Jj Del Coz-Díaz

List of Publications by Year
in descending order

134 papers	2,595 citations	186265 28 h-index	233421 45 g-index
134 all docs	134 docs citations	134 times ranked	1954 citing authors

#	ARTICLE	IF	CITATIONS
1	Thermal performance optimization of hollow clay bricks made up of paper waste. Energy and Buildings, 2014, 75, 96-108.	6.7	119
2	Application of an SVM-based regression model to the air quality study at local scale in the Avilés urban area (Spain). Mathematical and Computer Modelling, 2011, 54, 1453-1466.	2.0	118
3	Analysis and optimization of the heat-insulating light concrete hollow brick walls design by the finite element method. Applied Thermal Engineering, 2007, 27, 1445-1456.	6.0	113
4	Properties of gypsum composites containing vermiculite and polypropylene fibers: Numerical and experimental results. Energy and Buildings, 2014, 70, 135-144.	6.7	105
5	A SVM-based regression model to study the air quality at local scale in Oviedo urban area (Northern) Tj ETQq1 1 0.784314 rgBT /Overlo	2.2	90
6	A novel lightweight gypsum composite with diatomite and polypropylene fibers. Construction and Building Materials, 2016, 113, 732-740.	7.2	89
7	Non-linear thermal analysis of light concrete hollow brick walls by the finite element method and experimental validation. Applied Thermal Engineering, 2006, 26, 777-786.	6.0	63
8	Nonlinear thermal optimization of external light concrete multi-holed brick walls by the finite element method. International Journal of Heat and Mass Transfer, 2008, 51, 1530-1541.	4.8	63
9	Study of different grouting materials used in vertical geothermal closed-loop heat exchangers. Applied Thermal Engineering, 2013, 50, 159-167.	6.0	60
10	Review of international regulations governing the thermal insulation requirements of residential buildings and the harmonization of envelope energy loss. Renewable and Sustainable Energy Reviews, 2014, 34, 78-90.	16.4	60
11	Non-linear thermal optimization and design improvement of a new internal light concrete multi-holed brick walls by FEM. Applied Thermal Engineering, 2008, 28, 1090-1100.	6.0	59
12	Thermal design optimization of lightweight concrete blocks for internal one-way spanning slabs floors by FEM. Energy and Buildings, 2009, 41, 1276-1287.	6.7	58
13	Design optimization of 3D steel structures: Genetic algorithms vs. classical techniques. Journal of Constructional Steel Research, 2006, 62, 1303-1309.	3.9	54
14	The use of design of experiments to improve a neural network model in order to predict the thickness of the chromium layer in a hard chromium plating process. Mathematical and Computer Modelling, 2010, 52, 1169-1176.	2.0	52
15	The use of response surface methodology to improve the thermal transmittance of lightweight concrete hollow bricks by FEM. Construction and Building Materials, 2014, 52, 331-344.	7.2	50
16	Hygrothermal properties of lightweight concrete: Experiments and numerical fitting study. Construction and Building Materials, 2013, 40, 543-555.	7.2	49
17	Comparative analysis of TIG welding distortions between austenitic and duplex stainless steels by FEM. Applied Thermal Engineering, 2010, 30, 2448-2459.	6.0	47
18	Evaluation of the resistant capacity of cable nets using the finite element method and experimental validation. Engineering Geology, 2008, 100, 1-10.	6.3	46

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19	Estimation of the exposure of buildings to driving rain in Spain from daily wind and rain data. Building and Environment, 2012, 57, 259-270.	6.9	42
20	Combined use of wind-driven rain and wind pressure to define water penetration risk into building façades: The Spanish case. Building and Environment, 2013, 64, 46-56.	6.9	42
21	A modified elitist genetic algorithm applied to the design optimization of complex steel structures. Journal of Constructional Steel Research, 2005, 61, 265-280.	3.9	41
22	Nonlinear analysis of residual stresses in a rail manufacturing process by FEM. Applied Mathematical Modelling, 2009, 33, 34-53.	4.2	39
23	Design and shape optimization of a new type of hollow concrete masonry block using the finite element method. Engineering Structures, 2011, 33, 1-9.	5.3	39
24	A FEM comparative analysis of the thermal efficiency among floors made up of clay, concrete and lightweight concrete hollow blocks. Applied Thermal Engineering, 2010, 30, 2822-2826.	6.0	34
25	A study of the collapse of a WWII communications antenna using numerical simulations based on design of experiments by FEM. Engineering Structures, 2010, 32, 1792-1800.	5.3	32
26	Hygrothermal study of lightweight concrete hollow bricks: A new proposed experimental–numerical method. Energy and Buildings, 2014, 70, 194-206.	6.7	32
27	Nonlinear thermal analysis of multi-holed lightweight concrete blocks used in external and non-habitable floors by FEM. International Journal of Heat and Mass Transfer, 2011, 54, 533-548.	4.8	31
28	A correction factor to approximate the design thermal conductivity of building materials. Application to Spanish façades. Energy and Buildings, 2015, 88, 153-164.	6.7	30
29	Design and finite element analysis of a wet cycle cement rotary kiln. Finite Elements in Analysis and Design, 2002, 39, 17-42.	3.2	29
30	Non-linear analysis of unbolted base plates by the FEM and experimental validation. Thin-Walled Structures, 2006, 44, 529-541.	5.3	28
31	Flexible systems anchored to the ground for slope stabilisation: Critical review of existing design methods. Engineering Geology, 2011, 122, 129-145.	6.3	27
32	Non-linear analysis of the tubular 'heart' joint by FEM and experimental validation. Journal of Constructional Steel Research, 2007, 63, 1077-1090.	3.9	25
33	Sound transmission loss analysis through a multilayer lightweight concrete hollow brick wall by FEM and experimental validation. Building and Environment, 2010, 45, 2373-2386.	6.9	25
34	Numerical simulation of the performance of a snow fence with airfoil snow plates by FVM. Journal of Computational and Applied Mathematics, 2010, 234, 1200-1210.	2.0	23
35	Waste tire rubber particles modified by gamma radiation and their use as modifiers of concrete. Case Studies in Construction Materials, 2020, 12, e00321.	1.7	23
36	Non-linear analysis and warping of tubular pipe conveyors by the finite element method. Mathematical and Computer Modelling, 2007, 46, 95-108.	2.0	22

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37	Non-linear buckling analysis of a self-weighted metallic roof by FEM. Mathematical and Computer Modelling, 2010, 51, 216-228.	2.0	21
38	Recycled cellulose from Tetra Pak packaging as reinforcement of polyester based composites. Construction and Building Materials, 2017, 157, 1018-1023.	7.2	21
39	Frequency domain characterization of torque in tumbling ball mills using DEM modelling: Application to filling level monitoring. Powder Technology, 2018, 323, 433-444.	4.2	21
40	Detailed territorial estimation of design thermal conductivity for façade materials in North-Eastern Spain. Energy and Buildings, 2015, 102, 266-276.	6.7	20
41	Non-linear thermal analysis of the efficiency of light concrete multi-holed bricks with large recesses by FEM. Applied Mathematics and Computation, 2012, 218, 10040-10049.	2.2	19
42	Computer simulation of the laminar nozzle flow of a non-Newtonian fluid in a rubber extrusion process by the finite volume method and experimental comparison. Journal of Non-Crystalline Solids, 2007, 353, 981-983.	3.1	18
43	Non-linear hygrothermal failure analysis of an external clay brick wall by FEM â€" A case study. Construction and Building Materials, 2011, 25, 4454-4464.	7.2	18
44	Non-linear numerical analysis of plywood board timber connections by DOE-FEM and full-scale experimental validation. Engineering Structures, 2013, 49, 76-90.	5.3	18
45	Comparative study of LightWeight and Normal Concrete composite slabs behaviour under fire conditions. Engineering Structures, 2020, 207, 110196.	5.3	17
46	Global analysis of building façade exposure to water penetration in Chile. Building and Environment, 2013, 70, 284-297.	6.9	16
47	Field measurements of anchored flexible systems for slope stabilisation: Evidence of passive behaviour. Engineering Geology, 2013, 153, 95-104.	6.3	16
48	A new method for determining the water tightness of building facades. Building Research and Information, 2013, 41, 401-414.	3.9	16
49	Experimental and numerical analysis of new bricks made up of polymer modified-cement using expanded vermiculite. Computers and Concrete, 2013, 12, 319-335.	0.7	15
50	Implicit integration procedure for viscoplastic Gurson materials. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 6146-6157.	6.6	14
51	Nonlinear buckling and failure analysis of a self-weighted metallic roof with and without skylights by FEM. Engineering Failure Analysis, 2012, 26, 65-80.	4.0	14
52	Quantitative analysis of the divergence in energy losses allowed through building envelopes. Renewable and Sustainable Energy Reviews, 2015, 49, 1000-1008.	16.4	14
53	Non-linear analysis of cable networks by FEM and experimental validation. International Journal of Computer Mathematics, 2009, 86, 301-313.	1.8	13
54	Stiffness of the component â€˜lateral faces of RHSâ€™ at high temperature. Journal of Constructional Steel Research, 2011, 67, 1835-1842.	3.9	13

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55	Optimised method for estimating directional driving rain from synoptic observation data. Journal of Wind Engineering and Industrial Aerodynamics, 2013, 113, 1-11.	3.9	13
56	Flexible membranes anchored to the ground for slope stabilisation: Numerical modelling of soil slopes using SPH. Computers and Geotechnics, 2016, 78, 1-10.	4.7	13
57	Assessment of water penetration risk in building facades throughout Brazil. Building Research and Information, 2017, 45, 492-507.	3.9	13
58	Modified recycled tire fibers by gamma radiation and their use on the improvement of polymer concrete. Construction and Building Materials, 2019, 204, 327-334.	7.2	13
59	Numerical analysis of the influence of material mismatching in the transition curve of welded joints. Engineering Fracture Mechanics, 2008, 75, 3464-3482.	4.3	12
60	Finite volume modeling of the non-isothermal flow of a non-Newtonian fluid in a rubber's extrusion die. Journal of Non-Crystalline Solids, 2008, 354, 5334-5336.	3.1	12
61	Effect of the vent hole geometry and welding on the static strength of galvanized RHS K-joints by FEM and DOE. Engineering Structures, 2012, 41, 218-233.	5.3	12
62	An extended method for comparing watertightness tests for facades. Building Research and Information, 2013, 41, 706-721.	3.9	12
63	A comparison of methods for determining watertightness test parameters of building faÃ§ades. Building and Environment, 2014, 78, 145-154.	6.9	12
64	Thermal Performance Optimization of Lightweight Concrete/EPS Layered Composite Building Blocks. International Journal of Thermophysics, 2021, 42, 1.	2.1	12
65	Nonlinear explicit analysis and study of the behaviour of a new ring-type brake energy dissipator by FEM and experimental comparison. Applied Mathematics and Computation, 2010, 216, 1571-1582.	2.2	11
66	Collapse of a Masonry Wall in an Industrial Building: Diagnosis by Numerical Modeling. Journal of Performance of Constructed Facilities, 2013, 27, 65-76.	2.0	11
67	New launching method for steel bridges based on a self-supporting deck system: FEM and DOE analyses. Automation in Construction, 2014, 44, 183-196.	9.8	11
68	Numerical analysis of pressure field on curved self-weighted metallic roofs due to the wind effect by the finite element method. Journal of Computational and Applied Mathematics, 2006, 192, 40-50.	2.0	10
69	Evaluation of the damage in the vault and portico of the pre-Romanesque chapel of San Salvador de ValdediÃ³s using frictional contacts and the finite-element method. International Journal of Computer Mathematics, 2007, 84, 377-393.	1.8	10
70	Classification and Comparison of Snow Fences for the Protection of Transport Infrastructures. Journal of Cold Regions Engineering - ASCE, 2011, 25, 162-181.	1.1	10
71	Procedure for a detailed territorial assessment of wind-driven rain and driving-rain wind pressure and its implementation to three Spanish regions. Journal of Wind Engineering and Industrial Aerodynamics, 2014, 128, 76-89.	3.9	10
72	Patch loading in slender and high depth steel panels: FEM-DOE analyses and bridge launching application. Engineering Structures, 2015, 83, 74-85.	5.3	10

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73	On the significance of the climate-dataset time resolution in characterising wind-driven rain and simultaneous wind pressure. Part II: directional analysis. Stochastic Environmental Research and Risk Assessment, 2018, 32, 1799-1815.	4.0	10
74	Finite element analysis of the hyper-elastic contact problem in automotive door sealing. Journal of Non-Crystalline Solids, 2008, 354, 5331-5333.	3.1	9
75	Comparative Analysis of Mechanical Tensile Tests and the Explicit Simulation of a Brake Energy Dissipater by FEM. International Journal of Nonlinear Sciences and Numerical Simulation, 2009, 10, .	1.0	9
76	Performance analysis of wind fence models when used for truck protection under crosswind through numerical modeling. Journal of Wind Engineering and Industrial Aerodynamics, 2017, 168, 20-31.	3.9	9
77	Numerical simulation of bus aerodynamics on several classes of bridge decks. Engineering Applications of Computational Fluid Mechanics, 2017, 11, 435-449.	3.1	9
78	Finite element analysis of thin-walled composite two-span wood-based loadbearing stressed skin roof panels and experimental validation. Thin-Walled Structures, 2008, 46, 276-289.	5.3	8
79	Effects of elevated temperatures on mechanical properties of concrete containing haematite evaluated using fuzzy logic model. Materials Research Innovations, 2013, 17, 382-391.	2.3	8
80	Non-linear analysis of a reinforced concrete sheet cover (umbrella) of 40m diameter by the finite element method. Applied Mathematics and Computation, 2007, 184, 37-51.	2.2	7
81	Improvement alternatives for determining the watertightness performance of building facades. Building Research and Information, 2015, 43, 723-736.	3.9	7
82	Polymer waste materials as fillers in polymer mortars: experimental and finite elements simulation. Case Studies in Construction Materials, 2018, 9, e00178.	1.7	7
83	A New Methodology to Design Sustainable Archimedean Screw Turbines as Green Energy Generators. International Journal of Environmental Research and Public Health, 2020, 17, 9236.	2.6	7
84	Thermal Inertia Characterization of Multilayer Lightweight Walls: Numerical Analysis and Experimental Validation. Applied Sciences (Switzerland), 2021, 11, 5008.	2.5	7
85	Assessment of Lightweight Concrete Thermal Properties at Elevated Temperatures. Applied Sciences (Switzerland), 2021, 11, 10023.	2.5	7
86	A Mathematical Approach to Selective Scavenging of the Different Classes of Typical Atmospheric Aerosols by Rainout and Health Impact. Environmental Technology (United Kingdom), 2006, 27, 337-348.	2.2	6
87	Numerical analysis of the pressure field on curved and open self-weighted metallic roofs due to the wind effect by the finite volume method. Applied Mathematics and Computation, 2009, 209, 31-41.	2.2	6
88	Bridge–structure interaction analysis of a new bidirectional and continuous launching bridge mechanism. Engineering Structures, 2014, 59, 298-307.	5.3	6
89	Equivalence between the methods established by ISO 15927-3 to determine wind-driven rain exposure: Reanalysis and improvement proposal. Building and Environment, 2020, 174, 106777.	6.9	6
90	Aprendizaje interactivo mediante programa de análisis estructural avanzado. Journal of Constructional Steel Research, 1998, 46, 273-274.	3.9	5

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91	Static behavior of compressed braces in RHS K-joints of hot-dip galvanized trusses. Journal of Constructional Steel Research, 2013, 89, 307-316.	3.9	5
92	On the significance of the climate-dataset time resolution in characterising wind-driven rain and simultaneous wind pressure. Part I: scalar approach. Stochastic Environmental Research and Risk Assessment, 2018, 32, 1783-1797.	4.0	5
93	Recovery and Reuse of Waste Tetra Pak Packages by Using a Novel Treatment. , 2019, , 303-341.		5
94	Steady state numerical simulation of the particle collection efficiency of a new urban sustainable gravity settler using design of experiments by FVM. Applied Mathematics and Computation, 2011, 217, 8166-8178.	2.2	4
95	Numerical and experimental study of a new type of clip for joining cables. Engineering Structures, 2012, 44, 107-121.	5.3	4
96	Education for Sustainable Development: Methodology and Application within a Construction Course. Journal of Professional Issues in Engineering Education and Practice, 2013, 139, 72-79.	0.9	4
97	New mechanism for continuous and bidirectional displacement of heavy structures: Design and analysis. Automation in Construction, 2014, 44, 47-55.	9.8	4
98	Waste polymers and gamma radiation on the mechanical improvement of polymer mortars: Experimental and calculated results. Case Studies in Construction Materials, 2019, 11, e00273.	1.7	4
99	Lamellae of waste beverage packaging (Tetra Pak) and gamma radiation as tools for improvement of concrete. Case Studies in Construction Materials, 2020, 12, e00315.	1.7	4
100	Avoiding the need to directionally determine the exposure to rainwater penetration for faÃ§ade designs. Building and Environment, 2020, 176, 106850.	6.9	4
101	Numerical Analysis of the Behaviour of Tooth Intrarradial Posts by the Finite Element Method. Mathematical Modelling and Algorithms, 2005, 4, 275-287.	0.5	3
102	A data-driven manufacturing support system for rubber extrusion lines. International Journal of Production Research, 2010, 48, 2219-2231.	7.5	3
103	Stabilization of sludge from earth pressure balance for use in earth embankments. Applied Clay Science, 2011, 53, 533-537.	5.2	3
104	Optimization Based on Design of Experiments (DOE) Using Finite Element Model (FEM) Analysis Applied to Retrofitting the Church of Baldornon, Spain. International Journal of Architectural Heritage, 2012, 6, 436-451.	3.1	3
105	Novel Technologies and Applications for Construction Materials. Advances in Materials Science and Engineering, 2014, 2014, 1-2.	1.8	3
106	Improvement of a System for Catchment, Pretreatment, and Treatment of Runoff Water Using PIV Tests and Numerical Simulation. Journal of Irrigation and Drainage Engineering - ASCE, 2014, 140, 04014028.	1.0	3
107	Finite Element Analysis of Composite Laminated Timber (CLT). Proceedings (mdpi), 2018, 2, .	0.2	3
108	An alternative approach to estimate any subdaily extreme of rainfall and wind from usually available records. Stochastic Environmental Research and Risk Assessment, 2022, 36, 1819-1833.	4.0	3

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109	Acoustic Analysis of a Sandwich Non Metallic Panel for Roofs by FEM and Experimental Validation. AIP Conference Proceedings, 2007, , .	0.4	2
110	Optimization of an acoustic test chamber involving the fluid-structure interaction by FEM and experimental validation. Meccanica, 2010, 45, 705-722.	2.0	2
111	Nonlinear analysis of the pressure field in industrial buildings with curved metallic roofs due to the wind effect by FEM. Applied Mathematics and Computation, 2013, 221, 202-213.	2.2	2
112	A comparative modeling study to estimate wear of concrete. Neural Computing and Applications, 2014, 24, 649-662.	5.6	2
113	Improvement of a functional method to determine the design thermal transmittance of building faÃ§ades. Implementation in southern Spain. Journal of Building Engineering, 2020, 30, 101231.	3.4	2
114	Experimental and numerical analyses of rounded dovetail timber connections (RDC) under fire conditions. Engineering Structures, 2021, 228, 111535.	5.3	2
115	RevisiÃ³n y mejora de la caracterizaciÃ³n del grado de impermeabilidad requerido por el CTE DB-HS1 para fachadas de edificaciÃ³n. Informes De La Construccion, 2015, 67, e059.	0.3	2
116	Estudio comparativo experimental del comportamiento de uniones de cumbrera en cubiertas de madera laminada encolada con placas interiores de acero o tablero contrachapado de abedul. Materiales De Construccion, 2009, 59, 45-59.	0.7	2
117	Directional characterisation of annual and temporary exposure to rainwater penetration on building faÃ§ades throughout Mexico. Building and Environment, 2022, 212, 108837.	6.9	2
118	A model for defining evacuation policies for emergency escape from buildings. International Journal for Simulation and Multidisciplinary Design Optimization, 2008, 2, 237-244.	1.1	1
119	Analysis and study of an automobile rear seat by FEM. International Journal of Computer Mathematics, 2009, 86, 640-664.	1.8	1
120	Analysis and thermal optimization of an ecological ventilated self-weighted wood panel for roofs by FVM. Meccanica, 2010, 45, 619-634.	2.0	1
121	Non-linear analysis and calculation of the performance of a shelving protection system by FEM. Applied Mathematics and Computation, 2011, 218, 2365-2376.	2.2	1
122	Assessment of the Resistance of Steel K-joints between Rectangular Hollow Sections with Galvanizing Holes using the Finite Element Method. , 0, , .		1
123	CALIDAD DE AIRE INTERIOR Y EFICIENCIA ENERGÃ‰TICA. Dyna (Spain), 2012, 87, 74-79.	0.2	1
124	AJUSTE DE LA CONDUCTIVIDAD TÃ‰RMICA DE DISEÃ'O FIJADA POR EL CÃ"DIGO TÃ‰CNICO DE LA EDIFICACIÃ"N PARA MATERIALES DE FACHADA. Dyna (Spain), 2017, 92, 195-201.	0.2	1
125	Implementation of an elasticâ€"viscoplastic ductile model for the numerical simulation of the ductile crack growth in notched tensile and Charpy impact tests. International Journal of Computer Mathematics, 2008, 85, 587-601.	1.8	0
126	Mathematical study of the selective removal of different classes of atmospheric aerosols by coagulation, condensation, and gravitational settling, and the health impact. International Journal of Computer Mathematics, 2008, 85, 447-460.	1.8	0

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127	Numerical Study of Pressure Field in Laterally Closed Industrial Buildings with Curved Metallic Roofs due to the Wind Effect by FEM and European Rule Comparison. , 2009, , .		0
128	Non-linear thermal analysis of the efficiency of light concrete big-holed bricks by FEM. , 2012, , .		0
129	Non-linear analysis and calculation of the performance of a shelving protection system by FEM. , 2012, , .		0
130	Nuevo mÃ©todo de lanzamiento y sistema de empuje de puentes metÃ¡licos. Bases conceptuales. Hormigon Y Acero, 2015, 66, 151-163.	0.2	0
131	Novel Technologies and Applications for Construction Materials 2016. Advances in Materials Science and Engineering, 2017, 2017, 1-2.	1.8	0
132	APLICACIÃ"N AL CÃ"DIGO TÃ‰CNICO DE LA EDIFICACIÃ"N DE AVANCES EN EL ESTUDIO DE LA EXPOSICIÃ"N A LA HUMEDAD DE FACHADAS. Dyna (Spain), 2014, 89, 440-448.	0.2	0
133	Non-linear Analysis of the Soil-Structure Interaction of Baldornon's Church, Spain using the Finite Element Method. , 0, , .		0
134	Damage Assessment of a Self-Weight Metallic Roof with Skylights using the Finite Element Method. , 0, , .		0