

Ouakad H M; Ouakad M Hassen

List of Publications by Year in descending order

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109
papers

1,970
citations

304368

22
h-index

288905

40
g-index

109
all docs

109
docs citations

109
times ranked

879
citing authors

#	ARTICLE	IF	CITATIONS
1	The dynamic behavior of MEMS arch resonators actuated electrically. International Journal of Non-Linear Mechanics, 2010, 45, 704-713.	1.4	202
2	On the nonlinear resonances and dynamic pull-in of electrostatically actuated resonators. Journal of Micromechanics and Microengineering, 2009, 19, 045013.	1.5	128
3	Nonlinear Dynamics of MEMS Arches Under Harmonic Electrostatic Actuation. Journal of Microelectromechanical Systems, 2010, 19, 647-656.	1.7	115
4	On using the dynamic snap-through motion of MEMS initially curved microbeams for filtering applications. Journal of Sound and Vibration, 2014, 333, 555-568.	2.1	105
5	Nonlinear Dynamics of Electrically Actuated Carbon Nanotube Resonators. Journal of Computational and Nonlinear Dynamics, 2010, 5, .	0.7	104
6	Natural frequencies and mode shapes of initially curved carbon nanotube resonators under electric excitation. Journal of Sound and Vibration, 2011, 330, 3182-3195.	2.1	97
7	Nonlinear dynamics of a resonant gas sensor. Nonlinear Dynamics, 2010, 59, 607-618.	2.7	67
8	Stress-driven nonlocal elasticity for the instability analysis of fluid-conveying C-BN hybrid-nanotube in a magneto-thermal environment. Physica Scripta, 2020, 95, 065204.	1.2	49
9	On the nonlinear vibration and static deflection problems of actuated hybrid nanotubes based on the stress-driven nonlocal integral elasticity. Mechanics of Materials, 2020, 148, 103532.	1.7	45
10	One-to-One and Three-to-One Internal Resonances in MEMS Shallow Arches. Journal of Computational and Nonlinear Dynamics, 2017, 12, .	0.7	43
11	Dynamic response of slacked single-walled carbon nanotube resonators. Nonlinear Dynamics, 2012, 67, 1419-1436.	2.7	40
12	Experimental and mathematical analysis of a piezoelectrically actuated multilayered imperfect microbeam subjected to applied electric potential. Composite Structures, 2018, 184, 950-960.	3.1	40
13	Rippling effect on the structural response of electrostatically actuated single-walled carbon nanotube based NEMS actuators. International Journal of Non-Linear Mechanics, 2016, 87, 97-108.	1.4	39
14	Static response and natural frequencies of microbeams actuated by out-of-plane electrostatic fringing-fields. International Journal of Non-Linear Mechanics, 2014, 63, 39-48.	1.4	36
15	Static response and free vibration of MEMS arches assuming out-of-plane actuation pattern. International Journal of Non-Linear Mechanics, 2019, 110, 44-57.	1.4	36
16	An Electrostatically Actuated MEMS Arch Band-Pass Filter. Shock and Vibration, 2013, 20, 809-819.	0.3	33
17	Novel threshold pressure sensors based on nonlinear dynamics of MEMS resonators. Journal of Micromechanics and Microengineering, 2018, 28, 065007.	1.5	33
18	Vertical Axis Wind Turbine Aerodynamics: Summary and Review of Momentum Models. Journal of Energy Resources Technology, Transactions of the ASME, 2019, 141, .	1.4	32

#	ARTICLE	IF	CITATIONS
19	Electrostatic fringing-fields effects on the structural behavior of MEMS shallow arches. <i>Microsystem Technologies</i> , 2018, 24, 1391-1399.	1.2	30
20	Accelerated Adaptive Fuzzy Optimal Control of Three Coupled Fractional-Order Chaotic Electromechanical Transducers. <i>IEEE Transactions on Fuzzy Systems</i> , 2021, 29, 1701-1714.	6.5	30
21	Static, eigenvalue problem and bifurcation analysis of MEMS arches actuated by electrostatic fringing-fields. <i>Microsystem Technologies</i> , 2016, 22, 193-206.	1.2	28
22	Static and dynamic response of CNT nanobeam using nonlocal strain and velocity gradient theory. <i>Applied Mathematical Modelling</i> , 2018, 62, 207-222.	2.2	26
23	Nonlocal study of the vibration and stability response of small-scale axially moving supported beams on viscoelastic Pasternak foundation in a hygro-thermal environment. <i>Mathematical Methods in the Applied Sciences</i> , 0, , .	1.2	26
24	On the snap-through buckling analysis of electrostatic shallow arch micro-actuator via meshless Galerkin decomposition technique. <i>Engineering Analysis With Boundary Elements</i> , 2022, 134, 388-397.	2.0	21
25	The response of a micro-electro-mechanical system (MEMS) cantilever-paddle gas sensor to mechanical shock loads. <i>JVC/Journal of Vibration and Control</i> , 2015, 21, 2739-2754.	1.5	20
26	Nonlinear structural behavior of a size-dependent MEMS gyroscope assuming a non-trivial shaped proof mass. <i>Microsystem Technologies</i> , 2020, 26, 573-582.	1.2	20
27	Modeling and Simulations of Collapse Instabilities of Microbeams due to Capillary Forces. <i>Mathematical Problems in Engineering</i> , 2009, 2009, 1-16.	0.6	19
28	A resonant pressure MEMS sensor based on levitation force excitation detection. <i>Nonlinear Dynamics</i> , 2020, 100, 1105-1123.	2.7	19
29	Size-dependent behavior of slacked carbon nanotube actuator based on the higher-order strain gradient theory. <i>International Journal of Mechanics and Materials in Design</i> , 2018, 14, 393-415.	1.7	17
30	Nonlinear Dynamics of MEMS Arches Assuming Out-of-Plane Actuation Arrangement. <i>Journal of Vibration and Acoustics</i> , <i>Transactions of the ASME</i> , 2019, 141, .	1.0	17
31	Local nonlinear dynamics of MEMS arches actuated by fringing-field electrostatic actuation. <i>Nonlinear Dynamics</i> , 2019, 95, 2907-2921.	2.7	17
32	Optimal Synchronization of Unidirectionally Coupled FO Chaotic Electromechanical Devices With the Hierarchical Neural Network. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2022, 33, 1192-1202.	7.2	16
33	Numerical model for the calculation of the electrostatic force in non-parallel electrodes for MEMS applications. <i>Journal of Electrostatics</i> , 2015, 76, 254-261.	1.0	15
34	Nonlinear feedback controller of a microbeam resonator. <i>JVC/Journal of Vibration and Control</i> , 2015, 21, 1680-1697.	1.5	15
35	Thermal effect on the dynamic behavior of nanobeam resonator assuming size-dependent higher-order strain gradient theory. <i>Microsystem Technologies</i> , 2018, 24, 2585-2598.	1.2	15
36	Dynamic response of an electrostatically actuated microbeam to drop-table test. <i>Journal of Micromechanics and Microengineering</i> , 2012, 22, 095003.	1.5	14

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37	2D electrostatic energy harvesting device using a single shallow arched microbeam. International Journal of Non-Linear Mechanics, 2021, 132, 103700.	1.4	14
38	A review of smart sensors coupled with Internet of Things and Artificial Intelligence approach for heart failure monitoring. Medical and Biological Engineering and Computing, 2021, 59, 2185-2203.	1.6	14
39	Analysis of Bifurcation Behavior of a Piecewise Linear Vibrator with Electromagnetic Coupling for Energy Harvesting Applications. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2014, 24, 1450066.	0.7	13
40	Comprehensive numerical modeling of the nonlinear structural behavior of MEMS/NEMS electrostatic actuators under the effect of the van der Waals forces. Microsystem Technologies, 2017, 23, 5903-5910.	1.2	13
41	Dynamics of V-Shaped Electrothermal MEMS-Based Resonators. Journal of Microelectromechanical Systems, 2020, 29, 1372-1381.	1.7	13
42	Classification of the nonlinear dynamics in an initially curved bistable micro/nano-electro-mechanical system resonator. Micro and Nano Letters, 2015, 10, 583-588.	0.6	12
43	Theoretical and experimental investigations of the primary and parametric resonances in repulsive force based MEMS actuators. Sensors and Actuators A: Physical, 2020, 303, 111635.	2.0	12
44	Vibrational Response of Initially Deformed Bistable Microbeams Under the Combined Effect of Mechanical Shock Loads and Electrostatic Forces. Journal of Vibration and Acoustics, Transactions of the ASME, 2018, 140, .	1.0	11
45	Dynamical analysis and chaos control of MEMS resonators by using the analog circuit. Nonlinear Dynamics, 2022, 108, 97-112.	2.7	11
46	Dynamic analysis, circuit realization and accelerated adaptive backstepping control of the FO MEMS gyroscope. Chaos, Solitons and Fractals, 2022, 155, 111735.	2.5	10
47	Nanoscale Manipulators: Review of Conceptual Designs Through Recent Patents. Recent Patents on Nanotechnology, 2016, 10, 44-58.	0.7	9
48	Influence of squeeze-film damping on the dynamic behavior of a curved micro-beam. Advances in Mechanical Engineering, 2016, 8, 168781401665012.	0.8	9
49	Simple and accurate analytical solution to the post-buckling response of an electrostatically actuated MEMS curled cantilever. Microsystem Technologies, 2016, 22, 2251-2258.	1.2	9
50	Experimental and theoretical investigations of the lateral vibrations of an unbalanced Jeffcott rotor. Frontiers of Structural and Civil Engineering, 2020, 14, 1024-1032.	1.2	9
51	The Static and Dynamic Behavior of MEMS Arches Under Electrostatic Actuation. , 2009, , .		8
52	Dynamical analysis and anti-oscillation-based adaptive control of the FO arch MEMS with optimality. Nonlinear Dynamics, 2020, 101, 293-309.	2.7	8
53	On the implementation of adaptive sliding mode robust controller in the stabilization of electrically actuated micro-tunable capacitor. Microsystem Technologies, 2020, 26, 3903-3916.	1.2	8
54	Crossover/veering in V-Shaped MEMS Resonators. Journal of Microelectromechanical Systems, 2022, 31, 74-86.	1.7	8

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55	Bifurcation analysis and nonlinear dynamics of a capacitive energy harvester in the vicinity of the primary and secondary resonances. <i>Nonlinear Dynamics</i> , 2022, 108, 873-886.	2.7	8
56	Modeling the Electrostatic Deflection of a MEMS Multilayers Based Actuator. <i>Mathematical Problems in Engineering</i> , 2013, 2013, 1-6.	0.6	7
57	Reliability of MEMS shallow arches based actuator under the combined effect of mechanical shock and electric loads. <i>Microelectronics Reliability</i> , 2017, 79, 352-359.	0.9	7
58	Dynamic Analysis of Multilayers Based MEMS Resonators. <i>Mathematical Problems in Engineering</i> , 2017, 2017, 1-14.	0.6	7
59	Pull-in-free design of electrically actuated carbon nanotube-based NEMS actuator assuming non-parallel electrodes arrangement. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2018, 40, 1.	0.8	7
60	Global Nonlinear Dynamics of MEMS Arches Actuated by Fringing-Field Electrostatic Field. <i>Arabian Journal for Science and Engineering</i> , 2020, 45, 5959-5975.	1.7	7
61	On the double resonance activation of electrostatically actuated microbeam based resonators. <i>International Journal of Non-Linear Mechanics</i> , 2020, 121, 103437.	1.4	7
62	Investigating Mode Localization at Lower- and Higher-Order Modes in Mechanically Coupled MEMS Resonators. <i>Journal of Computational and Nonlinear Dynamics</i> , 2020, 15, .	0.7	7
63	Instability Characteristics of Free-Standing Nanowires Based on the Strain Gradient Theory with the Consideration of Casimir Attraction and Surface Effects. <i>Metrology and Measurement Systems</i> , 2017, 24, 489-507.	1.4	6
64	Dynamic analysis of straight stepped microbeams. <i>International Journal of Non-Linear Mechanics</i> , 2021, 128, 103639.	1.4	6
65	Static and Dynamic Analysis of Electrostatically Actuated MEMS Shallow Arches for Various Air-Gap Configurations. <i>Micromachines</i> , 2021, 12, 930.	1.4	6
66	Structural Behavior of Microbeams Actuated by Out-of-Plane Electrostatic Fringing-Fields. , 2013, , .		6
67	Numerical Investigation of a Vertical Axis Wind Turbine Performance Characterization Using New Variable Pitch Control Scheme. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2020, 142, .	1.4	6
68	Nonlinear Analysis of Electrically Actuated Carbon Nanotube Resonator Using a Novel Discretization Technique. <i>Mathematical Problems in Engineering</i> , 2013, 2013, 1-9.	0.6	5
69	Simulation and analysis of the aeroelastic-galloping-based piezoelectric energy harvester utilizing FEM and CFD. <i>MATEC Web of Conferences</i> , 2018, 159, 01052.	0.1	5
70	Highly sensitive low field Lorentz-force MEMS magnetometer. <i>Scientific Reports</i> , 2021, 11, 21634.	1.6	5
71	Investigation into Mode Localization of Electrostatically Coupled Shallow Microbeams for Potential Sensing Applications. <i>Micromachines</i> , 2022, 13, 989.	1.4	5
72	Modeling the Structural-Thermal-Electrical Coupling in an Electrostatically Actuated MEMS Switch and Its Impact on the Switch Stability. <i>Mathematical Problems in Engineering</i> , 2013, 2013, 1-8.	0.6	4

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73	Free Vibration Characteristics of Rectangular Membranes Assuming Rounded-Edges Boundary. <i>Vibration</i> , 2019, 2, 265-270.	0.9	4
74	Applied Mechatronics: On Mitigating Disturbance Effects in MEMS Resonators Using Robust Nonsingular Terminal Sliding Mode Controllers. <i>Machines</i> , 2022, 10, 34.	1.2	4
75	Nonlinear Feedback Control and Dynamics of an Electrostatically Actuated Microbeam Filter. , 2008, , .		3
76	Modeling the CO ₂ Sequestration Convection Problem Using the Lattice Boltzmann Method. <i>Mathematical Problems in Engineering</i> , 2013, 2013, 1-10.	0.6	3
77	On the Effects of Temperature and Relative Humidity on the Response of a MEMS Arch Resonator. , 2017, , .		3
78	A numerical-analytical methodology for acquiring the electrical force of carbon nanotube-based nanoactuator assuming an out-of-plane electrodes arrangement. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , 2018, 31, e2300.	1.2	3
79	Stability Analysis of Initially Curved Beams Mechanically Coupled in a Parallel Arrangement. <i>International Journal of Structural Stability and Dynamics</i> , 2018, 18, 1850041.	1.5	3
80	Parametric Study and Comparison of Aerodynamics Momentum-Based Models for Straight-Bladed Vertical Axis Wind Turbines. <i>Arabian Journal for Science and Engineering</i> , 2020, 45, 729-741.	1.7	3
81	Bi-stability behavior in electrostatically actuated non-contact based micro-actuator. <i>Microsystem Technologies</i> , 2020, 26, 2961-2969.	1.2	3
82	The static and dynamic behavior of MEMS arches under electrostatic actuation. , 2009, , .		2
83	Natural Frequencies and Mode Shapes of Slacked Carbon Nanotube NEMS Resonators. , 2010, , .		2
84	Forced Vibrations of Slacked Carbon Nanotube Resonators. , 2010, , .		2
85	Response of an electrostatically actuated microbeam to drop-table test. , 2010, , .		2
86	Static and bifurcation analysis of MEMS arches actuated by electrostatic fringing fields. , 2014, , .		2
87	Structural Behavior of a Multi-Layer Based Microbeam Actuator. <i>Actuators</i> , 2016, 5, 22.	1.2	2
88	The effect of size scale parameters on the structural behavior of carbon nanotube based nano-actuator. , 2016, , .		2
89	Comprehensive Analytical Approximations of the Pull-In Characteristics of an Electrostatically Actuated Nanobeam under the Influences of Intermolecular Forces. <i>Actuators</i> , 2018, 7, 3.	1.2	2
90	Statics and Dynamics of V-Shaped Microbeams Under Axial Forces. <i>Journal of Computational and Nonlinear Dynamics</i> , 2021, 16, .	0.7	2

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91	Velocity gradient elasticity for nonlinear vibration of carbon nanotube resonators. <i>Frontiers of Structural and Civil Engineering</i> , 2020, 14, 1520-1530.	1.2	2
92	On the use of nonlinear impact oscillators in vibrating electromagnetic based energy harvesters. <i>Journal of Intelligent Material Systems and Structures</i> , 2022, 33, 1654-1662.	1.4	2
93	Modelling and Simulation of a Cantilever-Paddle Beam Under the Effect of Capillary, Shock, and Electrostatic Forces. , 2008, , .		1
94	Modeling and Simulations of Collapse Instabilities of Microbeams Due to Capillary Forces. , 2008, , .		1
95	Experimental and Theoretical Investigation of the Nonlinear Dynamics of an Electrostatically-Actuated Device. , 2008, , .		1
96	Stability Analysis of Periodic Orbits in a Class of Duffing-Like Piecewise Linear Vibrators. <i>MATEC Web of Conferences</i> , 2014, 16, 08001.	0.1	1
97	Dynamic response of MEMS sensor near fundamental and higher-order frequencies. , 2014, , .		1
98	Static Response of Microbeams due to Capillary and Electrostatic Forces. , 2015, , .		1
99	A Novel Threshold Pressure Sensor Based on Nonlinear Dynamics of MEMS Arches. , 2017, , .		1
100	Analysis of the lateral vibrations of an unbalanced Jeffcott rotor. <i>MATEC Web of Conferences</i> , 2018, 211, 18007.	0.1	1
101	Nonlinear Structural Behavior of Double-Layers Based MEMS Actuator. , 2016, , .		0
102	Nonlocal modeling of a Carbon Nanotube actuated by an electrostatic force. <i>MATEC Web of Conferences</i> , 2016, 83, 04004.	0.1	0
103	Nonlinear Structural Mechanics of Micro-and Nanosystems. , 2016, , 127-195.		0
104	Exploration of the Response of Electrically Actuated MEMS Arches Under the Effect of Mechanical Shock Loads. , 2017, , .		0
105	An Experimental and Theoretical Investigation of Double Resonance Activation in Electrostatic MEMS Resonators. , 2018, , .		0
106	Innovative In-Plane Converter Design for a Capacitive Energy Harvester. <i>Applied Condition Monitoring</i> , 2021, , 125-135.	0.4	0
107	Nonlinear Dynamics of Electrically-Actuated Carbon Nanotube Resonator. , 2008, , .		0
108	A selective excitation mode design for a wider high-to-low frequencies tunable capacitive MEMS resonator. <i>Microsystem Technologies</i> , 2021, 27, 4329.	1.2	0

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109	Parametric resonance of bi-directional axial loads shallow arch microresonators. Journal of Micromechanics and Microengineering, 2022, 32, 054004.	1.5	0