



Cátedra Jean Monnet
Project Management
Methodology – OpenPM2

CV German Martinez

On this website you can find additional information about Professor Germán Martínez Montes, holder of the Jean Monnet Chair. **"PM² by European Commission. Open, free and common project management framework for all European institutions, companies and citizens. – PM²EU+".**

Academic Positions and Activities

- Full professor (Engineering Project) in the University of Granada and Jean Monnet Chair Holder (2020-2023)
- Associated professor, half-time associate professor at the University of Granada and Lecture in an associated centre of University of Wales.
- Vice-Dean of the Faculty of Civil Engineering and Facilities & Infrastructures General Manager of the UGR (all of this position are related to project management knowledge and skills).
- Currently Head of Department of Construction and Engineering Project.
- Technologist accredited by the National System of Scientific and Technological Evaluation (SINECYT) of Mexico.
- International Advisor for the implementation of the Civil Engineering degree in the National Intercultural University "Fabiola Salazar Leguia" of Bagua (Peru)
- External Evaluator of Civil Engineering Postgraduate Programs according to concert with the CONACYT of Paraguay.
- Actively participation in two Marie Curie Actions and principal investigator (PI) of more than 50 research and transfer projects.
- Supervisor of 8 PhD Thesis.
- 6 books and more than 100 scientific and professional papers in leading journals and international congresses. Most of them are related to Project Management, Risk Management and Procurement Systems.
- Reviewer of international journals like Safety Science, Construction & Renewable Sustainable Energy Review.
- Member of the Spanish official translation team of the Open PM2 (European Commission).

Teaching Activities

- Construction Project.
- Project Management.

- Project Management Methodologies.
- Risk Management.
- Procurement Procedures.
- Environmental Engineer.

Professional Activities

- External advisor of several Institutions, Enterprises and Public Administrations.
- Project Manager & Founder of Vicenor, S.L. (Spin-Off of the University of Granada);
- CEO of Andaluza de Señalizaciones, S.A. (Highway Management and Maintenance);
- Project Engineer at Urbaconsult, S.A. (advisory enterprise);
- Maintenance Engineer at GRUPISA, S.A. (Highway Management and Maintenance) and
- Project Manager at Local Government (Diputación de Granada).

International Publications

2026

- Boutros M-B, El Hajj C, Jawad D, Martínez Montes G. (2026). Managerial Perceptions of Emerging Technology Adoption in Construction: Evidence from Developing Countries Journal of Engineering, Design and Technology. <https://doi.org/10.1108/JEDT-10-2025-0614-R1>

2025

- El Hajj, C. I., & Martínez Montes, G. (2025). From Costs to Strategic Gains: Modeling the Economic Impact of BIM Through Sensitivity-Enhanced System Dynamics. Engineering, Construction and Architectural Management. <https://doi.org/10.1108/ECAM-04-2025-0690>
- Rodríguez-Rojas MI, Moreno Escobar B, Martínez Montes G, Garmendia Antín M. Planning Resilient Cities: A Methodological Framework for the Integration of Nature-Based Solutions. Applied Sciences. 2025; 15(23):12378. <https://doi.org/10.3390/app152312378>
- El Hajj, C. I., & Martínez Montes, G. (2025). Examining Green Building Practices: The Influence on Building Information Modeling Function Diffusion. Sustainability, 17(9), 3843. <https://doi.org/10.3390/su17093843>
- El Hajj, C., & Montes, G. M. (2025). Challenges of projectification in an engineering school: Lessons learned and room for improving the whole performance of the institution. Social Sciences & Humanities Open, 11, 101487. <https://doi.org/10.1016/j.ssaho.2025.101487>

2024

- Boutros M-B, El Hajj C, Jawad D, Martínez Montes G. Diffusion of ERP in the

<http://catedras.ugr.es/openpm2/>

Construction Industry: An ERP Modules Approach: Case Study of Developing Countries. *Buildings*. 2024; 14(10):3224.
<https://doi.org/10.3390/buildings14103224> (Q2-JCR).

2023

- Moreno Escobar, Begoña, Germán Martínez Montes, and Claudette El Hajj. 2023. "Building the Foundation for a Necessary Debate: Projectification of Society" *Systems* 11, no. 4: 165. <https://doi.org/10.3390/systems11040165> (Q2-JCR).

2022

- Mattinzioli, T., Sol-Sanchez, M., Moreno-Navarro, F., Rubio-Gamez, M. C., & Martinez, G. (2022). Benchmarking the embodied environmental impacts of the design parameters for asphalt mixtures. *Sustainable Materials and Technologies*, 32, e00395. <https://doi.org/10.1016/j.SUSMAT.2022.E00395> (Q1-JCR).

2021

- El, H. C., Dima, J., & Martinez, M. G. (2021). Analysis of a Construction Innovative Solution from the Perspective of an Information System Theory. *Journal of Construction Engineering and Management*, 147(9), 3121003. [https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0002120](https://doi.org/10.1061/(ASCE)CO.1943-7862.0002120) (Q1 - JCR)
- El Hajj, C., Martínez Montes, G. and Jawad, D. (2021), "Analysis of BIM functionalities diffusion in the construction industry: the case of the MENA region", *Engineering, Construction and Architectural Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/ECAM-03-2021-0269> (IF: 3.531 - Year 2020). (Q2 - JCR)
- El Hajj, C., Martínez Montes, G. and Jawad, D. (2021), "An overview of BIM adoption barriers in the Middle East and North Africa developing countries", *Engineering, Construction and Architectural Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/ECAM-05-2021-0432>, (IF: 3.531 - Year 2020). (Q2 - JCR)
- Mattinzioli, T., Sol-Sánchez, M., Martínez, G. et al. A parametric study on the impact of open-source inventory variability and uncertainty for the life cycle assessment of road bituminous pavements. *Int J Life Cycle Assess* 26, 916–935 (2021). <https://doi.org/10.1007/s11367-021-01878-1> (Q1 - JCR)
- Mattinzioli, T., Sol-Sánchez, M., Jiménez del Barco Carrión, A., Moreno-Navarro, F., Rubio-Gámez M.C., and Martínez, G. (2021). Analysis of the GHG Savings and Cost-Effectiveness of Asphalt Pavement Climate Mitigation Strategies. *Journal of Cleaner Production*. (IF: 9.297). Vol 320. <https://doi.org/10.1016/j.JCLEPRO.2021.128768> (D1 - JCR)

2020

- Rodríguez-Rojas, M.I.; Huertas-Fernández, F.; Moreno, B.; Martínez, G. Middle-Term Evolution of Efficiency in Permeable Pavements: A Real Case Study in a

Mediterranean climate. *Int. J. Environ. Res. Public Health* 2020, 17, 7774.
<https://doi.org/10.3390/ijerph17217774> (Q1 - JCR)

- Mattinzioli, T; Sol-Sánchez, M.; Martínez, G. & Rubio-Gámez, M. (2020) A Critical Review of Roadway Sustainable Rating Systems. *Sustainable Cities and Society*. DOI: 10.1016/j.scs.2020.102447. <https://doi.org/10.1016/j.scs.2020.102447> (D1 - JCR)
- Mattinzioli, T; Sol-Sánchez, M.; Moreno, B.; Alegre, J. & Martínez, G. (2020) Sustainable building rating systems: A critical review for achieving a common consensus, *Critical Reviews in Environmental Science and Technology*, <https://doi.org/10.1080/10643389.2020.1732781> (D1 - JCR)

2019

- Vidal , R.; Sánchez-Pantoja, N.; Martínez, G. (2019). Life cycle assessment of a residential building with cross-laminated timber structure in Granada-Spain. *Informes de la Construcción*, 71(554): e289. <https://doi.org/10.3989/ic.60982> (Q4 - JCR)
- Espartero, F., Martínez, G. and Frías, M. (2019) Observatorio Andaluz de Astronomía. *Revista Mexicana de Astronomía y Astrofísica. RevMexAA (SC)*. 51 (2019) 58-61. DOI: <http://doi.org/10.22201/ia.14052059p.2019.51.12>
- Espartero, F, Frías, M., Martínez, G. and Pérez, A. (2019) The PRO-AM Observatory. *Revista Mexicana de Astronomía y Astrofísica. RevMexAA (SC)*. 51 (2019) 62-65. DOI: <http://doi.org/10.22201/ia.14052059p.2019.51.13>
- Espartero, F, Frías, M., Martínez, G. and Pérez, A. (2019) Autonomous mini observatory for meteor spectrography. *Revista Mexicana de Astronomía y Astrofísica. RevMexAA (SC)*. 51 (2019) 131-134. DOI: <http://doi.org/10.22201/ia.14052059p.2019.51.22>.

2018

- Espartero, F., Martínez, G., Frías, M., Simón, F. & Castro-Tirado, A. (2018) «Autonomous spectrographic system to analyse the main elements of fireballs and meteors» *Earth, Planets and Space*. Volume 70,2, January 2018, Pages 1-7. DOI: <https://doi.org/10.1186/s40623-017-0768-2> (Q2 - JCR)
- Rodríguez-Rojas MI, Huertas-Fernández F, Moreno B, Martínez G, Grindlay AL (2018) «A study of the application of permeable pavements as a sustainable technique for the mitigation of soil sealing in cities: A case study in the south of Spain» *Journal of Environmental Management*. Volume 205, 1 January 2018, Pages 151-162. DOI: <https://doi.org/10.1016/j.jenvman.2017.09.075>. (Q1 - JCR)

2017

- Pirozolo, L., Moreno-Navarro, F., Martínez-Montes, G., Rubio-Gámez, M.C. (2017) «Evaluation of bituminous subballast manufactured at low temperatures as an

alternative for the construction of more sustainable railway structures». *Materiales de Construcción*. Vol 67, No 327 DOI: <http://dx.doi.org/10.3989/mc.2017.04816>

- Rodríguez-Rojas, M.I.; Cuevas-Arrabal, M.; Moreno, G.; Martínez-Montes, G. (2017) «El cambio de paradigma de la gestión del drenaje urbano desde la perspectiva del planeamiento. Una propuesta metodológica.» *Boletín de la Asociación de Geógrafos Españoles*. Volumen 75. DOI: <http://dx.doi.org/10.21138/bage.2492>
- Sol, M., Moreno-Navarro, F., Martínez-Montes, G., Rubio-Gámez, M.C. (2017) An alternative sustainable railway maintenance technique based on the use of rubber particles. *Journal of Cleaner Production*. Volume 142, Part 4. Páginas: 3850–3858. DOI: <https://doi.org/10.1016/j.jclepro.2016.10.077>.

2016

- Rodríguez-Rojas M.I., Huertas-Fernández F., Martínez G., Moreno B. (2016): «Indicators to evaluate Water Sensitive Urban Design in Urban Planning». *WIT Transactions on The Built Environment*, 210. 775-784. ISSN. 1743-3541 (online) DOI: <https://doi.org/10.2495/SDP160651> SJR (2015): 0.14, Posición 209/280 (1).
- Jiménez del Barco-Carrión, A., García-Travé, G., Moreno-Navarro, F., Martínez-Montes, G., Rubio-Gámez, M.C. Comparison of the influence of recycled crumb rubber and polymer concentration on the performance of binders for asphalt mixtures. *Materiales de Construcción*. Nº. 323, 2016. DOI: <https://doi.org/10.3989/mc.2016.08815>.

2015

- Rodríguez, M. I.; Cuevas M.M., Huertas F., Martínez G.& Moreno B. (2015): «Indicators to evaluate Water Sensitive Urban Design in Urban Planning». *WIT Transactions on The Built Environment*, 168 (1).
- Pacheco, R; Alonso, M; Martinez, G; Ordóñez, J. (2014) Efficient design of residential buildings geometry to optimize photovoltaic energy generation and energy demand in a warm Mediterranean climate. *Energy Efficiency*. February 2015, Volume 8, Issue 1, pp 65-84 <https://doi.org/10.1007/s12053-014-9275-5>

2014

- Rodríguez, M.I., Cuevas, M.M., Martínez, G. y Moreno, B. (2014): «Planning Criteria for Water Sensitive Urban Design». *WIT Transactions on Ecology and the Environment*, 191. <https://doi.org/10.2495/SC141342>

2013

- Vidal, R.; Moliner, E.; Martínez, G.; Rubio, M.C. 2013. Life cycle assessment of hot mix asphalt and zeolite-based warm mix asphalt with reclaimed asphalt pavement. *Resources, Conservation and Recycling*. Vol. 74, pp. 111-114. <https://doi.org/10.1016/j.resconrec.2013.02.018>

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- Rubio, M.C.; Moreno, F.; Martínez-Echevarria, M.J.; Martínez, G.; Vazquez, J.M. 2013. "Comparative analysis of emissions from the manufacture and use of hot and half-warm mix asphalt". Journal of Cleaner Production. Vol. 41, pp. 1-6. <https://doi.org/10.1016/j.jclepro.2012.09.036>

2012

- Pacheco, R., Ordóñez, J. & Martínez, G. 2012. "Energy efficient design of building: A review. Renewable and Sustainable Energy Reviews, vol. 16, no. 6, pp. 3559-3573. <https://doi.org/10.1016/j.rser.2012.03.045>
- Rubio, M.C.; Martínez, G.; Baena, L.; Moreno, F. (2012). Warm mix asphalt: an overview. Journal of Cleaner Production. Volume 24, March 2012, Pages 76-84. <https://doi.org/10.1016/j.jclepro.2011.11.053>
- Rubio, M.C.; Moreno, F.; Martínez-Echevarria, M.J.; Martínez, G.; Vazquez, J.M. 2012. "Comparative analysis of emissions from the manufacture and use of hot and half-warm mix asphalt". Journal of Cleaner Production, <https://doi.org/10.1016/j.jclepro.2012.09.036>
- Martínez. G.; Moreno, B.; Rubio, M.C. 2012. "Gestión del riesgo en proyectos de ingeniería civil. Singularidades". Dyna. Vol. 87-, pp. 12-15.
- Martínez. G.; Moreno, B.; Rubio, M.C. 2012. "Gestión del riesgo en proyectos de ingeniería. El caso del Campus Universitario PTS. Universidad de Granada (España)". Dyna-Colombia. Vol. 79-173, pp. 7-14.

2011

- Martínez, G. Prados, E. Alegre, J. y Ordóñez, J. (2011). The applicability of computer simulation using Monte Carlo techniques in windfarm profitability analysis. Renewable and Sustainable Energy Review . Vol. 15-9. Pp 4746-4755. <https://doi.org/10.1016/j.rser.2011.07.078>

2010

- Ordóñez, J., Jadraque, E., Alegre, J. & Martínez, G. 2010, "Analysis of the photovoltaic solar energy capacity of residential rooftops in Andalusia (Spain)", Renewable and Sustainable Energy Reviews, vol. 14, no. 7, pp. 2122-2130. <https://doi.org/10.1016/j.rser.2010.01.001>

2008

- Rubio, M.C; Martínez, G; Rubio, J.C.; Ordoñez, J. (2008). Role of the Civil Engineer as a Coordinator of Health and Safety Matters within the Construction Sector. Journal of Professional Issues in Engineering Education and Practice. Vol 134-2. Pp.152-157. [https://doi.org/10.1061/\(ASCE\)1052-3928\(2008\)134:2\(152\)](https://doi.org/10.1061/(ASCE)1052-3928(2008)134:2(152))

2007

- Martínez, G., Rubio, M.C., Rubio, J.C., Rodríguez, P., Terres, F. (2007) Work Risk Prevention Procedures in Highways Management and Manufacturing Contracts. Human Factor and Ergonomics in Manufacturing,17:229-244.

- Rodríguez, G., Alegre, J., Martínez, G. (2007). The contribution of Environmental Management Systems to the management of Construction and Demolition Waste: The cases of the Autonomous Community of Madrid (Spain). Resources, Conservation & Recycling, 50:334-349.
<https://doi.org/10.1016/j.resconrec.2006.06.008>
- Martínez, G., Rubio, M.C., Moreno, B., Ordóñez, J. (2007) Final project teaching in higher education within civil engineering. A new perspective. Journal of Professional Issues in Engineering Education and Practice, 133:94-98.
[https://doi.org/10.1061/\(ASCE\)1052-3928\(2007\)133:2\(94\)](https://doi.org/10.1061/(ASCE)1052-3928(2007)133:2(94))
- García, J.O. Gago, E.J. Bayo, J.A. & Montes, G.M. 2007, "The use of solar energy in the buildings construction sector in Spain", Renewable and Sustainable Energy Reviews, vol. 11, no. 9, pp. 2166-2178.
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- Martínez, G. y Prados, E. (2007). Profitability of Wind Energy: Short-term Risk Factors and Possible Improvements. Renewable and Sustainable Energy Reviews. Vol. 11-9. Pp. 2191-2200.<https://doi.org/10.1016/j.rser.2006.03.009>
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<https://doi.org/10.1016/j.rser.2005.03.002>

2005

- Rubio, M.C.; Menéndez, A.; Martínez, G.; Rubio, J.C. (2005). Obligations and Responsibilities of Civil Engineers for the Prevention of Labour Risks. References to European Regulations. Journal of Professional Issues in Engineering Education and Practice. Vol 131. Pp 70-75.
- Martínez, G.; Serrano, M; Rubio, M.C; Menéndez, A. (2005). An Overview of renewable energy in Spain. The small Hydro-Power case. Renewable & Sustainable Energy Reviews. Vol. 9 . pp. 522-534.
<https://doi.org/10.1016/j.rser.2004.05.008>
- Martínez, G.; Rubio, M.C; Alegre, J; Ordóñez, J.; Oliver, J. (2005). Viabilidad de Proyectos de Minicentrales Hidroeléctricas. Enfoque con análisis de riesgo. Ingeniería Hidráulica en México. Vol. XX-I. pp. 5-18.

Collaboration with private companies and institutions

- PUERTO DE MOTRIL
- GUAMAR
- SANDO
- UCOP
- INVESIA
- PEREZ JIMENEZ
- JIMENEZ CARMONA
- JUNTA DE ANDALUCÍA
- DIPUTUACIÓN DE MÁLAGA

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Development Cooperation - Project Esperanza

Development cooperation is one of the best examples of generosity and collaboration that we can provide from our privileged position.

For many, many years, and thanks to my aunt Aurora, I have felt a special connection to the African continent, to those who live there and who desire to improve their lives.

After a few years without getting involved in any project because of Aurora's death, destiny knocked on my door. Belén, a graduate student of the UGR, spoke to me with a sparkle in her eyes about what she had achieved and how much could be done in terms of cooperation. I could do nothing but smile, touched!

I made her an exciting long-term proposal called "Project **ESPERANZA** (hope)". I wanted to collaborate and help the African continent, where a relative of mine, Aunt Aurora, had dedicated her whole life to helping others.

What does the Hope Project consist of?

It consists of raising enough money each year to finance a solidarity project in Africa. For how many years? As many years as the word hope has, nine. In other words, nine letters, nine years, nine projects. We focus on financing basic infrastructures: wells, pipes, sanitation, etc., but also schools, maternity wards and any other way of helping (there are a thousand ways to help).

If you really learn more about this amazing project, please, follow this link: [PROYECTO ESPERANZA](#).