Dimitrios G Lignos

List of Publications by Year
in descending order

100 papers	3,757 citations	136950 32 h-index	133252 59 g-index
104 all docs	104 docs citations	104 times ranked	1416 citing authors

#	Article	IF	Citations
1	Seismic performance of steel columns interacting with embedded column bases while exhibiting inelastic deformations. Engineering Structures, 2022, 251, 113381.	5.3	3
2	Warping-Inclusive Kinematic Coupling in Mixed-Dimension Macro Models for Steel Wide Flange Beam Columns. Journal of Structural Engineering, 2022, 148, .	3.4	4
3	Finite element modeling and behavior of dissipative embedded column base connections under cyclic loading. Journal of Constructional Steel Research, 2022, 189, 107063.	3.9	3
4	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, .	3.4	4
5	Proposed nonlinear macro‐model for seismic risk assessment of composite‐steel moment resisting frames. Earthquake Engineering and Structural Dynamics, 2022, 51, 1180-1200.	4.4	7
6	Seismic demands of steel moment resisting frames with inelastic beam‐to‐column web panel zones. Earthquake Engineering and Structural Dynamics, 2022, 51, 1591-1609.	4.4	6
7	Low‐damage steel structures for enhanced life‐cycle seismic performance. Stahlbau, 2022, 91, 315-325.	0.1	1
8	Closure to "Experimental Evaluation of Steel Columns under Seismic Hazard-Consistent Collapse Loading Protocols" by Yusuke Suzuki and Dimitrios G. Lignos. Journal of Structural Engineering, 2022, 148, .	3.4	0
9	Best-fit constraint equations for coupling mixed-dimension simulation models with wide flange cross sections. Finite Elements in Analysis and Design, 2022, 208, 103782.	3.2	0
10	Proposed Backing Bar Detail in Welded Beam-to-Column Connections for Seismic Applications. Journal of Structural Engineering, 2022, 148, .	3.4	5
11	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 G. Deierlein, and Ronald Hamburger. Journal of Structural Engineering, 2021, 147, 07020018.	3.4	0
12	Anchor‐yield exposed column bases for minimizing residual deformations in seismic‐resistant steel moment frames. Earthquake Engineering and Structural Dynamics, 2021, 50, 1083-1100.	4.4	12
13	Seismic design of non-dissipative embedded column base connections. Journal of Constructional Steel Research, 2021, 177, 106417.	3.9	9
14	Experimental behavior of iron-based shape memory alloys under cyclic loading histories. Construction and Building Materials, 2021, 272, 121712.	7.2	27
15	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. Journal of Structural Engineering, 2021, 147, 07020020.	3.4	0
16	Rate-dependent model for simulating the hysteretic behavior of low-yield stress buckling-restrained braces under dynamic excitations. Engineering Structures, 2021, 230, 111659.	5.3	6
17	Proposed Panel Zone Model for Seismic Design of Steel Moment-Resisting Frames. Journal of Structural Engineering, 2021, 147, .	3.4	19
18	Experimental Evaluation of Steel Columns under Seismic Hazard-Consistent Collapse Loading Protocols. Journal of Structural Engineering, 2021, 147, .	3.4	23

#	Article	IF	Citations
19	Constitutive Modeling of Structural Steels: Nonlinear Isotropic/Kinematic Hardening Material Model and Its Calibration. Journal of Structural Engineering, 2021, 147, .	3.4	38
20	Development of Inelastic Panel Zone Database. Journal of Structural Engineering, 2021, 147, .	3.4	9
21	Fragility Assessment of Beam-Slab Connections for Informing Earthquake-Induced Repairs in Composite-Steel Moment Resisting Frames. Frontiers in Built Environment, 2021, 7, .	2.3	1
22	Cyclic Metal Plasticity Model Parameters with Limited Information: Constrained Optimization Approach. Journal of Engineering Mechanics - ASCE, 2021, 147, .	2.9	3
23	Hysteretic Behaviour of Shear Stud Connectors in Composite Steel Momentâ€Resisting Frames. Ce/Papers, 2021, 4, 575-582.	0.3	0
24	Experimental study of sliding friction damper with composite materials for earthquake resistant structures. Engineering Structures, 2021, 248, 113063.	5.3	23
25	Simulating Cyclic Local Bucklingâ€"Induced Softening in Steel Beam-Columns Using a Nonlocal Material Model in Displacement-Based Fiber Elements. Journal of Structural Engineering, 2020, 146, .	3.4	12
26	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, .	3.4	39
27	Development of collapseâ€consistent loading protocols for experimental testing of steel columns. Earthquake Engineering and Structural Dynamics, 2020, 49, 114-131.	4.4	41
28	Proposed methodology for buildingâ€specific earthquake loss assessment including column residual axial shortening. Earthquake Engineering and Structural Dynamics, 2020, 49, 339-355.	4.4	23
29	Fiberâ€based hysteretic model for simulating strength and stiffness deterioration of steel hollow structural section columns under cyclic loading. Earthquake Engineering and Structural Dynamics, 2020, 49, 1702-1720.	4.4	14
30	EaRLâ€"Software for Earthquake Risk, Loss and Lifecycle Analysis. SoftwareX, 2020, 12, 100607.	2.6	1
31	Consistency in Solving the Inverse Problem of the Voce-Chaboche Constitutive Model for Plastic Straining. Journal of Engineering Mechanics - ASCE, 2020, 146, .	2.9	36
32	Hysteretic Behavior of Moment-Resisting Frames Considering Slab Restraint and Framing Action. Journal of Structural Engineering, 2020, 146, .	3.4	24
33	Recommendations for Improved Welding Procedures for Thick Steel Plates Through Thermo-Mechanical Analysis. International Journal of Steel Structures, 2019, 19, 193-212.	1.3	5
34	Seismic Stability of Wide-Flange Steel Columns Interacting with Embedded Column Base Connections. Journal of Structural Engineering, 2019, 145, .	3.4	18
35	Full-scale testing of stiffened extended shear tab connections under combined axial and shear forces. Engineering Structures, 2019, 185, 90-105.	5.3	4
36	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, .	3.4	88

#	Article	IF	Citations
37	Composite steel beam database for seismic design and performance assessment of composite-steel moment-resisting frame systems. Bulletin of Earthquake Engineering, 2019, 17, 3015-3039.	4.1	20
38	Experimental investigation of steel building gravity framing systems under strong earthquake shaking. Soil Dynamics and Earthquake Engineering, 2019, 116, 230-241.	3.8	11
39	Earthquake-Induced Collapse Risk and Loss Assessment of Steel Concentrically Braced Frames. Key Engineering Materials, 2018, 763, 90-97.	0.4	1
40	Assessment of structural damage detection methods for steel structures using full-scale experimental data and nonlinear analysis. Bulletin of Earthquake Engineering, 2018, 16, 2971-2999.	4.1	14
41	Nonmodel-based framework for rapid seismic risk and loss assessment of instrumented steel buildings. Engineering Structures, 2018, 156, 417-432.	5.3	20
42	Seismic Performance Characterization of Wood-Sheathed and Cold-Formed Steel Framed Floor and Roof Diaphragm Structures. Journal of Structural Engineering, 2018, 144, .	3.4	11
43	Fatigue Strength Upgrading of Cover Plate Ends by Welded Extensions in Existing Steel Bridge Girders. Journal of Bridge Engineering, 2018, 23, .	2.9	5
44	Full-Scale Testing of Deep Wide-Flange Steel Columns under Multiaxis Cyclic Loading: Loading Sequence, Boundary Effects, and Lateral Stability Bracing Force Demands. Journal of Structural Engineering, 2018, 144, .	3.4	71
45	Fragility Curves for Wide-Flange Steel Columns and Implications for Building-Specific Earthquake-Induced Loss Assessment. Earthquake Spectra, 2018, 34, 1405-1429.	3.1	16
46	Improved Seismic Design and Nonlinear Modeling Recommendations for Wide-Flange Steel Columns. Journal of Structural Engineering, 2018, 144, .	3.4	49
47	Simulating Local Buckling-Induced Softening in Steel Members Using an Equivalent Nonlocal Material Model in Displacement-Based Fiber Elements. Journal of Structural Engineering, 2018, 144, .	3.4	15
48	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.	3.8	41
49	Behaviour of stiffened extended shear tab connections under gravity induced shear force. Journal of Constructional Steel Research, 2018, 148, 336-350.	3.9	2
50	Earthquakeâ€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.	4.4	76
51	A probabilistic approach for assessing discontinuities in structural steel components based on Charpy-V-notch tests. Engineering Structures, 2017, 147, 1-11.	5.3	1
52	11.29: Updates to the ASCEâ€41â€13 provisions for the nonlinear modeling of steel wideâ€flange columns for performanceâ€based earthquake engineering. Ce/Papers, 2017, 1, 3072-3081.	0.3	17
53	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, .	3.4	45
54	PROPOSED METHODOLOGY FOR EARTHQUAKE-INDUCED LOSS ASSESSMENT OF INSTRUMENTED STEEL FRAME BUILDINGS: BUILDING-SPECIFIC AND CITY-SCALE APPROACHES. , 2017, , .		2

#	Article	IF	Citations
55	Spectral shape metrics and structural collapse potential. Earthquake Engineering and Structural Dynamics, 2016, 45, 1643-1659.	4.4	55
56	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.	4.4	10
57	Proposed modeling approach of welding procedures for heavy steel plates. Engineering Structures, 2016, 127, 18-30.	5.3	7
58	Assessment of Numerical and Experimental Errors in Hybrid Simulation of Framed Structural Systems through Collapse. Journal of Earthquake Engineering, 2016, 20, 885-909.	2.5	15
59	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, .	3.4	43
60	Average spectral acceleration as an intensity measure for collapse risk assessment. Earthquake Engineering and Structural Dynamics, 2015, 44, 2057-2073.	4.4	230
61	Design Decision Support for Steel Frame Buildings through an Earthquake-Induced Loss Assessment. , 2015, , .		5
62	Application of Simplified Analysis Procedures for Performance-Based Earthquake Evaluation of Steel Special Moment Frames. Earthquake Spectra, 2015, 31, 1949-1968.	3.1	23
63	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.	4.4	124
64	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.	4.1	85
65	EARTHQUAKE LOSS ASSESSMENT OF STEEL FRAME BUILDINGS DESIGNED IN HIGHLY SEISMIC REGIONS. , 2015, , .		9
66	Estimation of base motion in instrumented steel buildings using output‐only system identification. Earthquake Engineering and Structural Dynamics, 2014, 43, 547-563.	4.4	8
67	Computational Approach for Collapse Assessment of Concentrically Braced Frames in Seismic Regions. Journal of Structural Engineering, 2014, 140, .	3.4	117
68	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, .	3.4	26
69	Seismic performance of a steel moment-resisting frame subject to strength and ductility uncertainty. Engineering Structures, 2014, 78, 69-77.	5.3	65
70	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.	4.4	107
71	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
72	An efficient method for estimating the collapse risk of structures in seismic regions. Earthquake Engineering and Structural Dynamics, 2013, 42, 25-41.	4.4	193

#	Article	IF	Citations
73	Drift-based and dual-parameter fragility curves for concentrically braced frames in seismic regions. Journal of Constructional Steel Research, 2013, 90, 209-220.	3.9	32
74	Collapse Assessment of Steel Moment Frames Based on E-Defense Full-Scale Shake Table Collapse Tests. Journal of Structural Engineering, 2013, 139, 120-132.	3.4	111
75	Dynamic Response of a Chevron Concentrically Braced Frame. Journal of Structural Engineering, 2013, 139, 515-525.	3.4	63
76	Development and Utilization of Structural Component Databases for Performance-Based Earthquake Engineering. Journal of Structural Engineering, 2013, 139, 1382-1394.	3.4	111
77	Effect of Composite Action on the Dynamic Stability of Special Steel Moment Resisting Frames Designed in Seismic Regions. , 2013, , .		5
78	Seismic Assessment of Steel Moment Frames Using Simplified Nonlinear Models. Computational Methods in Applied Sciences (Springer), 2013, , 91-109.	0.3	3
79	An efficient method for estimating the collapse risk of structures in seismic regions. , 2013, 42, 25.		1
80	Fragility functions for pre-Northridge welded steel moment-resisting beam-to-column connections. Engineering Structures, 2012, 45, 574-584.	5.3	34
81	Development of fragility functions as a damage classification/prediction method for steel momentâ€resisting frames using a waveletâ€based damage sensitive feature. Earthquake Engineering and Structural Dynamics, 2012, 41, 681-696.	4.4	51
82	Use of Wavelet-Based Damage-Sensitive Features for Structural Damage Diagnosis Using Strong Motion Data. Journal of Structural Engineering, 2011, 137, 1215-1228.	3.4	57
83	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.	3.4	664
84	Prediction of Nonlinear Responseâ€"Pushover Analysis versus Simplified Nonlinear Response History Analysis. , 2011, , .		4
85	Collapse Assessment of Steel Moment Resisting Frames Under Earthquake Shaking. Computational Methods in Applied Sciences (Springer), 2011, , 1-19.	0.3	4
86	Prediction and validation of sidesway collapse of two scale models of a 4â€story steel moment frame. Earthquake Engineering and Structural Dynamics, 2011, 40, 807-825.	4.4	168
87	A simplified method for collapse capacity assessment of moment-resisting frame and shear wall structural systems. Engineering Structures, 2011, 33, 1107-1116.	5.3	84
88	Numerical and experimental evaluation of seismic capacity of high-rise steel buildings subjected to long duration earthquakes. Computers and Structures, 2011, 89, 959-967.	4.4	50
89	Dynamic Response of a Steel Concentrically Braced Frame. , 2011, , .		2
90	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.	1.9	104

#	Article	IF	Citations
91	Fragility Assessment of Reduced Beam Section Moment Connections. Journal of Structural Engineering, 2010, 136, 1140-1150.	3.4	44
92	Basic concepts and performance measures in prediction of collapse of buildings under earthquake ground motions. , 2010, 19, 167.		1
93	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.	0.2	9
94	Comparison of Retrofitting Techniques for Existing Steel Moment Resisting Frames. , 2009, , .		2
95	Estimation of Seismic Performance of Existing Steel Moment Resisting Frame Buildings by Using Continuous Models. , 2009, , .		1
96	How to Predict the Probability of Collapse of Non-Ductile Building Structures. Geotechnical, Geological and Earthquake Engineering, 2009, , 343-365.	0.2	2
97	Reliability of a 4-Story Steel Moment-Resisting Frame against Collapse Due to Seismic Excitations. , 2008, , .		9
98	A Database in Support of Modeling of Component Deterioration for Collapse Prediction of Steel Frame Structures. , 2007, , .		34
99	Effect of Column Base Flexibility on Earthquake-Induced Residual Deformations of Steel Columns. Key Engineering Materials, 0, 763, 149-156.	0.4	5
100	Steel Columns under Multi-Axis Seismic Loading: Experimental Findings and Design Recommendations. Key Engineering Materials, 0, 763, 376-383.	0.4	1