

Najib Kacem

List of Publications by Year in descending order

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Version: 2024-02-01

71
papers

1,278
citations

361296

20
h-index

360920

35
g-index

72
all docs

72
docs citations

72
times ranked

912
citing authors

#	ARTICLE	IF	CITATIONS
1	An asymmetric mode-localized mass sensor based on the electrostatic coupling of different structural modes with distributed electrodes. <i>Nonlinear Dynamics</i> , 2022, 108, 61-79.	2.7	4
2	The Effect of the Bending Beam Width Variations on the Discrepancy of the Resulting Quadrature Errors in MEMS Gyroscopes. <i>Micromachines</i> , 2022, 13, 655.	1.4	2
3	Investigating the effects of Silicon etching imperfections on the quadrature error in MEMS gyroscopes. , 2022, , .		0
4	Pendulum-based embedded energy harvester for rotating systems. <i>Mechanical Systems and Signal Processing</i> , 2022, 180, 109415.	4.4	9
5	On the equivalence between mass perturbation and DC voltage bias in coupled MEMS resonators: Theoretical and experimental investigation. <i>Journal of Applied Physics</i> , 2022, 132, 024502.	1.1	5
6	On the Optimization of a Multimodal Electromagnetic Vibration Energy Harvester Using Mode Localization and Nonlinear Dynamics. <i>Actuators</i> , 2021, 10, 25.	1.2	5
7	Experimental characterization of nonlinear static and dynamic behaviors of circular capacitive microplates with initial deflection. <i>Nonlinear Dynamics</i> , 2021, 103, 2329-2343.	2.7	1
8	Computational investigation of high-order mode localization in electrostatically coupled microbeams with distributed electrodes for high sensitivity mass sensing. <i>Mechanical Systems and Signal Processing</i> , 2021, 158, 107781.	4.4	13
9	Design and modeling of a MEMS accelerometer based on coupled mode-localized nonlinear resonators under electrostatic actuation. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2021, 103, 105960.	1.7	13
10	Implementation of a tunable hybrid system with coupled high Q -factor resonators based on mode localization for sensing purposes. <i>Smart Materials and Structures</i> , 2020, 29, 02LT01.	1.8	8
11	Towards an Ultra Sensitive Hybrid Mass Sensor Based on Mode Localization without Resonance Tracking. <i>Sensors</i> , 2020, 20, 5295.	2.1	4
12	Functionalization of electrostatic nonlinearities to overcome mode aliasing limitations in the sensitivity of mass microsensors based on energy localization. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	30
13	Exploiting nonlinearity to enhance the sensitivity of mode-localized mass sensor based on electrostatically coupled MEMS resonators. <i>International Journal of Non-Linear Mechanics</i> , 2020, 121, 103455.	1.4	32
14	Efficient broadband vibration energy harvesting based on tuned non-linearity and energy localization. <i>Smart Materials and Structures</i> , 2020, 29, 10LT01.	1.8	23
15	Piezoelectric Actuated Nonlinear Energy Sink With Tunable Attenuation Efficiency. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2020, 87, .	1.1	5
16	Mass sensor using mode localization in two weakly coupled MEMS cantilevers with different lengths: Design and experimental model validation. <i>Sensors and Actuators A: Physical</i> , 2019, 295, 643-652.	2.0	55
17	Modeling and experimental characterization of squeeze film effects in nonlinear capacitive circular microplates. <i>Mechanical Systems and Signal Processing</i> , 2019, 127, 68-88.	4.4	13
18	On the energy localization in weakly coupled oscillators for electromagnetic vibration energy harvesting. <i>Smart Materials and Structures</i> , 2019, 28, 07LT02.	1.8	27

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19	Vibration Energy Localization from Nonlinear Quasi-Periodic Coupled Magnets. Applied Condition Monitoring, 2019, , 121-128.	0.4	1
20	Mode Localization in Two Coupled Nearly Identical MEMS Cantilevers for Mass Sensing. , 2019, , .		1
21	Exploiting Nonlinear Dynamics and Energy Localization to Enhance the Performances of an Electromagnetic Vibration Energy Harvester. , 2019, , .		1
22	On the Implementation of Mode Localization Between Physical and Digital Resonators. , 2018, , .		2
23	Optimization of vibration energy localization in quasi-periodic structures. MATEC Web of Conferences, 2018, 241, 01013.	0.1	0
24	Robustness of Nonlinear Electromagnetic Vibration Energy Harvester Subjected to Random Excitation. , 2018, , .		0
25	Effects of Squeeze Film and Initial Deflection on the Resonance Frequencies and Modal Damping of Circular Microplates. , 2018, , .		0
26	Investigations of the Effects of Geometric Imperfections on the Nonlinear Static and Dynamic Behavior of Capacitive Micromachined Ultrasonic Transducers. Micromachines, 2018, 9, 575.	1.4	8
27	Design of a quasi-periodic vibration energy harvester based on an electromagnetic technique. MATEC Web of Conferences, 2018, 241, 01024.	0.1	0
28	Effect of the localization on the response of a quasi-periodic electromagnetic oscillator array for vibration energy harvesting. MATEC Web of Conferences, 2018, 241, 01003.	0.1	1
29	Design of a nonlinear energy harvester based on high static low dynamic stiffness for low frequency random vibrations. Sensors and Actuators A: Physical, 2018, 283, 54-64.	2.0	38
30	A nonlinear resonant mass sensor with enhanced sensitivity and resolution incorporating compressed bistable beam. Journal of Applied Physics, 2018, 124, 164503.	1.1	14
31	High performances low frequency vibration energy harvester with HSLD stiffness. Journal of Physics: Conference Series, 2018, 1052, 012088.	0.3	0
32	Stabilization of solitons in coupled nonlinear pendulums with simultaneous external and parametric excitations. Communications in Nonlinear Science and Numerical Simulation, 2017, 42, 1-11.	1.7	24
33	Uncertainty quantification/propagation in nonlinear models. Engineering Computations, 2017, 34, 1082-1106.	0.7	5
34	Investigation of modal interactions and their effects on the nonlinear dynamics of a periodic coupled pendulums chain. International Journal of Mechanical Sciences, 2017, 127, 130-141.	3.6	20
35	Estimation and correction of the modal damping error involving linear and nonlinear localized dissipation. European Journal of Mechanics, A/Solids, 2017, 66, 296-308.	2.1	2
36	Nonlinear Static and Dynamic Behavior of an Imperfect Circular Microplate Under Electrostatic Actuation. , 2017, , .		0

#	ARTICLE	IF	CITATIONS
37	Multistability and Bifurcation Topology in Electrostatically Coupled Nanobeams Under Parametric Resonance. , 2017, , .		1
38	Modal parameter identification of a CMUT membrane using response data only. Mechanics and Industry, 2017, 18, 702.	0.5	2
39	Robustness Analysis of the Collective Nonlinear Dynamics of a Periodic Coupled Pendulums Chain. Applied Sciences (Switzerland), 2017, 7, 684.	1.3	9
40	Robustness Analysis of the Collective Dynamics of Nonlinear Periodic Structures Under Parametric Uncertainty. , 2016, , .		0
41	Multistability and Modal Interactions in Periodic 2D Coupled Pendulums Array. , 2016, , .		1
42	Mode Veering and Internal Resonance in Mechanically Coupled Nanocantilevers under Electrostatic Actuation. Procedia Engineering, 2016, 168, 924-928.	1.2	5
43	Electrostatic Actuation to Counterbalance the Manufacturing Defects in a MEMS Mass Detection Sensor Using Mode Localization. Procedia Engineering, 2016, 168, 1488-1491.	1.2	14
44	Low cost metamodel for robust design of periodic nonlinear coupled micro-systems. MATEC Web of Conferences, 2016, 83, 05004.	0.1	1
45	Nonlinear dynamics of magnetically coupled beams for multi-modal vibration energy harvesting. , 2016, , .		4
46	Pull-in instability tuning in imperfect nonlinear circular microplates under electrostatic actuation. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 3886-3890.	0.9	33
47	Multi-modal vibration energy harvesting approach based on nonlinear oscillator arrays under magnetic levitation. Smart Materials and Structures, 2016, 25, 025018.	1.8	61
48	Nonlinear Dynamics and Its Applications in Nanocantilevers. , 2016, , 81-136.		1
49	Overcoming limitations of nanomechanical resonators with simultaneous resonances. Applied Physics Letters, 2015, 107, 073105.	1.5	33
50	Nonlinear 2-DOFs Vibration Energy Harvester Based on Magnetic Levitation. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 39-45.	0.3	5
51	Nonlinear dynamics of circular capacitive micromachined ultrasonic transducers. , 2015, , .		2
52	Collective dynamics of periodic nonlinear oscillators under simultaneous parametric and external excitations. Nonlinear Dynamics, 2015, 82, 749-766.	2.7	21
53	Uncertainties Propagation through Robust Reduced Model. Lecture Notes in Mechanical Engineering, 2015, , 537-544.	0.3	0
54	NONLINEAR DYNAMICS OF A 2D ARRAY OF COUPLED PENDULUMS UNDER PARAMETRIC EXCITATION. , 2015, , .		3

#	ARTICLE	IF	CITATIONS
55	Design and modelling of an energy harvester for tire pressure monitoring systems. MATEC Web of Conferences, 2014, 16, 01009.	0.1	0
56	Bifurcation topology transfer in nonlinear nanocantilever arrays subject to parametric and internal resonances. MATEC Web of Conferences, 2014, 16, 04004.	0.1	1
57	Computational models for large amplitude nonlinear vibrations of electrostatically actuated carbon nanotube-based mass sensors. Sensors and Actuators A: Physical, 2014, 208, 10-20.	2.0	47
58	Enhancement of the performance of a hybrid nonlinear vibration energy harvester based on piezoelectric and electromagnetic transductions. Smart Materials and Structures, 2014, 23, 075024.	1.8	84
59	Pull-In Retarding in Nonlinear Nanoelectromechanical Resonators Under Superharmonic Excitation. Journal of Computational and Nonlinear Dynamics, 2012, 7, .	0.7	24
60	Nonlinear dynamics of nanoelectromechanical cantilevers based on nanowire piezoresistive detection. MATEC Web of Conferences, 2012, 1, 04007.	0.1	0
61	Forced large amplitude periodic vibrations of non-linear Mathieu resonators for microgyroscope applications. International Journal of Non-Linear Mechanics, 2011, 46, 1347-1355.	1.4	30
62	Computational and quasi-analytical models for non-linear vibrations of resonant MEMS and NEMS sensors. International Journal of Non-Linear Mechanics, 2011, 46, 532-542.	1.4	72
63	Stability control of nonlinear micromechanical resonators under simultaneous primary and superharmonic resonances. Applied Physics Letters, 2011, 98, 193507.	1.5	32
64	High Order Nonlinearities and Mixed Behavior in Micromechanical Resonators. Springer Proceedings in Physics, 2011, , 167-172.	0.1	0
65	Nonlinear phenomena in nanomechanical resonators: mechanical behaviors and physical limitations. Mecanique Et Industries, 2010, 11, 521-529.	0.2	20
66	Dynamic range enhancement of nonlinear nanomechanical resonant cantilevers for highly sensitive NEMS gas/mass sensor applications. Journal of Micromechanics and Microengineering, 2010, 20, 045023.	1.5	116
67	Hysteresis Suppression in Nonlinear Mathieu M/NEMS Resonators. , 2009, , .		1
68	Bifurcation topology tuning of a mixed behavior in nonlinear micromechanical resonators. Applied Physics Letters, 2009, 95, 183104.	1.5	79
69	Nonlinear dynamics of nanomechanical beam resonators: improving the performance of NEMS-based sensors. Nanotechnology, 2009, 20, 275501.	1.3	178
70	Electrochemical Deposition of Metals Inside High Aspect Ratio Nanoelectrode Array: Analytical Current Expression and Multidimensional Kinetic Model for Cobalt Nanostructure Synthesis. Journal of Physical Chemistry C, 2007, 111, 5229-5235.	1.5	31
71	Optimal design for vibration energy harvesters based on quasi-periodic structures. Physica Scripta, 0, , .	1.2	1