

Luca Pelã

List of Publications by Year in descending order

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77
papers

2,676
citations

172443

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197805

49
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79
all docs

79
docs citations

79
times ranked

1346
citing authors

#	ARTICLE	IF	CITATIONS
1	Structural Analysis of Masonry Historical Constructions. Classical and Advanced Approaches. Archives of Computational Methods in Engineering, 2010, 17, 299-325.	10.2	473
2	Seismic assessment of masonry arch bridges. Engineering Structures, 2009, 31, 1777-1788.	5.3	131
3	An orthotropic damage model for the analysis of masonry structures. Construction and Building Materials, 2013, 41, 957-967.	7.2	120
4	Continuum damage model for orthotropic materials: Application to masonry. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 917-930.	6.6	98
5	Micro-scale continuous and discrete numerical models for nonlinear analysis of masonry shear walls. Construction and Building Materials, 2017, 149, 296-314.	7.2	92
6	Continuum FE models for the analysis of Mallorca Cathedral. Engineering Structures, 2013, 46, 653-670.	5.3	79
7	Numerical analysis of structural damage in the church of the Poblet Monastery. Engineering Failure Analysis, 2015, 48, 41-61.	4.0	77
8	Comparison of seismic assessment procedures for masonry arch bridges. Construction and Building Materials, 2013, 38, 381-394.	7.2	76
9	A crack-tracking technique for localized damage in quasi-brittle materials. Engineering Fracture Mechanics, 2010, 77, 2431-2450.	4.3	74
10	Predictive model for the seismic vulnerability assessment of small historic centres: Application to the inner Abruzzi Region in Italy. Engineering Structures, 2017, 153, 81-96.	5.3	72
11	Advanced frame element for seismic analysis of masonry structures: model formulation and validation. Earthquake Engineering and Structural Dynamics, 2015, 44, 2489-2506.	4.4	69
12	Regularization of first order computational homogenization for multiscale analysis of masonry structures. Computational Mechanics, 2016, 57, 257-276.	4.0	63
13	Multiscale computational first order homogenization of thick shells for the analysis of out-of-plane loaded masonry walls. Computer Methods in Applied Mechanics and Engineering, 2017, 315, 273-301.	6.6	56
14	Monotonic and cyclic testing of clay brick and lime mortar masonry in compression. Construction and Building Materials, 2018, 193, 453-466.	7.2	50
15	Review of Different Pushover Analysis Methods Applied to Masonry Buildings and Comparison with Nonlinear Dynamic Analysis. Journal of Earthquake Engineering, 2017, 21, 1234-1255.	2.5	47
16	Combined In-Situ and Laboratory Minor Destructive Testing of Historical Mortars. International Journal of Architectural Heritage, 2018, 12, 334-349.	3.1	42
17	Comparison of seismic analysis methods applied to a historical church struck by 2009 L'Aquila earthquake. Bulletin of Earthquake Engineering, 2015, 13, 3749-3778.	4.1	41
18	Seismic vulnerability assessment of historic centers: description of a predictive method and application to the case study of scanno (Abruzzi, Italy). International Journal of Architectural Heritage, 2018, 12, 1171-1195.	3.1	41

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19	Finite element modelling of internal and multiple localized cracks. <i>Computational Mechanics</i> , 2017, 59, 299-316.	4.0	39
20	Numerical investigation of non-linear equivalent-frame models for regular masonry walls. <i>Engineering Structures</i> , 2018, 173, 512-529.	5.3	38
21	Torque Penetrometric Test for the in-situ characterisation of historical mortars: fracture mechanics interpretation and experimental validation. <i>Construction and Building Materials</i> , 2017, 157, 509-520.	7.2	36
22	A localized mapped damage model for orthotropic materials. <i>Engineering Fracture Mechanics</i> , 2014, 124-125, 196-216.	4.3	35
23	Combining Brazilian tests on masonry cores and double punch tests for the mechanical characterization of historical mortars. <i>Construction and Building Materials</i> , 2016, 112, 112-127.	7.2	35
24	In-plane shear behaviour by diagonal compression testing of brick masonry walls strengthened with basalt and steel textile reinforced mortars. <i>Construction and Building Materials</i> , 2020, 240, 117905.	7.2	35
25	A crack-tracking technique for localized cohesive-frictional damage. <i>Engineering Fracture Mechanics</i> , 2015, 150, 96-114.	4.3	32
26	Compression test of masonry core samples extracted from existing brickwork. <i>Construction and Building Materials</i> , 2016, 119, 230-240.	7.2	32
27	Experimental evaluation of the shear strength of aerial lime mortar brickwork by standard tests on triplets and non-standard tests on core samples. <i>Engineering Structures</i> , 2017, 136, 441-453.	5.3	32
28	Performance-based Seismic Risk Assessment of Urban Systems. <i>International Journal of Architectural Heritage</i> , 2018, 12, 1131-1149.	3.1	32
29	An Enhanced Finite Element Macro-Model for the Realistic Simulation of Localized Cracks in Masonry Structures: A Large-Scale Application. <i>International Journal of Architectural Heritage</i> , 2018, 12, 432-447.	3.1	31
30	Seismic Risk Assessment and Mitigation at Emergency Limit Condition of Historical Buildings along Strategic Urban Roadways. Application to the "Antiga Esquerra de L'Eixample" Neighborhood of Barcelona. <i>International Journal of Architectural Heritage</i> , 2018, 12, 1055-1075.	3.1	29
31	Tracking multi-directional intersecting cracks in numerical modelling of masonry shear walls under cyclic loading. <i>Meccanica</i> , 2018, 53, 1757-1776.	2.0	28
32	Dynamic elastic properties of brick masonry constituents. <i>Construction and Building Materials</i> , 2019, 199, 756-770.	7.2	27
33	Challenges, Tools and Applications of Tracking Algorithms in the Numerical Modelling of Cracks in Concrete and Masonry Structures. <i>Archives of Computational Methods in Engineering</i> , 2019, 26, 961-1005.	10.2	26
34	Experimental analysis of the size effect on the compressive behaviour of cylindrical samples core-drilled from existing brick masonry. <i>Construction and Building Materials</i> , 2019, 228, 116759.	7.2	25
35	Cyclic shear-compression testing of brick masonry walls repaired and retrofitted with basalt textile reinforced mortar. <i>Composite Structures</i> , 2022, 283, 115068.	5.8	25
36	Analysis of the performance in the linear field of Equivalent-Frame Models for regular and irregular masonry walls. <i>Engineering Structures</i> , 2017, 145, 190-210.	5.3	24

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37	Influence of recycled limestone filler additions on the mechanical behaviour of commercial premixed hydraulic lime based mortars. <i>Construction and Building Materials</i> , 2020, 238, 117722.	7.2	24
38	Analytical Derivation of Seismic Fragility Curves for Historical Masonry Structures Based on Stochastic Analysis of Uncertain Material Parameters. <i>International Journal of Architectural Heritage</i> , 2019, 13, 1142-1164.	3.1	23
39	Assessing community resilience, housing recovery and impact of mitigation strategies at the urban scale: a case study after the 2012 Northern Italy Earthquake. <i>Bulletin of Earthquake Engineering</i> , 2020, 18, 6039-6074.	4.1	22
40	Building survey forms for heterogeneous urban areas in seismically hazardous zones. Application to the historical center of Valparaíso, Chile. <i>International Journal of Architectural Heritage</i> , 2018, 12, 1076-1111.	3.1	21
41	Relationship between the static and dynamic elastic modulus of brick masonry constituents. <i>Construction and Building Materials</i> , 2020, 259, 120386.	7.2	19
42	Experimental and numerical insights on the diagonal compression test for the shear characterisation of masonry. <i>Construction and Building Materials</i> , 2021, 287, 122964.	7.2	18
43	Analysis of the Effect of Provisional Ties on the Construction and Current Deformation of Mallorca Cathedral. <i>International Journal of Architectural Heritage</i> , 2016, 10, 418-437.	3.1	17
44	Multi directional pushover analysis of irregular masonry buildings without box behavior. <i>Engineering Structures</i> , 2019, 201, 109534.	5.3	17
45	Nonlinear finite and discrete element simulations of multi-storey masonry walls. <i>Bulletin of Earthquake Engineering</i> , 2022, 20, 2219-2244.	4.1	16
46	Open-source digital technologies for low-cost monitoring of historical constructions. <i>Journal of Cultural Heritage</i> , 2017, 25, 31-40.	3.3	15
47	Automated data analysis for static structural health monitoring of masonry heritage structures. <i>Structural Control and Health Monitoring</i> , 2020, 27, e2581.	4.0	15
48	Nonlinear Numerical Modeling of Complex Masonry Heritage Structures Considering History-Related Phenomena in Staged Construction Analysis and Material Uncertainty in Seismic Assessment. <i>Journal of Performance of Constructed Facilities</i> , 2020, 34, .	2.0	15
49	Nonlinear analysis of masonry structures using fiberâ€section line elements. <i>Earthquake Engineering and Structural Dynamics</i> , 2019, 48, 1345-1364.	4.4	14
50	New Trends and Challenges in Large-Scale and Urban Assessment of Seismic Risk in Historical Centres. <i>International Journal of Architectural Heritage</i> , 2018, 12, 1051-1054.	3.1	13
51	On the reliability of the equivalent frame models: the case study of the permanently monitored Pizzoliâ€™s town hall. <i>Bulletin of Earthquake Engineering</i> , 2022, 20, 2187-2217.	4.1	13
52	Experimental study of retrofit solutions for damaged concrete bridge slabs. <i>Composites Part B: Engineering</i> , 2012, 43, 2471-2479.	12.0	12
53	Cylindrical samples of brick masonry with aerial lime mortar under compression: Experimental and numerical study. <i>Construction and Building Materials</i> , 2019, 227, 116782.	7.2	11
54	A Risk Index for the Structural Diagnosis of Masonry Heritage (RISDiMaH). <i>Construction and Building Materials</i> , 2021, 284, 122433.	7.2	10

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55	A simplified model for seismic safety assessment of reinforced concrete buildings: framework and application to a 3-storey plan-irregular moment resisting frame. <i>Engineering Structures</i> , 2022, 250, 113348.	5.3	10
56	Experimental cyclic behaviour of shear masonry walls reinforced with single and double layered Steel Reinforced Grout. <i>Construction and Building Materials</i> , 2022, 320, 126053.	7.2	10
57	Mechanical Characterization of Historical Masonry by Core Drilling and Testing of Cylindrical Samples. <i>International Journal of Architectural Heritage</i> , 0, , 150817093153002.	3.1	9
58	Viscoelasticity and Damage Model for Creep Behavior of Historical Masonry Structures. <i>Open Civil Engineering Journal</i> , 2012, 6, 188-199.	0.8	9
59	Validation of non-linear equivalent-frame models for irregular masonry walls. <i>Engineering Structures</i> , 2022, 253, 113755.	5.3	9
60	Cyclic Analyses of Reinforced Concrete Masonry Panels Using a Force-Based Frame Element. <i>Journal of Structural Engineering</i> , 2019, 145, .	3.4	8
61	Seismic vulnerability index method for hybrid timber-masonry structures. Numerical calibration and application to the city of Valparaíso, Chile. <i>Journal of Building Engineering</i> , 2021, 44, 103185.	3.4	8
62	A Multilevel Approach for the Cultural Heritage Vulnerability and Strengthening: Application to the Melfi Castle. <i>Buildings</i> , 2020, 10, 158.	3.1	7
63	NUMERICAL VALIDATION OF EQUIVALENT-FRAME MODELS FOR URM WALLS. , 2016, , .		7
64	Anisotropy and compressive strength evaluation of solid fired clay bricks by testing small specimens. <i>Construction and Building Materials</i> , 2022, 344, 128195.	7.2	7
65	Dynamic Identification and Static Loading Tests of Timber Vaults: Application to a Modernist 20th Century Heritage Structure. <i>International Journal of Architectural Heritage</i> , 2017, 11, 607-620.	3.1	5
66	Seismic Assessment of the Milano Centrale Railway Station. <i>International Journal of Architectural Heritage</i> , 2013, 7, 609-627.	3.1	4
67	Performance-Based Urban Planning: Framework and Aquila Historic City Center Case Study. <i>International Journal of Architectural Heritage</i> , 2017, , 1-14.	3.1	4
68	Tracking of Localized Cracks in the Finite Element Analysis of Masonry Walls. <i>RILEM Bookseries</i> , 2019, , 919-928.	0.4	3
69	Experimental and Numerical Mechanical Characterization of Unreinforced and Reinforced Masonry Elements with Weak Air Lime Mortar Joints. <i>Sustainability</i> , 2022, 14, 3990.	3.2	3
70	Experimental comparison of two testing setups for characterizing the shear mechanical properties of masonry. <i>Journal of Building Engineering</i> , 2021, 44, 103277.	3.4	2
71	Static structural health monitoring and automated data analysis procedures applied to the diagnosis of a complex medieval masonry monastery. , 2020, , .		2
72	Numerical Modelling of Traditional Buildings Composed of Timber Frames and Masonry Walls under Seismic Loading. <i>International Journal of Architectural Heritage</i> , 2023, 17, 1256-1289.	3.1	2

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73	Modelling of in-plane seismic behaviour of one-way steel or timber jack arch floors in existing buildings. Application to the Eixample district of Barcelona. Engineering Structures, 2022, 262, 114343.	5.3	2
74	Effect of pier-spandrel geometry on the in-plane response of masonry structures. , 2016, , 339-346.		1
75	Complete experimental characterization of lime mortar and clay brick masonry. , 2016, , 1799-1806.		1
76	Experimental setup and numerical evaluation of the compression test on thin tiles for masonry timber vaults. Construction and Building Materials, 2021, 313, 125294.	7.2	1
77	Evaluation of mortar strength in existing masonry structures through a Minor Destructive Technique. , 2016, , 1699-1706.		0