

CV Date

12/02/2025

Part A. PERSONAL INFORMATION

First Name	María José		
Family Name	Suárez López		
Sex	Female	Date of Birth	20/11/1978
ID number Social Security, Passport	76946195V		
URL Web			
Email Address	suarezlmaria@uniovi.es		
Open Researcher and Contributor ID (ORCID)	0000-0001-7468-831X		

A.1. Current position

Job Title	Associate Professor (Profesor Titular)		
Starting date	2023		
Institution	Universidad de Oviedo		
Department / Centre	Energy / Escuela Politécnica Superior de Ingeniería de Gijón		
Country	Spain	Phone Number	(+34) 985182114
Keywords	Classic thermodynamic, transference of the heat; Solar thermic generation; Conventional thermic stations		

A.3. Education

Degree/Master/PhD	University / Country	Year
Ph.D. in Energy Engineering	Universidad de Oviedo / Spain	2012
Chemical Engineering, MEng	Universidad de Oviedo	2002

Part B. CV SUMMARY

Research activity

Research lines: The applicant has been developed the following research lines thanks to funding obtained through research projects in European, national and regional competitive calls for proposals.

- Numerical analysis of the smoke propagation in fires
- Numerical and experimental study of passive solar solutions in bioclimatic architecture
- Energy efficiency in buildings
- Numerical modeling of the contaminant dispersion
- Numerical and experimental analysis of energy devices

Results of the research activity:

The following publications are the result of research projects and doctoral theses supervised by the applicant:

- 32 articles published in journals included in the Journal Citation Reports (15 of them in Q1). The majority of these papers has numerous cites currently.
- 1 book chapter in an international prestige collection
- 3 papers presented in prestigious international congresses (considered as a JCR paper), 17 papers presented in other international conferences and 6 papers presented in national congresses. All of them with a peer review process.
- 2 research awards: Eduardo Barreiros Foundation and Government of Extremadura.

Research projects:

- 1 European project. Principal researcher
- 6 National projects. Principal researcher in 1
- 18 Regional projects. Principal researcher in 8

Transfer of results:

- 15 contracts of special relevance with public and private entities. Principal researcher in 3

Most of the research projects, in which the applicant has participated or directed, have been carried out in collaboration with companies. In all of them and more specifically in contracts with private or public entities such as the Asturian Energy Foundation (FAEN) and the company TSK Electrónica y Electricidad S.A., there has been a transfer of research and technology to these entities. This technology has been developed at Oviedo University and CTIC Foundation - Technology Center. In addition to the basic technology transfer, the methodologies and applications developed during the basic research have been adapted to the specific requirements of the companies.

The quality of the transfer of the results to the companies or entities can be evaluated by the use that these entities give to the results of the projects and/or contracts or by the continuity of the collaboration in related topics or even in new topics. This is the case of TSK Electrónica y Electricidad, S.A., a company with which the candidate has been collaborating since 2013 in all kinds of international, national and regional competitive calls.

Researcher mobility:

- Stays in 2 R&D centres: CIEMAT and Extremadura University

Supervisor of Doctoral Thesis:

The results of Doctoral Theses have been published in papers and conferences. The collaboration with the doctorates continues currently through research projects and new publications. All doctorates are working in relevant positions both in Spain and abroad.

- Supervisor of 3 doctoral theses with "Cum Laude"
- Supervisor of 2 doctoral theses (currently in progress)

Other:

- Reviewer of 5 journals included in JCR, 3 in Q1: Energy and Buildings, Energy Conversion and Management and Journal of Cleaner Production

Experience in management and administration:

- Director of Energy Efficiency, Sustainability and Environment, Oviedo University, 2021
- Manager for Energy Unit (middle-level management) in CTIC Technological Centre
- Knowledge in agile project management using SCRUM and KANBAN techniques
- Participation in the organization of 3 international congresses

Work experience:

- Internship engineer in CAPSA
- Quality inspector in REPSOL
- Engineer in Solar Kuantica S.L. - PhD expert in energy efficiency in CTIC Technological Centre

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.** David García Menéndez; Juan Carlos Ríos Fernández; Ana María Blanco Marigorta; (4/4) María José Suárez López. 2022. Dynamic simulation and exergetic analysis of a solar thermal collector installation. Alexandria Engineering Journal. Elsevier. 61, pp.1665-1677. ISSN 1110-0168. <https://doi.org/10.1016/j.aej.2021.06.075>
- 2 Scientific paper.** Micheal Alaa William; (2/4) María José Suárez López; Silvia Soutullo; Ahmed A. Hanafy. 2021. Building envelopes toward energy-efficient buildings: A balanced multi-approach decision making. International Journal of Energy Research. Wiley. pp.1-18. ISSN 0363-907X. <https://doi.org/10.1002/er.7166>

- 3 **Scientific paper.** Micheal Alaa William; (2/4) María José Suárez López; Silvia Soutullo; Ahmed A. Hanafy. 2021. Evaluating heating, ventilation, and air-conditioning systems toward minimizing the airborne transmission risk of Mucormycosis and COVID-19 infections in built environment. Case Studies in Thermal Engineering. Elsevier. 28-101567, pp.---. ISSN 2214-157X. <https://doi.org/10.1016/j.csite.2021.101567>
- 4 **Scientific paper.** Ahmed Essam Tourab; Ana María Blanco Marigorta; Aly M. Elharidi; (4/4) María José Suárez López. 2020. A Novel Humidification Technique Used in Water Desalination Systems Based on the Humidification–Dehumidification Process: Experimentally and Theoretically. Water. MDPI. 12-2264, pp.---. ISSN 2073-4441. <https://doi.org/10.3390/w12082264>
- 5 **Scientific paper.** (1/4) María José Suárez López (AC); Silvia Soutullo Castro; Antonio Navarro Manso; Eduardo Blanco Marigorta. 2020. Heat collection in an attached sunspace. Renewable Energy. Elsevier. 145, pp.2144-2150. ISSN 0960-1481. <https://doi.org/10.1016/j.renene.2019.07.137>
- 6 **Scientific paper.** Silvia Soutullo Castro; (2/4) María José Suárez López (AC); David García Menéndez; Eduardo Blanco Marigorta. 2019. Decision matrix methodology for retrofitting techniques of existing buildings. Journal of Cleaner Production. Elsevier. 240, pp.118153. ISSN 0959-6526. <https://doi.org/10.1016/j.clepro.2019-118153>
- 7 **Scientific paper.** Andrés Meana Fernández; (2/5) María José Suárez López; Eduardo Blanco Marigorta; Jesús-Ignacio Prieto García; David García Menéndez. 2024. Experimental heating and cooling curves of the ground for temporary energy storage applications. Journal of Energy Storage. Elsevier. 94-112419, pp.1-11. ISSN 2352-152X. <https://doi.org/10.1016/j.est.2024.112419>
- 8 **Scientific paper.** Elena Antuña Yudego; Víctor Manuel Fernández Pacheco; Eduardo Álvarez Álvarez; Juan Luis Carús Candás; (5/5) María José Suárez López. 2023. A CFD-based methodology for impact assessment of industrial emissions and evaluation of mitigation measures for regulatory purposes. Processes. MDPI. 11-7, pp.2039. ISSN 2227-9717. <https://doi.org/10.3390/pr11072039>
- 9 **Scientific paper.** Víctor Manuel Fernández Pacheco; Elena Antuña Yudego; Juan Luis Carús Candás; María José Suárez López; Eduardo Álvarez Álvarez. 2022. An evapotranspiration evolution model as a function of meteorological variables: A CFD model approach. Sustainability. MDPI. 14-7, pp.3800. <https://doi.org/10.3390/su14073800>
- 10 **Scientific paper.** Micheal A. William; María José Suárez López; Silvia Soutullo Castro; M.M. Fouad; A.A. Hanafy; W.M. El-Maghlany. 2022. Multi-objective integrated BES-CFD co-simulation approach towards pandemic proof buildings. Energy Reports. Elsevier. 8, pp.137-152. <https://doi.org/10.1016/j.egyr.2022.06.091>

C.2. Conferences and meetings

- 1 Andrés Meana Fernández; María José Suárez López; Eduardo Blanco Marigorta; Jesús I. Prieto García; David García Menéndez. Experimental analysis of the feasibility of using the ground as a temporary energy accumulator. 36th INTERNATIONAL CONFERENCE ON EFFICIENCY, COST, OPTIMISATION, SIMULATION AND ENVIRONMENTAL IMPACT OF ENERGY SYSTEMS (ECOS2023). University of Las Palmas de Gran Canaria. 2023. Spain.
- 2 Álvaro García Martínez; Aitor Fernández Jiménez; Eduardo Álvarez Álvarez; Eduardo Blanco Marigorta; María José Suárez López. Experimental model of a hydrogen fuel cell using graphene pads as heat spreaders. 36th INTERNATIONAL CONFERENCE ON EFFICIENCY, COST, OPTIMISATION, SIMULATION AND ENVIRONMENTAL IMPACT OF ENERGY SYSTEMS (ECOS2023). University of Las Palmas de Gran Canaria. 2023. Spain.
- 3 Micheal Alaa William; Mennatallah Fouad; Ahmed A. Hanafy; María José Suárez López; Silvia Soutullo. Enviro-economic assessment of buildings decarbonization scenarios in hot climates: Mindset toward energy-efficiency. CEES 2022 - 4th International Conference on Clean Energy and Electrical Systems. Ontario Tech University and West Virginia University. 2022. Japan. Participatory - oral communication. Conference.

- 4 María José Suárez López; María Nuria Sánchez Egido; Eduardo Blanco Marigorta; María José Jiménez; Enmanuela Giancola. A CFD Energetic study of the influence of the panel orientation in Open Joint Ventilated Façades. TMREES22-FR INTERNATIONAL CONFERENCE ON TECHNOLOGIES AND MATERIALS FOR RENEWABLE ENERGY, ENVIRONMENT AND SUSTAINABILITY. European Academy for Sustainable Development (EURACA). 2022. France.
- 5 Micheal A. William; María José Suárez López; Silvia Soutullo Castro; M. Fouad; A.A. Hanafy; W.M. El-Maghlany. Multi-objective integrated BES-CFD co-simulation approach toward pandemic proof buildings. TMREES22-FR INTERNATIONAL CONFERENCE ON TECHNOLOGIES AND MATERIALS FOR RENEWABLE ENERGY, ENVIRONMENT AND SUSTAINABILITY. European Academy for Sustainable Development (EURACA). 2022. France.
- 6 María Nuria Sánchez Ejido; María José Suárez López; Eduardo Blanco Marigorta; José Antonio Ferrer; Enmanuela Giancola. Open-Joint Ventilated Façades Performance with Changing Climatic Conditions. PLEA 2020 - Planning Post Carbon Cities. A Coruña University. 2020. Spain. Conference.

C.3. Research projects and contracts

- 1 **Project.** AYUD/2021/57485, Next-generation heat dissipator design. FICYT - Fundación Fomento Asturias Investigación. María José Suárez López. (Universidad de Oviedo). 15/10/2021-31/12/2023. 61.400 €. Principal investigator.
- 2 **Project.** IDE/2021/000457, BIO-TECS - Research on the technology hybridization of Deep Learning, Edge Computing, Internet of Things, and Energy Microgeneration for the conservation of biodiversity in isolated, remote and potentially hostile environments. INSTITUTO DE DESARROLLO ECONOMICO DEL PRINCIPADO DE ASTURIAS. María José Suárez López. (Universidad de Oviedo). 15/06/2021-31/12/2023. 499.945,18 €. Principal investigator.
- 3 **Project.** IDE/2021/000462, DativeHaus - Study and research in the design of an energy-optimized modular data processing center. INSTITUTO DE DESARROLLO ECONOMICO DEL PRINCIPADO DE ASTURIAS. María José Suárez López. (Universidad de Oviedo). 15/06/2021-31/12/2023. 257.832,61 €. Principal investigator.
- 4 **Project.** IDE/2018/000423 (FUO-145-19), EVAIR - Evaluation of mitigation measures on atmospheric pollution and prediction of high resolution air quality levels through a multi-scale methodology. IDEPA Instituto de Desarrollo Económico del Principado de Asturias. Eduardo Álvarez Álvarez. (Universidad de Oviedo). 13/08/2018-30/11/2020. 100.776,26 €. Principal investigator. Collaboration in the model development and numerical simulation using Computational Fluid Dynamic (CFD) techniques. Analysis of the results obtained. Management tasks: Collaboration in the proposal e...
- 5 **Project.** SERA-20171010 (FUO- 317-17), FORWARD - Operational monitoring and FOrcasting system for Resilience of agriculture and forestry under intensification of the Water cycle: a big Data approach. Centro para el Desarrollo Tecnológico Industrial (CDTI). María José Suárez López. (Universidad de Oviedo). 20/09/2017-20/03/2019. 585.089 €. Principal investigator. Development of the methodology for the analysis of the crops evapotranspiration using Computational Fluid Dynamic Techniques (CFD). Management tasks: Collaboration in the proposal elaboration and coo...
- 6 **Project.** IDE/2016/000181 (FUO-058-17), EventRisk - Methodology for the forecast of risk events in industrial environments. IDEPA Instituto de Desarrollo Económico del Principado de Asturias. Eduardo Álvarez Álvarez. (Universidad de Oviedo). 14/02/2017-13/08/2018. 35.689 €. Principal investigator. Development of the methodology for the analysis of both atmospheric pollutants and particles dispersion using Computational Fluid Dynamic (CFD) techniques. Management tasks: Collaboration in the pro...
- 7 **Contract.** Calculation of the Heating and Conditioning system for the material handling facilities to be carried out by the Company at the Ostroleka Thermal Power Station in Poland TSK Group. María José Suárez López. 15/01/2019-15/01/2020. 18.000 €.