Sotirios Natsiavas

List of Publications by Year in descending order

80	2,128	236612 25	243296 44
papers	citations	h-index	g-index

82	82	82	935
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	NON-LINEAR DYNAMICS OF GEAR-PAIR SYSTEMS WITH PERIODIC STIFFNESS AND BACKLASH. Journal of Sound and Vibration, 2000, 229, 287-310.	2.1	281
2	Design Optimization of Quarter-car Models with Passive and Semi-active Suspensions under Random Road Excitation. JVC/Journal of Vibration and Control, 2005, 11, 581-606.	1.5	192
3	Periodic response and stability of oscillators with symmetric trilinear restoring force. Journal of Sound and Vibration, 1989, 134, 315-331.	2.1	117
4	Periodic and chaotic dynamics of motor-driven gear-pair systems with backlash. Chaos, Solitons and Fractals, 2001, 12, 2427-2440.	2.5	93
5	Steady state oscillations and stability of non-linear dynamic vibration absorbers. Journal of Sound and Vibration, 1992, 156, 227-245.	2.1	91
6	Dynamics of Multiple-Degree-of-Freedom Oscillators With Colliding Components. Journal of Sound and Vibration, 1993, 165, 439-453.	2.1	82
7	STABILITY OF PIECEWISE LINEAR OSCILLATORS WITH VISCOUS AND DRY FRICTION DAMPING. Journal of Sound and Vibration, 1998, 217, 507-522.	2.1	82
8	Multi-objective optimization of quarter-car models with a passive or semi-active suspension system. Vehicle System Dynamics, 2007, 45, 77-92.	2.2	71
9	On the dynamics of oscillators with bi-linear damping and stiffness. International Journal of Non-Linear Mechanics, 1990, 25, 535-554.	1.4	70
10	Dynamic analysis of piecewise linear oscillators with time periodic coefficients. International Journal of Non-Linear Mechanics, 2000, 35, 53-68.	1.4	64
11	ON GEARED ROTORDYNAMIC SYSTEMS WITH OIL JOURNAL BEARINGS. Journal of Sound and Vibration, 2001, 243, 721-745.	2.1	53
12	Fault Detection and Optimal Sensor Location in Vehicle Suspensions. JVC/Journal of Vibration and Control, 2003, 9, 337-359.	1.5	53
13	Control and Dynamics of Quarter-Car Models With Dual-Rate Damping. JVC/Journal of Vibration and Control, 2000, 6, 1045-1063.	1.5	44
14	Stability and bifurcation analysis for oscillators with motion limiting constraints. Journal of Sound and Vibration, 1990, 141, 97-102.	2.1	43
15	Linear and nonlinear dynamics of reciprocating engines. International Journal of Non-Linear Mechanics, 2003, 38, 723-738.	1.4	36
16	Variability of updated finite element models and their predictions consistent with vibration measurements. Structural Control and Health Monitoring, 2012, 19, 630-654.	1.9	36
17	Mode Localization and Frequency Veering in a Non-Conservative Mechanical System With Dissimilar Components. Journal of Sound and Vibration, 1993, 165, 137-147.	2.1	35
18	Coupled Lateral-Torsional Vibration of a Gear-Pair System Supported by a Squeeze Film Damper. Journal of Vibration and Acoustics, Transactions of the ASME, 1998, 120, 860-867.	1.0	30

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19	Dynamics of Oscillators with Strongly Nonlinear Asymmetric Damping. Nonlinear Dynamics, 1999, 20, 221-246.	2.7	30
20	Dynamics of Slider-Crank Mechanisms with Flexible Supports and Non-Ideal Forcing. Nonlinear Dynamics, 2004, 35, 205-227.	2.7	30
21	Dynamics of Large Scale Mechanical Models Using Multilevel Substructuring. Journal of Computational and Nonlinear Dynamics, 2007, 2, 40-51.	0.7	30
22	Vibration of a continuous system with clearance and motion constraints. International Journal of Non-Linear Mechanics, 2000, 35, 675-690.	1.4	29
23	A set of ordinary differential equations of motion for constrained mechanical systems. Nonlinear Dynamics, 2015, 79, 1911-1938.	2.7	29
24	Effect of non-linearities in the identification and fault detection of gear-pair systems. International Journal of Non-Linear Mechanics, 2006, 41, 213-230.	1.4	28
25	On application of Newtonâ€™s law to mechanical systems with motion constraints. Nonlinear Dynamics, 2013, 72, 455-475.	2.7	26
26	Dynamics of finite element structural models with multiple unilateral constraints. International Journal of Non-Linear Mechanics, 2009, 44, 371-382.	1.4	25
27	Ride Dynamics of Nonlinear Vehicle Models Using Component Mode Synthesis. Journal of Vibration and Acoustics, Transactions of the ASME, 2002, 124, 427-434.	1.0	24
28	Nonlinear biodynamics of passengers coupled with quarter car models. Journal of Sound and Vibration, 2007, 304, 50-71.	2.1	23
29	Dynamics and stability of non-linear free vibration of thin rotating rings. International Journal of Non-Linear Mechanics, 1994, 29, 31-48.	1.4	21
30	A new look into the kinematics and dynamics of finite rigid body rotations using Lie group theory. International Journal of Solids and Structures, 2013, 50, 57-72.	1.3	21
31	Dynamics of piecewise linear oscillators with van der Pol type damping. International Journal of Non-Linear Mechanics, 1991, 26, 349-366.	1.4	20
32	ON VIBRATION ISOLATION OF MECHANICAL SYSTEMS WITH NON-LINEAR FOUNDATIONS. Journal of Sound and Vibration, 1996, 194, 173-185.	2.1	19
33	Dynamic Response and Identification of Critical Points in the Superstructure of a Vehicle Using a Combination of Numerical and Experimental Methods. Experimental Mechanics, 2015, 55, 529-542.	1.1	19
34	Application of an augmented Lagrangian approach to multibody systems with equality motion constraints. Nonlinear Dynamics, 2020, 99, 753-776.	2.7	18
35	Analytical Modeling of Discrete Mechanical Systems Involving Contact, Impact, and Friction. Applied Mechanics Reviews, 2019, 71, .	4.5	17
36	Stability Analysis and Complex Dynamics of a Gear-Pair System Supported by a Squeeze Film Damper. Journal of Vibration and Acoustics, Transactions of the ASME, 1997, 119, 85-88.	1.0	15

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37	Hybrid (numerical-experimental) modeling of complex structures with linear and nonlinear components. Nonlinear Dynamics, 2006, 47, 193-217.	2.7	15
38	A Dynamic Partitioning Method to solve the vehicle-bridge interaction problem. Computers and Structures, 2021, 251, 106547.	2.4	15
39	Weak formulation and first order form of the equations of motion for a class of constrained mechanical systems. International Journal of Non-Linear Mechanics, 2015, 77, 208-222.	1.4	14
40	Non-linear parametric resonance of spinning rings. Journal of Sound and Vibration, 1995, 184, 93-109.	2.1	13
41	On the dynamics of rings rotating with variable spin speed. Nonlinear Dynamics, 1995, 7, 345-363.	2.7	13
42	Dynamics of mechanical systems involving impact and friction using an efficient contact detection algorithm. International Journal of Non-Linear Mechanics, 2017, 94, 309-322.	1.4	12
43	Bayesian Uncertainty Quantification and Propagation in Nonlinear Structural Dynamics. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 33-41.	0.3	12
44	Regular and chaotic forced vibration of thin rotating rings. International Journal of Non-Linear Mechanics, 1998, 33, 843-855.	1.4	10
45	Parametric Identification and Health Monitoring of Complex Ground Vehicle Models. JVC/Journal of Vibration and Control, 2008, 14, 1021-1036.	1.5	10
46	Optimal selection of suspension parameters in large scale vehicle models. Vehicle System Dynamics, 2009, 47, 1147-1166.	2.2	8
47	Modal interactions in self-excited oscillators under external primary resonance. Journal of Sound and Vibration, 1995, 184, 261-280.	2.1	7
48	On periodic steady state response and stability of Filippov-type mechanical models. Nonlinear Dynamics, 2011, 66, 355-376.	2.7	7
49	Free Vibration in a Class of Self-Excited Oscillators with 1:3 Internal Resonance. Nonlinear Dynamics, 1997, 12, 109-128.	2.7	6
50	Dynamics of Nonlinear Oscillators under Simultaneous Internal and External Resonances. Nonlinear Dynamics, 1998, 16, 23-39.	2.7	6
51	Self-Excited Oscillators with Asymmetric Nonlinearities and One-to-Two Internal Resonance. Nonlinear Dynamics, 1998, 17, 325-346.	2.7	6
52	Modelling and ride dynamics of a flexible multi-body model of an urban bus. Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics, 2008, 222, 143-154.	0.5	6
53	Periodic steady state response of large scale mechanical models with local nonlinearities. International Journal of Solids and Structures, 2009, 46, 3565-3576.	1.3	6
54	A time-stepping method for multibody systems with frictional impacts based on a return map and boundary layer theory. International Journal of Non-Linear Mechanics, 2021, 131, 103683.	1.4	6

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55	EXTERNAL PRIMARY RESONANCE OF SELF-EXCITED OSCILLATORS WITH 1:3 INTERNAL RESONANCE. Journal of Sound and Vibration, 1997, 208, 211-224.	2.1	5
56	A geometric solution to the general single contact frictionless problem by combining concepts of analytical dynamics and b-calculus. International Journal of Non-Linear Mechanics, 2017, 95, 117-131.	1.4	5
57	An analytical dynamics approach for mechanical systems involving a single frictional contact using b-geometry. International Journal of Solids and Structures, 2018, 148-149, 140-156.	1.3	5
58	A novel return map in non-flat configuration spaces Î¿f multibody systems with impact. International Journal of Solids and Structures, 2020, 202, 822-834.	1.3	5
59	A model-based fatigue damage estimation framework of large-scale structural systems. Structural Health Monitoring, 2021, 20, 834-847.	4.3	5
60	FORCING INDUCED ASYMMETRY ON DYNAMICAL SYSTEMS WITH CUBIC NON-LINEARITIES. Journal of Sound and Vibration, 2000, 233, 279-295.	2.1	4
61	Dynamics of Piecewise Linear Oscillators. World Scientific Series on Nonlinear Science, Series A, 2000, , 127-153.	0.0	4
62	An augmented Lagrangian formulation for the equations of motion of multibody systems subject to equality constraints. Procedia Engineering, 2017, 199, 747-752.	1.2	4
63	A Boundary Layer Approach to Multibody Systems Involving Single Frictional Impacts. Journal of Computational and Nonlinear Dynamics, 2019, 14, .	0.7	4
64	A time-stepping method for multibody systems involving frictional impacts and phases with persistent contact. Mechanism and Machine Theory, 2022, 169, 104591.	2.7	4
65	Application of Newtonâ€™s law of motion to constrained mechanical systems possessing configuration manifolds with time-dependent geometric properties. Nonlinear Dynamics, 2016, 85, 2583-2610.	2.7	3
66	A NOVEL APPROACH FOR THE ANALYSIS OF A COUPLED TRAIN-RAILWAY BRIDGE SYSTEM: BASIC PRINCIPLES AND METHODOLOGY. , 2019, , .		3
67	Dynamic Analysis and Identification of Critical Points in the Superstructure of a Vehicle Through FE Modeling and Mobility Tests. , 2013, , .		2
68	Numerical integration of multibody dynamic systems involving nonholonomic equality constraints. Nonlinear Dynamics, 2021, 105, 1191-1211.	2.7	2
69	Modal interaction and bifurcations in two degree of freedom duffing oscillators. Nonlinear Dynamics, 1991, 2, 405-417.	2.7	1
70	On the Seismic Behavior of Unanchored Liquid Containers. Journal of Pressure Vessel Technology, Transactions of the ASME, 1996, 118, 257-264.	0.4	1
71	Stochastic dynamics and fatigue analysis of large-scale mechanical models using multilevel substructuring. Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics, 2012, 226, 343-358.	0.5	1
72	A novel co-simulation approach for mechanical systems. Multibody System Dynamics, 0, , .	1.7	1

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73	Special Issue of the Journal of Vibration and Control in honor of Professor Fabrizio Vestroni. JVC/Journal of Vibration and Control, 2008, 14, 3-5.	1.5	0
74	Numerical Integration of a New Set of Equations of Motion for Mechanical Systems With Scleronomic Constraints. , 2015, , .		0
75	A new set of equations of motion for constrained structures and a comparison of the effect of bilateral and unilateral constraints. Procedia Engineering, 2017, 199, 218-223.	1.2	0
76	Nonlinear Ground/Structure Interaction and Buckling of a Liquid-Filled Tank Under Ground Excitation. Studies in Applied Mechanics, 1988, 19, 267-284.	0.4	0
77	Vibration of Thin Circular Spinning Rings. The Shock and Vibration Digest, 1999, 31, 101-114.	6.2	0
78	Nonlinear Dynamics of Multibody Systems Using an Augmented Lagrangian Formulation. , 2020, , 3-11.		0
79	Boundary Layer Dynamics of Multibody Systems Involving Impact and Friction. , 2020, , 97-106.		0
80	Preface to the special issue NODYCON 2021, Second International Nonlinear Dynamics Conference, Feb. 16â€“19, 2021. Nonlinear Dynamics, 2022, 107, 1413-1415.	2.7	0