

# Lawrence A Bergman

## List of Publications by Year in descending order

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59  
papers

2,845  
citations

172207

29  
h-index

168136

53  
g-index

61  
all docs

61  
docs citations

61  
times ranked

1390  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Method of Proper Orthogonal Decomposition for Dynamical Characterization and Order Reduction of Mechanical Systems: An Overview. <i>Nonlinear Dynamics</i> , 2005, 41, 147-169.	2.7	706
2	Title is missing!. <i>Nonlinear Dynamics</i> , 2003, 33, 87-102.	2.7	160
3	Numerical and experimental investigation of a highly effective single-sided vibro-impact non-linear energy sink for shock mitigation. <i>International Journal of Non-Linear Mechanics</i> , 2013, 52, 96-109.	1.4	133
4	Comparing Linear and Essentially Nonlinear Vibration-Based Energy Harvesting. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2011, 133, .	1.0	99
5	Effective Stiffening and Damping Enhancement of Structures With Strongly Nonlinear Local Attachments. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2012, 134, .	1.0	98
6	Experimental investigation of targeted energy transfers in strongly and nonlinearly coupled oscillators. <i>Journal of the Acoustical Society of America</i> , 2005, 118, 791-799.	0.5	89
7	Theoretical and Experimental Study of Multimodal Targeted Energy Transfer in a System of Coupled Oscillators. <i>Nonlinear Dynamics</i> , 2006, 47, 285-309.	2.7	87
8	Large-scale experimental evaluation and numerical simulation of a system of nonlinear energy sinks for seismic mitigation. <i>Engineering Structures</i> , 2014, 77, 34-48.	2.6	83
9	Vibration reduction in unbalanced hollow rotor systems with nonlinear energy sinks. <i>Nonlinear Dynamics</i> , 2015, 79, 527-538.	2.7	76
10	Suppression of limit cycle oscillations in the van der Pol oscillator by means of passive non-linear energy sinks. <i>Structural Control and Health Monitoring</i> , 2006, 13, 41-75.	1.9	72
11	Numerical and experimental investigations of a rotating nonlinear energy sink. <i>Meccanica</i> , 2017, 52, 763-779.	1.2	72
12	Response attenuation in a large-scale structure subjected to blast excitation utilizing a system of essentially nonlinear vibration absorbers. <i>Journal of Sound and Vibration</i> , 2017, 389, 52-72.	2.1	68
13	Dynamics of a Linear Oscillator Coupled to a Bistable Light Attachment: Numerical Study. <i>Journal of Computational and Nonlinear Dynamics</i> , 2015, 10, .	0.7	66
14	Isolated Resonance Captures and Resonance Capture Cascades Leading to Single- or Multi-Mode Passive Energy Pumping in Damped Coupled Oscillators. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2004, 126, 235-244.	1.0	64
15	Experimental Testing and Numerical Simulation of a Six-Story Structure Incorporating Two-Degree-of-Freedom Nonlinear Energy Sink. <i>Journal of Structural Engineering</i> , 2014, 140, .	1.7	62
16	Complex dynamics and targeted energy transfer in linear oscillators coupled to multi-degree-of-freedom essentially nonlinear attachments. <i>Nonlinear Dynamics</i> , 2007, 48, 285-318.	2.7	60
17	Energy Transfers in a System of Two Coupled Oscillators with Essential Nonlinearity: 1:1 Resonance Manifold and Transient Bridging Orbits. <i>Nonlinear Dynamics</i> , 2005, 42, 283-303.	2.7	58
18	Dynamic instabilities in coupled oscillators induced by geometrically nonlinear damping. <i>Nonlinear Dynamics</i> , 2012, 67, 807-827.	2.7	58

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19	Nonlinear targeted energy transfer: state of the art and new perspectives. <i>Nonlinear Dynamics</i> , 2022, 108, 711-741.	2.7	58
20	Vortex-induced vibration of a linearly sprung cylinder with an internal rotational nonlinear energy sink in turbulent flow. <i>Nonlinear Dynamics</i> , 2020, 99, 593-609.	2.7	45
21	Shock Mitigation by Means of Low- to High-Frequency Nonlinear Targeted Energy Transfers in a Large-Scale Structure. <i>Journal of Computational and Nonlinear Dynamics</i> , 2016, 11, .	0.7	40
22	A time-domain nonlinear system identification method based on multiscale dynamic partitions. <i>Meccanica</i> , 2011, 46, 625-649.	1.2	37
23	Design, simulation, and large-scale testing of an innovative vibration mitigation device employing essentially nonlinear elastomeric springs. <i>Earthquake Engineering and Structural Dynamics</i> , 2014, 43, 1829-1851.	2.5	34
24	A unified formulation for interface coupling and frictional contact modeling with embedded error estimation. <i>International Journal for Numerical Methods in Engineering</i> , 2012, 92, 141-177.	1.5	33
25	Realization of a Strongly Nonlinear Vibration-Mitigation Device Using Elastomeric Bumpers. <i>Journal of Engineering Mechanics - ASCE</i> , 2014, 140, .	1.6	33
26	Effect of an internal nonlinear rotational dissipative element on vortex shedding and vortex-induced vibration of a sprung circular cylinder. <i>Journal of Fluid Mechanics</i> , 2017, 828, 196-235.	1.4	31
27	Nonlinear system identification of the dynamics of a vibro-impact beam: numerical results. <i>Archive of Applied Mechanics</i> , 2012, 82, 1461-1479.	1.2	30
28	Computational study of vortex-induced vibration of a sprung rigid circular cylinder with a strongly nonlinear internal attachment. <i>Journal of Fluids and Structures</i> , 2013, 40, 214-232.	1.5	30
29	Targeted Energy Transfer Between a Swept Wing and Winglet-Housed Nonlinear Energy Sink. <i>AIAA Journal</i> , 2014, 52, 2633-2651.	1.5	30
30	Title is missing!. <i>Nonlinear Dynamics</i> , 2003, 33, 1-10.	2.7	29
31	Transonic Aeroelastic Instability Suppression for a Swept Wing by Targeted Energy Transfer. <i>Journal of Aircraft</i> , 2014, 51, 1467-1482.	1.7	27
32	Influence of system parameters on dynamic behavior of gear pair with stochastic backlash. <i>Meccanica</i> , 2014, 49, 429-440.	1.2	25
33	Towards a new type of energy trap: Classical analog of quantum Landau-Zener tunneling. <i>International Journal of Non-Linear Mechanics</i> , 2011, 46, 247-252.	1.4	20
34	Equivalent modal damping, stiffening and energy exchanges in multi-degree-of-freedom systems with strongly nonlinear attachments. <i>Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics</i> , 2012, 226, 122-146.	0.5	20
35	Toward understanding the self-adaptive dynamics of a harmonically forced beam with a sliding mass. <i>Archive of Applied Mechanics</i> , 2017, 87, 699-720.	1.2	19
36	Sustained high-frequency energy harvesting through a strongly nonlinear electromechanical system under single and repeated impulsive excitations. <i>Journal of Sound and Vibration</i> , 2014, 333, 3214-3235.	2.1	16

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37	Pulse transmission and acoustic non-reciprocity in a granular channel with symmetry-breaking clearances. <i>Granular Matter</i> , 2020, 22, 1.	1.1	16
38	Effect of 1:3 resonance on the steady-state dynamics of a forced strongly nonlinear oscillator with a linear light attachment. <i>Archive of Applied Mechanics</i> , 2014, 84, 1189-1203.	1.2	15
39	5-DOF Dynamic Model of Vehicle Shimmy System with Clearance at Universal Joint in Steering Handling Mechanism. <i>Shock and Vibration</i> , 2013, 20, 951-961.	0.3	14
40	Influences of system parameters on dynamic behavior of the vehicle shimmy system with clearance in steering linkage. <i>JVC/Journal of Vibration and Control</i> , 2015, 21, 359-370.	1.5	14
41	Extreme nonlinear energy exchanges in a geometrically nonlinear lattice oscillating in the plane. <i>Journal of the Mechanics and Physics of Solids</i> , 2018, 110, 1-20.	2.3	13
42	Extreme intermodal energy transfers through vibro-impacts for highly effective and rapid blast mitigation. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2021, 103, 106012.	1.7	13
43	Targeted energy transfer in laminar vortex-induced vibration of a sprung cylinder with a nonlinear dissipative rotator. <i>Physica D: Nonlinear Phenomena</i> , 2017, 350, 26-44.	1.3	12
44	Dynamic analysis of cross shaft type universal joint with clearance. <i>Journal of Mechanical Science and Technology</i> , 2013, 27, 3201-3205.	0.7	11
45	New inverse wavelet transform method with broad application in dynamics. <i>Mechanical Systems and Signal Processing</i> , 2021, 156, 107691.	4.4	11
46	Rebuttal of "steady state dynamics of a linear structure weakly coupled to an essentially nonlinear oscillator" by P. Malatkar and A.H. Nayfeh. <i>Nonlinear Dynamics</i> , 2008, 53, 167-168.	2.7	9
47	A three-dimensional nonlinear reduced-order predictive joint model. <i>Earthquake Engineering and Engineering Vibration</i> , 2003, 2, 59-73.	1.1	8
48	Coexistence of multiple long-time solutions for two-dimensional laminar flow past a linearly sprung circular cylinder with a rotational nonlinear energy sink. <i>Physical Review Fluids</i> , 2019, 4, .	1.0	8
49	Natural frequency veering and mode localization caused by straight through "cracks in rectangular plates with elastic boundary conditions. <i>Acta Mechanica</i> , 2018, 229, 4017-4031.	1.1	6
50	Separation of Traveling and Standing Waves in a Rigid-Walled Circular Duct Containing an Intermediate Impedance Discontinuity. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2017, 139, .	1.0	5
51	Influence of backlash in gear reducer on dynamic of single-link manipulator arm. <i>Robotica</i> , 2015, 33, 1671-1685.	1.3	4
52	Inducing a nonreflective airborne discontinuity in a circular duct by using a nonresonant side branch to create mode complexity. <i>Journal of the Acoustical Society of America</i> , 2018, 143, 746-755.	0.5	4
53	Energy transmission by impact in a system of two discrete oscillators. <i>Nonlinear Dynamics</i> , 2020, 100, 135-145.	2.7	4
54	Generalization of the Concept of Bandwidth. <i>Journal of Sound and Vibration</i> , 2022, 533, 117010.	2.1	3

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55	Global complexity effects due to local damping in a nonlinear system in 1:3 internal resonance. <i>Archive of Applied Mechanics</i> , 2016, 86, 1083-1094.	1.2	2
56	High-frequency vibration energy harvesting from repeated impulsive forcing utilizing intentional dynamic instability caused by strong nonlinearity. <i>Journal of Intelligent Material Systems and Structures</i> , 2017, 28, 468-487.	1.4	2
57	Simulating offset blast loads experimentally using shake-table-generated ground motions: Method development and validation. <i>Structural Control and Health Monitoring</i> , 2020, 27, e2480.	1.9	2
58	Motion complexity in a non-classically damped system with closely spaced modes: From standing to traveling waves. <i>Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics</i> , 2016, 230, 178-190.	0.5	1
59	Realization by impedance discontinuity of a unidirectional wave in a duct with harmonically perturbed uniform mean flow. <i>Journal of the Acoustical Society of America</i> , 2019, 145, 3048-3057.	0.5	0