Universidad del Bío-Bío, Corfo Innova Chile. Madelyn Marrero-Meléndez (US). 2015-2017. 196.600 €.
7. (Ref.20020130200132BA) Development of sustainable materials using rubbles, eps foam, natural materials and paper from urban and CDW wastes in concrete in order to generate products for social enterprising and green employment. Universidad de Buenos Aires-Programación Científica UBACYT-2014. Yajnes, Marta (UBA). 2014-2016 (UBA). 5000 $.
8. (BIA2013-43061-R) From waste to resource´(W2R) (BIA2013-43061-R) (2013), on the development of new eco- materials from rehabilitation CDW. Spanish Ministry of Economy and Competitiveness. Department of Research, Development and Innovation. Del Río, Mercedes (Universidad Politécnica de Madrid). 2014-2016. 113.740 €. Research Team.
9.(BIA2011-25812) EVALHED: Ecological footprint assessment in the housing sector in Spain. Spanish Ministry of Science and Innovation. Madelyn Marrero Meléndez (US). 2012-2014. 70.180 €. Research Team.

C.4. Contracts, technological or transfer merits

1. (Ref. 4115/0632). Basic Project of Construction and Technical advice in the direction of works of the pilot project “Nearly Zero-Energy Building and Passivhaus in Andalusia” housing in Córdoba. Funding company: GRUPO PUMA S.L, ROCKWOOL S.A.U, PROARID GREEN S.L.(MR)P.Mercader-Moyano (US).Duration: 21/04/2021-20/04/2022.Amount 11.500 €.
2.(Ref.3825/0632)/(3557/0632). Implementation of eco-efficient and urban health measurements in buildings and neighborhoods rehabilitation to introduce new products in the AEC sector (Phase II) and Phase (I). Funding company: GRUPO PUMA S.L. (MR) P.Mercader Moyano. Duration: 2020-2022 2019-2020 respectively. Amount 6000 €.
3.(Ref. 4139/0632/Ref.3719/0632/Ref.3548/0632) Implementation of eco-efficient and urban health measurements in buildings and neighborhoods rehabilitation to introduce new products in the AEC sector (Phase III, phase II and phase I). Funding company: MAPEI SPAIN S.A. (MR) P.Mercader Moyano. Duration: 2021-2018 in total. Amount: 9.000 €.
4. (Ref.2827/0632). Diagnosis of "Energy Poverty" in building and proposal of eco-efficient repair. Funding: CCPP Compositor. (MR) P. Mercader-Moyano (US). 2016.
5. (Ref. 2688/0632) NZEB: Technical Project, Organisation and Technical Assessment in the Project management of the pilot project NZEB one-family housing in La Herrería, Fuente Palmera, Córdoba. Funding: Guisado-Baena. (MR) Pilar Mercader-Moyano (US). 2015-2016.
6. (Ref. 2127/0632) Expert opinion and reparation proposal in Industrial park Calonge, Sevilla. R&M Arquitectos Asociados S.L.U. MR: P.Mercader Moyano (US). 2014.
7. (Ref. 2223/0632) Expert opinion on office, premises and garage building “Torre Este” Sevilla. R&M Arquitectos Asociados Company. MR: P.Mercader Moyano (US). 2014.
8. (Ref. 1899/0632) Study, analysis, damages characterization, expert opinion of building pathologies and reparation proposal of the residential complex “Habitania”, Sevilla. Company R&M. MR: Pilar Mercader Moyano (US). 2013-2014.
9. (Ref. 1712/0632) Study, analysis, damages characterization, expert opinion of building pathologies and reparation proposal of the office, premises and garage building “Ágora Royal Parque Empresarial” Sevilla. Company R&M. MR: Pilar Mercader Moyano (US). 2012-2013.
10. (Ref. 1406/0492) Creation of a database in ARCVIEW to determine the buildings older than 50 years in Seville´. CDW minimization tool for housing projects. MR: Jose Antonio Solis Guzmán (Universidad de Sevilla). 2011-2012. 11.811,8 €. Research team.