

# Dimitrios G Lignos

## List of Publications by Year in descending order

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100  
papers

3,757  
citations

136740

32  
h-index

133063

59  
g-index

104  
all docs

104  
docs citations

104  
times ranked

1416  
citing authors

#	ARTICLE	IF	CITATIONS
1	Deterioration Modeling of Steel Components in Support of Collapse Prediction of Steel Moment Frames under Earthquake Loading. Journal of Structural Engineering, 2011, 137, 1291-1302.	1.7	664
2	Average spectral acceleration as an intensity measure for collapse risk assessment. Earthquake Engineering and Structural Dynamics, 2015, 44, 2057-2073.	2.5	230
3	An efficient method for estimating the collapse risk of structures in seismic regions. Earthquake Engineering and Structural Dynamics, 2013, 42, 25-41.	2.5	193
4	Prediction and validation of sidesway collapse of two scale models of a 4-story steel moment frame. Earthquake Engineering and Structural Dynamics, 2011, 40, 807-825.	2.5	168
5	Effect of gravity framing on the overstrength and collapse capacity of steel frame buildings with perimeter special moment frames. Earthquake Engineering and Structural Dynamics, 2015, 44, 1289-1307.	2.5	124
6	Computational Approach for Collapse Assessment of Concentrically Braced Frames in Seismic Regions. Journal of Structural Engineering, 2014, 140, .	1.7	117
7	Collapse Assessment of Steel Moment Frames Based on E-Defense Full-Scale Shake Table Collapse Tests. Journal of Structural Engineering, 2013, 139, 120-132.	1.7	111
8	Development and Utilization of Structural Component Databases for Performance-Based Earthquake Engineering. Journal of Structural Engineering, 2013, 139, 1382-1394.	1.7	111
9	Modeling of the composite action in fully restrained beam-to-column connections: implications in the seismic design and collapse capacity of steel special moment frames. Earthquake Engineering and Structural Dynamics, 2014, 43, 1935-1954.	2.5	107
10	Basic concepts and performance measures in prediction of collapse of buildings under earthquake ground motions. Structural Design of Tall and Special Buildings, 2010, 19, 167-181.	0.9	104
11	Proposed Updates to the ASCE 41 Nonlinear Modeling Parameters for Wide-Flange Steel Columns in Support of Performance-Based Seismic Engineering. Journal of Structural Engineering, 2019, 145, .	1.7	88
12	Analytical investigation of the cyclic behavior and plastic hinge formation in deep wide-flange steel beam-columns. Bulletin of Earthquake Engineering, 2015, 13, 1097-1118.	2.3	85
13	A simplified method for collapse capacity assessment of moment-resisting frame and shear wall structural systems. Engineering Structures, 2011, 33, 1107-1116.	2.6	84
14	Earthquake-induced loss assessment of steel frame buildings with special moment frames designed in highly seismic regions. Earthquake Engineering and Structural Dynamics, 2017, 46, 2141-2162.	2.5	76
15	Full-Scale Testing of Deep Wide-Flange Steel Columns under Multiaxial Cyclic Loading: Loading Sequence, Boundary Effects, and Lateral Stability Bracing Force Demands. Journal of Structural Engineering, 2018, 144, .	1.7	71
16	Seismic performance of a steel moment-resisting frame subject to strength and ductility uncertainty. Engineering Structures, 2014, 78, 69-77.	2.6	65
17	Dynamic Response of a Chevron Concentrically Braced Frame. Journal of Structural Engineering, 2013, 139, 515-525.	1.7	63
18	Use of Wavelet-Based Damage-Sensitive Features for Structural Damage Diagnosis Using Strong Motion Data. Journal of Structural Engineering, 2011, 137, 1215-1228.	1.7	57

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19	Spectral shape metrics and structural collapse potential. Earthquake Engineering and Structural Dynamics, 2016, 45, 1643-1659.	2.5	55
20	Development of fragility functions as a damage classification/prediction method for steel moment-resisting frames using a wavelet-based damage sensitive feature. Earthquake Engineering and Structural Dynamics, 2012, 41, 681-696.	2.5	51
21	Numerical and experimental evaluation of seismic capacity of high-rise steel buildings subjected to long duration earthquakes. Computers and Structures, 2011, 89, 959-967.	2.4	50
22	Improved Seismic Design and Nonlinear Modeling Recommendations for Wide-Flange Steel Columns. Journal of Structural Engineering, 2018, 144, .	1.7	49
23	Effect of Modeling Assumptions on the Earthquake-Induced Losses and Collapse Risk of Steel-Frame Buildings with Special Concentrically Braced Frames. Journal of Structural Engineering, 2017, 143, .	1.7	45
24	Fragility Assessment of Reduced Beam Section Moment Connections. Journal of Structural Engineering, 2010, 136, 1140-1150.	1.7	44
25	Evaluation of Simplified and State-of-the-Art Analysis Procedures for Steel Frame Buildings Equipped with Supplemental Damping Devices Based on E-Defense Full-Scale Shake Table Tests. Journal of Structural Engineering, 2016, 142, .	1.7	43
26	Adaptive numerical method algorithms for nonlinear viscous and bilinear oil damper models subjected to dynamic loading. Soil Dynamics and Earthquake Engineering, 2018, 113, 488-502.	1.9	41
27	Development of collapse-consistent loading protocols for experimental testing of steel columns. Earthquake Engineering and Structural Dynamics, 2020, 49, 114-131.	2.5	41
28	Experimental Evaluation and Numerical Modeling of Wide-Flange Steel Columns Subjected to Constant and Variable Axial Load Coupled with Lateral Drift Demands. Journal of Structural Engineering, 2020, 146, .	1.7	39
29	Constitutive Modeling of Structural Steels: Nonlinear Isotropic/Kinematic Hardening Material Model and Its Calibration. Journal of Structural Engineering, 2021, 147, .	1.7	38
30	Consistency in Solving the Inverse Problem of the Voce-Chaboche Constitutive Model for Plastic Straining. Journal of Engineering Mechanics - ASCE, 2020, 146, .	1.6	36
31	A Database in Support of Modeling of Component Deterioration for Collapse Prediction of Steel Frame Structures. , 2007, , .		34
32	Fragility functions for pre-Northridge welded steel moment-resisting beam-to-column connections. Engineering Structures, 2012, 45, 574-584.	2.6	34
33	Drift-based and dual-parameter fragility curves for concentrically braced frames in seismic regions. Journal of Constructional Steel Research, 2013, 90, 209-220.	1.7	32
34	Experimental behavior of iron-based shape memory alloys under cyclic loading histories. Construction and Building Materials, 2021, 272, 121712.	3.2	27
35	Seismic Retrofit of Steel Moment-Resisting Frames with High-Performance Fiber-Reinforced Concrete Infill Panels: Large-Scale Hybrid Simulation Experiments. Journal of Structural Engineering, 2014, 140, .	1.7	26
36	Hysteretic Behavior of Moment-Resisting Frames Considering Slab Restraint and Framing Action. Journal of Structural Engineering, 2020, 146, .	1.7	24

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37	Application of Simplified Analysis Procedures for Performance-Based Earthquake Evaluation of Steel Special Moment Frames. <i>Earthquake Spectra</i> , 2015, 31, 1949-1968.	1.6	23
38	Proposed methodology for building-specific earthquake loss assessment including column residual axial shortening. <i>Earthquake Engineering and Structural Dynamics</i> , 2020, 49, 339-355.	2.5	23
39	Experimental Evaluation of Steel Columns under Seismic Hazard-Consistent Collapse Loading Protocols. <i>Journal of Structural Engineering</i> , 2021, 147, .	1.7	23
40	Experimental study of sliding friction damper with composite materials for earthquake resistant structures. <i>Engineering Structures</i> , 2021, 248, 113063.	2.6	23
41	Nonmodel-based framework for rapid seismic risk and loss assessment of instrumented steel buildings. <i>Engineering Structures</i> , 2018, 156, 417-432.	2.6	20
42	Composite steel beam database for seismic design and performance assessment of composite-steel moment-resisting frame systems. <i>Bulletin of Earthquake Engineering</i> , 2019, 17, 3015-3039.	2.3	20
43	Proposed Panel Zone Model for Seismic Design of Steel Moment-Resisting Frames. <i>Journal of Structural Engineering</i> , 2021, 147, .	1.7	19
44	Seismic Stability of Wide-Flange Steel Columns Interacting with Embedded Column Base Connections. <i>Journal of Structural Engineering</i> , 2019, 145, .	1.7	18
45	11.29: Updates to the ASCE 41 provisions for the nonlinear modeling of steel wide-flange columns for performance-based earthquake engineering. <i>Ce/Papers</i> , 2017, 1, 3072-3081.	0.1	17
46	Fragility Curves for Wide-Flange Steel Columns and Implications for Building-Specific Earthquake-Induced Loss Assessment. <i>Earthquake Spectra</i> , 2018, 34, 1405-1429.	1.6	16
47	Assessment of Numerical and Experimental Errors in Hybrid Simulation of Framed Structural Systems through Collapse. <i>Journal of Earthquake Engineering</i> , 2016, 20, 885-909.	1.4	15
48	Simulating Local Buckling-Induced Softening in Steel Members Using an Equivalent Nonlocal Material Model in Displacement-Based Fiber Elements. <i>Journal of Structural Engineering</i> , 2018, 144, .	1.7	15
49	Assessment of structural damage detection methods for steel structures using full-scale experimental data and nonlinear analysis. <i>Bulletin of Earthquake Engineering</i> , 2018, 16, 2971-2999.	2.3	14
50	Fiber-based hysteretic model for simulating strength and stiffness deterioration of steel hollow structural section columns under cyclic loading. <i>Earthquake Engineering and Structural Dynamics</i> , 2020, 49, 1702-1720.	2.5	14
51	Simulating Cyclic Local Buckling-Induced Softening in Steel Beam-Columns Using a Nonlocal Material Model in Displacement-Based Fiber Elements. <i>Journal of Structural Engineering</i> , 2020, 146, .	1.7	12
52	Anchor-yield exposed column bases for minimizing residual deformations in seismic-resistant steel moment frames. <i>Earthquake Engineering and Structural Dynamics</i> , 2021, 50, 1083-1100.	2.5	12
53	Seismic Performance Characterization of Wood-Sheathed and Cold-Formed Steel Framed Floor and Roof Diaphragm Structures. <i>Journal of Structural Engineering</i> , 2018, 144, .	1.7	11
54	Experimental investigation of steel building gravity framing systems under strong earthquake shaking. <i>Soil Dynamics and Earthquake Engineering</i> , 2019, 116, 230-241.	1.9	11

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55	Seismic performance of a steel moment frame subassembly tested from the onset of damage through collapse. Earthquake Engineering and Structural Dynamics, 2016, 45, 1563-1580.	2.5	10
56	Reliability of a 4-Story Steel Moment-Resisting Frame against Collapse Due to Seismic Excitations. , 2008, , .		9
57	Seismic design of non-dissipative embedded column base connections. Journal of Constructional Steel Research, 2021, 177, 106417.	1.7	9
58	Development of Inelastic Panel Zone Database. Journal of Structural Engineering, 2021, 147, .	1.7	9
59	Significance of Modeling Deterioration in Structural Components for Predicting the Collapse Potential of Structures Under Earthquake Excitations. Geotechnical, Geological and Earthquake Engineering, 2010, , 173-181.	0.1	9
60	EARTHQUAKE LOSS ASSESSMENT OF STEEL FRAME BUILDINGS DESIGNED IN HIGHLY SEISMIC REGIONS. , 2015, , .		9
61	Estimation of base motion in instrumented steel buildings using output-only system identification. Earthquake Engineering and Structural Dynamics, 2014, 43, 547-563.	2.5	8
62	Proposed modeling approach of welding procedures for heavy steel plates. Engineering Structures, 2016, 127, 18-30.	2.6	7
63	Proposed nonlinear macro-model for seismic risk assessment of composite-steel moment resisting frames. Earthquake Engineering and Structural Dynamics, 2022, 51, 1180-1200.	2.5	7
64	Rate-dependent model for simulating the hysteretic behavior of low-yield stress buckling-restrained braces under dynamic excitations. Engineering Structures, 2021, 230, 111659.	2.6	6
65	Seismic demands of steel moment resisting frames with inelastic beam-to-column web panel zones. Earthquake Engineering and Structural Dynamics, 2022, 51, 1591-1609.	2.5	6
66	Effect of Composite Action on the Dynamic Stability of Special Steel Moment Resisting Frames Designed in Seismic Regions. , 2013, , .		5
67	Design Decision Support for Steel Frame Buildings through an Earthquake-Induced Loss Assessment. , 2015, , .		5
68	Fatigue Strength Upgrading of Cover Plate Ends by Welded Extensions in Existing Steel Bridge Girders. Journal of Bridge Engineering, 2018, 23, .	1.4	5
69	Effect of Column Base Flexibility on Earthquake-Induced Residual Deformations of Steel Columns. Key Engineering Materials, 0, 763, 149-156.	0.4	5
70	Recommendations for Improved Welding Procedures for Thick Steel Plates Through Thermo-Mechanical Analysis. International Journal of Steel Structures, 2019, 19, 193-212.	0.6	5
71	Proposed Backing Bar Detail in Welded Beam-to-Column Connections for Seismic Applications. Journal of Structural Engineering, 2022, 148, .	1.7	5
72	Prediction of Nonlinear Response"Pushover Analysis versus Simplified Nonlinear Response History Analysis. , 2011, , .		4

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73	Collapse Assessment of Steel Moment Resisting Frames Under Earthquake Shaking. Computational Methods in Applied Sciences (Springer), 2011, , 1-19.	0.1	4
74	Full-scale testing of stiffened extended shear tab connections under combined axial and shear forces. Engineering Structures, 2019, 185, 90-105.	2.6	4
75	Warping-Inclusive Kinematic Coupling in Mixed-Dimension Macro Models for Steel Wide Flange Beam Columns. Journal of Structural Engineering, 2022, 148, .	1.7	4
76	Development and Experimental Validation of Dissipative Embedded Column Base Connections for Enhanced Seismic Performance of Steel Moment-Resisting Frames. Journal of Structural Engineering, 2022, 148, .	1.7	4
77	Seismic Assessment of Steel Moment Frames Using Simplified Nonlinear Models. Computational Methods in Applied Sciences (Springer), 2013, , 91-109.	0.1	3
78	Cyclic Metal Plasticity Model Parameters with Limited Information: Constrained Optimization Approach. Journal of Engineering Mechanics - ASCE, 2021, 147, .	1.6	3
79	Seismic performance of steel columns interacting with embedded column bases while exhibiting inelastic deformations. Engineering Structures, 2022, 251, 113381.	2.6	3
80	Finite element modeling and behavior of dissipative embedded column base connections under cyclic loading. Journal of Constructional Steel Research, 2022, 189, 107063.	1.7	3
81	Comparison of Retrofitting Techniques for Existing Steel Moment Resisting Frames. , 2009, , .		2
82	Dynamic Response of a Steel Concentrically Braced Frame. , 2011, , .		2
83	Behaviour of stiffened extended shear tab connections under gravity induced shear force. Journal of Constructional Steel Research, 2018, 148, 336-350.	1.7	2
84	How to Predict the Probability of Collapse of Non-Ductile Building Structures. Geotechnical, Geological and Earthquake Engineering, 2009, , 343-365.	0.1	2
85	PROPOSED METHODOLOGY FOR EARTHQUAKE-INDUCED LOSS ASSESSMENT OF INSTRUMENTED STEEL FRAME BUILDINGS: BUILDING-SPECIFIC AND CITY-SCALE APPROACHES. , 2017, , .		2
86	Estimation of Seismic Performance of Existing Steel Moment Resisting Frame Buildings by Using Continuous Models. , 2009, , .		1
87	A probabilistic approach for assessing discontinuities in structural steel components based on Charpy-V-notch tests. Engineering Structures, 2017, 147, 1-11.	2.6	1
88	Earthquake-Induced Collapse Risk and Loss Assessment of Steel Concentrically Braced Frames. Key Engineering Materials, 2018, 763, 90-97.	0.4	1
89	Steel Columns under Multi-Axis Seismic Loading: Experimental Findings and Design Recommendations. Key Engineering Materials, 0, 763, 376-383.	0.4	1
90	EaRLâ€™Software for Earthquake Risk, Loss and Lifecycle Analysis. SoftwareX, 2020, 12, 100607.	1.2	1

#	ARTICLE	IF	CITATIONS
91	Fragility Assessment of Beam-Slab Connections for Informing Earthquake-Induced Repairs in Composite-Steel Moment Resisting Frames. <i>Frontiers in Built Environment</i> , 2021, 7, .	1.2	1
92	An efficient method for estimating the collapse risk of structures in seismic regions. , 2013, 42, 25.		1
93	Modeling of the composite action in fully restrained beam-to-column connections: implications in the seismic design and collapse capacity of steel special moment frames. , 2014, 43, 1935.		1
94	Basic concepts and performance measures in prediction of collapse of buildings under earthquake ground motions. , 2010, 19, 167.		1
95	Low-damage steel structures for enhanced life-cycle seismic performance. <i>Stahlbau</i> , 2022, 91, 315-325.	0.2	1
96	Closure to "Proposed Updates to the ASCE 41 Nonlinear Modeling Parameters for Wide-Flange Steel Columns in Support of Performance-Based Seismic Engineering" by Dimitrios G. Lignos, Alexander R. Hartloper, Ahmed Elkady, Gregory C. Deierlein, and Ronald Hamburger. <i>Journal of Structural Engineering</i> , 2021, 147, 07020018.	1.7	0
97	Closure to "Experimental Evaluation and Numerical Modeling of Wide-Flange Steel Columns Subjected to Constant and Variable Axial Load Coupled with Lateral Drift Demands" by Julien Cravero, Ahmed Elkady, and Dimitrios G. Lignos. <i>Journal of Structural Engineering</i> , 2021, 147, 07020020.	1.7	0
98	Hysteretic Behaviour of Shear Stud Connectors in Composite Steel Moment-Resisting Frames. <i>Ce/Papers</i> , 2021, 4, 575-582.	0.1	0
99	Closure to "Experimental Evaluation of Steel Columns under Seismic Hazard-Consistent Collapse Loading Protocols" by Yusuke Suzuki and Dimitrios G. Lignos. <i>Journal of Structural Engineering</i> , 2022, 148, .	1.7	0
100	Best-fit constraint equations for coupling mixed-dimension simulation models with wide flange cross sections. <i>Finite Elements in Analysis and Design</i> , 2022, 208, 103782.	1.7	0