# Dimitrios G Lignos

## List of Publications by Year in descending order

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|---|---|---|---|
| 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 | 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 |
| 2 | Average spectral acceleration as an intensity measure for collapse risk assessment. Earthquake Engineering and Structural Dynamics, 2015, 44, 2057-2073. | 4.4 | 230 |
| 3 | 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 |
| 4 | 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 |
| 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. | 4.4 | 124 |
| 6 | Computational Approach for Collapse Assessment of Concentrically Braced Frames in Seismic Regions. Journal of Structural Engineering, 2014, 140, . | 3.4 | 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. | 3.4 | 111 |
| 8 | Development and Utilization of Structural Component Databases for Performance-Based Earthquake Engineering. Journal of Structural Engineering, 2013, 139, 1382-1394. | 3.4 | 111 |
| 9 | Modeling of the composite action in fully restrained beamâ€toâ€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 |
| 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. | 1.9 | 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, . | 3.4 | 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. | 4.1 | 85 |
| 13 | 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 |
| 14 | 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 |
| 15 | 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 |
| 16 | Seismic performance of a steel moment-resisting frame subject to strength and ductility uncertainty. Engineering Structures, 2014, 78, 69-77. | 5.3 | 65 |
| 17 | Dynamic Response of a Chevron Concentrically Braced Frame. Journal of Structural Engineering, 2013, 139, 515-525. | 3.4 | 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. | 3.4 | 57 |

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|---|---|---|---|
| 19 | Spectral shape metrics and structural collapse potential. Earthquake Engineering and Structural Dynamics, 2016, 45, 1643-1659. | 4.4 | 55 |
| 20 | 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 |
| 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. | 4.4 | 50 |
| 22 | Improved Seismic Design and Nonlinear Modeling Recommendations for Wide-Flange Steel Columns. Journal of Structural Engineering, 2018, 144, . | 3.4 | 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, . | 3.4 | 45 |
| 24 | Fragility Assessment of Reduced Beam Section Moment Connections. Journal of Structural Engineering, 2010, 136, 1140-1150. | 3.4 | 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, . | 3.4 | 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. | 3.8 | 41 |
| 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 | 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 |
| 29 | Constitutive Modeling of Structural Steels: Nonlinear Isotropic/Kinematic Hardening Material Model and Its Calibration. Journal of Structural Engineering, 2021, 147, . | 3.4 | 38 |
| 30 | 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 |
| 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. | 5.3 | 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. | 3.9 | 32 |
| 34 | Experimental behavior of iron-based shape memory alloys under cyclic loading histories. Construction and Building Materials, 2021, 272, 121712. | 7.2 | 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, . | 3.4 | 26 |
| 36 | Hysteretic Behavior of Moment-Resisting Frames Considering Slab Restraint and Framing Action. Journal of Structural Engineering, 2020, 146, . | 3.4 | 24 |

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| 37 | Application of Simplified Analysis Procedures for Performance-Based Earthquake Evaluation of Steel Special Moment Frames. Earthquake Spectra, 2015, 31, 1949-1968. | 3.1 | 23 |
| 38 | 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 |
| 39 | Experimental Evaluation of Steel Columns under Seismic Hazard-Consistent Collapse Loading Protocols. Journal of Structural Engineering, 2021, 147, . | 3.4 | 23 |
| 40 | Experimental study of sliding friction damper with composite materials for earthquake resistant structures. Engineering Structures, 2021, 248, 113063. | 5.3 | 23 |
| 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 | 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 |
| 43 | Proposed Panel Zone Model for Seismic Design of Steel Moment-Resisting Frames. Journal of Structural Engineering, 2021, 147, . | 3.4 | 19 |
| 44 | Seismic Stability of Wide-Flange Steel Columns Interacting with Embedded Column Base Connections. Journal of Structural Engineering, 2019, 145, . | 3.4 | 18 |
| 45 | 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 |
| 46 | 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 |
| 47 | 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 |
| 48 | 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 |
| 49 | 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 |
| 50 | 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 |
| 51 | 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 |
| 52 | Anchorâ€yield exposed column bases for minimizing residual deformations in seismicâ€resistant steel moment frames. Earthquake Engineering and Structural Dynamics, 2021, 50, 1083-1100. | 4.4 | 12 |
| 53 | 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 |
| 54 | Experimental investigation of steel building gravity framing systems under strong earthquake shaking. Soil Dynamics and Earthquake Engineering, 2019, 116, 230-241. | 3.8 | 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. | 4.4 | 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. | 3.9 | 9 |
| 58 | Development of Inelastic Panel Zone Database. Journal of Structural Engineering, 2021, 147, . | 3.4 | 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. | 0.2 | 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 outputâ€only system identification. Earthquake Engineering and Structural Dynamics, 2014, 43, 547-563. | 4.4 | 8 |
| 62 | Proposed modeling approach of welding procedures for heavy steel plates. Engineering Structures, 2016, 127, 18-30. | 5.3 | 7 |
| 63 | Proposed nonlinear macroâ€model for seismic risk assessment of compositeâ€steel moment resisting frames. Earthquake Engineering and Structural Dynamics, 2022, 51, 1180-1200. | 4.4 | 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. | 5.3 | 6 |
| 65 | Seismic demands of steel moment resisting frames with inelastic beamâ€toâ€column web panel zones. Earthquake Engineering and Structural Dynamics, 2022, 51, 1591-1609. | 4.4 | 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, . | 2.9 | 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. | 1.3 | 5 |
| 71 | Proposed Backing Bar Detail in Welded Beam-to-Column Connections for Seismic Applications. Journal of Structural Engineering, 2022, 148, . | 3.4 | 5 |
| 72 | Prediction of Nonlinear Responseâ€”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. | 0.3 | 4 |
| 74 | Full-scale testing of stiffened extended shear tab connections under combined axial and shear forces. Engineering Structures, 2019, 185, 90-105. | 5.3 | 4 |
| 75 | Warping-Inclusive Kinematic Coupling in Mixed-Dimension Macro Models for Steel Wide Flange Beam Columns. Journal of Structural Engineering, 2022, 148, . | 3.4 | 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, . | 3.4 | 4 |
| 77 | Seismic Assessment of Steel Moment Frames Using Simplified Nonlinear Models. Computational Methods in Applied Sciences (Springer), 2013, , 91-109. | 0.3 | 3 |
| 78 | Cyclic Metal Plasticity Model Parameters with Limited Information: Constrained Optimization Approach. Journal of Engineering Mechanics - ASCE, 2021, 147, . | 2.9 | 3 |
| 79 | Seismic performance of steel columns interacting with embedded column bases while exhibiting inelastic deformations. Engineering Structures, 2022, 251, 113381. | 5.3 | 3 |
| 80 | 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 |
| 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. | 3.9 | 2 |
| 84 | How to Predict the Probability of Collapse of Non-Ductile Building Structures. Geotechnical, Geological and Earthquake Engineering, 2009, , 343-365. | 0.2 | 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. | 5.3 | 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. | 2.6 | 1 |

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| 91 | 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 |
| 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 | Lowâ€damage steel structures for enhanced lifeâ€cycle seismic performance. Stahlbau, 2022, 91, 315-325. | 0.1 | 1 |
| 96 | Closure to â€œProposed Updates to the ASCE 41 Nonlinear Modeling Parameters for Wide-Flange Steel Columns in Support of Performance-Based Seismic Engineeringâ€•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 |
| 97 | Closure to â€œExperimental Evaluation and Numerical Modeling of Wide-Flange Steel Columns Subjected to Constant and Variable Axial Load Coupled with Lateral Drift Demandsâ€•by Julien Cravero, Ahmed Elkady, and Dimitrios G. Lignos. Journal of Structural Engineering, 2021, 147, 07020020. | 3.4 | 0 |
| 98 | Hysteretic Behaviour of Shear Stud Connectors in Composite Steel Momentâ€Resisting Frames. Ce/Papers, 2021, 4, 575-582. | 0.3 | 0 |
| 99 | Closure to â€œExperimental Evaluation of Steel Columns under Seismic Hazard-Consistent Collapse Loading Protocolsâ€•by Yusuke Suzuki and Dimitrios G. Lignos. Journal of Structural Engineering, 2022, 148, . | 3.4 | 0 |
| 100 | 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 |