

# Oren Lavan

## List of Publications by Year in descending order

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35  
papers

1,002  
citations

430754

18  
h-index

434063

31  
g-index

38  
all docs

38  
docs citations

38  
times ranked

401  
citing authors

#	ARTICLE	IF	CITATIONS
1	Multi-Objective Evolutionary Seismic Design with Passive Energy Dissipation Systems. Journal of Earthquake Engineering, 2009, 13, 758-790.	1.4	120
2	Optimal design of supplemental viscous dampers for irregular shear-frames in the presence of yielding. Earthquake Engineering and Structural Dynamics, 2005, 34, 889-907.	2.5	100
3	Optimal design of supplemental viscous dampers for linear framed structures. Earthquake Engineering and Structural Dynamics, 2006, 35, 337-356.	2.5	87
4	Numerical collapse simulation of large-scale structural systems using an optimization-based algorithm. Earthquake Engineering and Structural Dynamics, 2009, 38, 655-677.	2.5	62
5	OPTIMAL PERIPHERAL DRIFT CONTROL OF 3D IRREGULAR FRAMED STRUCTURES USING SUPPLEMENTAL VISCOUS DAMPERS. Journal of Earthquake Engineering, 2006, 10, 903-923.	1.4	61
6	Minimum-cost optimization of nonlinear fluid viscous dampers and their supporting members for seismic retrofitting. Earthquake Engineering and Structural Dynamics, 2017, 46, 1941-1961.	2.5	61
7	Design of passive systems for control of inelastic structures. Earthquake Engineering and Structural Dynamics, 2009, 38, 783-804.	2.5	49
8	Simultaneous topology and sizing optimization of viscous dampers in seismic retrofitting of 3D irregular frame structures. Earthquake Engineering and Structural Dynamics, 2014, 43, 1325-1342.	2.5	48
9	Simple Iterative Use of Lyapunov's Solution for the Linear Optimal Seismic Design of Passive Devices in Framed Buildings. Journal of Earthquake Engineering, 2009, 13, 650-666.	1.4	39
10	Optimization-based minimum-cost seismic retrofitting of hysteretic frames with nonlinear fluid viscous dampers. Earthquake Engineering and Structural Dynamics, 2018, 47, 2985-3005.	2.5	38
11	Towards realistic minimum-cost optimization of viscous fluid dampers for seismic retrofitting. Bulletin of Earthquake Engineering, 2016, 14, 971-998.	2.3	34
12	Multi-objective optimal design of tuned mass dampers. Structural Control and Health Monitoring, 2017, 24, e2008.	1.9	34
13	A methodology for the integrated seismic design of nonlinear buildings with supplemental damping. Structural Control and Health Monitoring, 2015, 22, 484-499.	1.9	32
14	Adjoint sensitivity analysis and optimization of hysteretic dynamic systems with nonlinear viscous dampers. Structural and Multidisciplinary Optimization, 2018, 57, 2273-2289.	1.7	30
15	Optimization-based seismic design of steel moment-resisting frames with nonlinear viscous dampers. Structural Control and Health Monitoring, 2021, 28, .	1.9	29
16	On the efficiency of viscous dampers in reducing various seismic responses of wall structures. Earthquake Engineering and Structural Dynamics, 2012, 41, 1673-1692.	2.5	25
17	Dynamic Analysis of Gap Closing and Contact in the Mixed Lagrangian Framework: Toward Progressive Collapse Prediction. Journal of Engineering Mechanics - ASCE, 2010, 136, 979-986.	1.6	23
18	Quantitative Comparison of Optimization Approaches for the Design of Supplemental Damping in Earthquake Engineering Practice. Journal of Structural Engineering, 2009, 135, 321-325.	1.7	21

#	ARTICLE	IF	CITATIONS
19	Performance-based seismic retrofitting of frame structures using negative stiffness devices and fluid viscous dampers via optimization. <i>Earthquake Engineering and Structural Dynamics</i> , 2021, 50, 3116-3137.	2.5	15
20	Multi-objective loss-based optimization of viscous dampers for seismic retrofitting of irregular structures. <i>Soil Dynamics and Earthquake Engineering</i> , 2020, 129, 105765.	1.9	13
21	Seismic Design of Friction-Damped Braced Frames Based on Historical Records. <i>Earthquake Spectra</i> , 2005, 21, 761-778.	1.6	12
22	Efficient Seismic Design of 3D Asymmetric and Setback RC Frame Buildings for Drift and Strain Limitation. <i>Journal of Structural Engineering</i> , 2017, 143, .	1.7	12
23	Gradient-based multi-hazard optimization of MTMDs for tall buildings. <i>Computers and Structures</i> , 2021, 249, 106503.	2.4	12
24	Seismic design of multiple-rocking systems: A gradient-based optimization approach. <i>Earthquake Engineering and Structural Dynamics</i> , 2021, 50, 3460-3482.	2.5	10
25	Adjoint sensitivity analysis and optimization of transient problems using the mixed Lagrangian formalism as a time integration scheme. <i>Structural and Multidisciplinary Optimization</i> , 2020, 61, 619-634.	1.7	9
26	Mixed Lagrangian formalism for dynamic analysis of self-centering systems. <i>Earthquake Engineering and Structural Dynamics</i> , 2021, 50, 998-1019.	2.5	8
27	Topology optimization of multiple-rocking concentrically braced frames subjected to earthquakes. <i>Structural and Multidisciplinary Optimization</i> , 2022, 65, 1.	1.7	6
28	Bi-tuned semi-active TMDs: Multi-hazard design for tall buildings using gradient-based optimization. <i>Structural Control and Health Monitoring</i> , 2022, 29, .	1.9	4
29	Time-Integrated Mixed Lagrangian Formulation for Time-Discontinuous or Impulsive Loadings and Responses of Structures. <i>Journal of Engineering Mechanics - ASCE</i> , 2013, 139, 1239-1248.	1.6	2
30	Closure to "Quantitative Comparison of Optimization Approaches for the Design of Supplemental Damping in Earthquake Engineering Practice" by Robert Levy and Oren Lavan. <i>Journal of Structural Engineering</i> , 2010, 136, 1183-1184.	1.7	1
31	Seismic analysis and design of viscously coupled walls or trusses with discrete locations for viscous dampers. , 2015, , .		1
32	Analysis of Collapse of Irregular Tall Structures Using Mixed Lagrangian Formulation. <i>Geotechnical, Geological and Earthquake Engineering</i> , 2013, , 235-250.	0.1	1
33	Topology and Sizing Optimization of Nonlinear Viscous Dampers for the Minimum-Cost Seismic Retrofitting of 3-D Frame Structures. , 2017, , .		0
34	Optimizing Skyscrapers' Spatial Integrated DSF-MTMD System Under Wind Loads. , 2019, , .		0
35	Deformation Based Seismic Design of Generally Irregular 3D RC Frame Buildings for Minimized Total Steel Volume. <i>Geotechnical, Geological and Earthquake Engineering</i> , 2020, , 39-46.	0.1	0