

Shengxi Zhou

List of Publications by Year in descending order

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114
papers

6,642
citations

71102

41
h-index

64796

79
g-index

115
all docs

115
docs citations

115
times ranked

2505
citing authors

#	ARTICLE	IF	CITATIONS
1	Multistability phenomenon in signal processing, energy harvesting, composite structures, and metamaterials: A review. <i>Mechanical Systems and Signal Processing</i> , 2022, 166, 108419.	8.0	136
2	A low-frequency rotational electromagnetic energy harvester using a magnetic plucking mechanism. <i>Applied Energy</i> , 2022, 305, 117838.	10.1	103
3	On the analysis of the tristable vibration isolation system with delayed feedback control under parametric excitation. <i>Mechanical Systems and Signal Processing</i> , 2022, 164, 108207.	8.0	29
4	Dynamic response mechanism of the galloping energy harvester under fluctuating wind conditions. <i>Mechanical Systems and Signal Processing</i> , 2022, 166, 108410.	8.0	15
5	Characterizing nonlinear characteristics of asymmetric tristable energy harvesters. <i>Mechanical Systems and Signal Processing</i> , 2022, 168, 108612.	8.0	67
6	Broadband energy harvester for low-frequency rotations utilizing centrifugal softening piezoelectric beam array. <i>Energy</i> , 2022, 241, 122833.	8.8	20
7	Stochastic and deterministic responses of an asymmetric quad-stable energy harvester. <i>Mechanical Systems and Signal Processing</i> , 2022, 168, 108672.	8.0	21
8	A review of flow-induced vibration energy harvesters. <i>Energy Conversion and Management</i> , 2022, 254, 115223.	9.2	106
9	Non-uniform illumination image enhancement for surface damage detection of wind turbine blades. <i>Mechanical Systems and Signal Processing</i> , 2022, 170, 108797.	8.0	10
10	Multistage oscillators for ultra-low frequency vibration isolation and energy harvesting. <i>Science China Technological Sciences</i> , 2022, 65, 631-645.	4.0	21
11	Energy harvesting efficiency of a quasi-zero stiffness system. <i>AIP Conference Proceedings</i> , 2022, , .	0.4	1
12	Wideband energy harvesting using nonlinear energy sink with bio-inspired hexagonal skeleton structure. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2022, 111, 106465.	3.3	20
13	Energy harvesting efficiency of a quasi-zero stiffness energy harvester. <i>European Physical Journal: Special Topics</i> , 2022, 231, 1557-1565.	2.6	4
14	The effect of centrifugal force on the dynamic performance of beam-type rotational energy harvesters. <i>European Physical Journal: Special Topics</i> , 2022, 231, 1383-1392.	2.6	4
15	A novel electromagnetic energy harvester based on the bending of the sole. <i>Applied Energy</i> , 2022, 314, 119000.	10.1	27
16	Multistable vibration energy harvesters: Principle, progress, and perspectives. <i>Journal of Sound and Vibration</i> , 2022, 528, 116886.	3.9	92
17	Modeling and analysis of a three-degree-of-freedom piezoelectric vibration energy harvester for broadening bandwidth. <i>Mechanical Systems and Signal Processing</i> , 2022, 176, 109169.	8.0	32
18	Recent progress on flutter-based wind energy harvesting. <i>International Journal of Mechanical System Dynamics</i> , 2022, 2, 82-98.	2.8	25

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19	Wide Bandwidth Wind-Induced Vibration Energy Harvester with an Angle Section Head. <i>International Journal of Applied Mechanics</i> , 2022, 14, .	2.2	4
20	A piezoelectric-electromagnetic hybrid flutter-based wind energy harvester: Modeling and nonlinear analysis. <i>International Journal of Non-Linear Mechanics</i> , 2022, 144, 104051.	2.6	23
21	Theoretical and experimental investigations of multibifurcated piezoelectric energy harvesters with coupled bending and torsional vibrations. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2022, 38, .	3.4	1
22	Disturbance rejection and performance enhancement of perturbed tri-stable energy harvesters by adaptive finite-time disturbance observer. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2022, 38, .	3.4	4
23	A review of nonlinear piezoelectric energy harvesting interface circuits in discrete components. <i>Applied Mathematics and Mechanics (English Edition)</i> , 2022, 43, 1001-1026.	3.6	20
24	Enhancing energy harvesting in low-frequency rotational motion by a quad-stable energy harvester with time-varying potential wells. <i>Mechanical Systems and Signal Processing</i> , 2021, 148, 107167.	8.0	80
25	Theoretical modeling and experimental validation of the centrifugal softening effect for high-efficiency energy harvesting in ultralow-frequency rotational motion. <i>Mechanical Systems and Signal Processing</i> , 2021, 152, 107424.	8.0	24
26	On the stochastic response regimes of a tristable viscoelastic isolation system under delayed feedback control. <i>Science China Technological Sciences</i> , 2021, 64, 858-868.	4.0	13
27	Multiple Solutions of the Tristable Energy Harvester. <i>Energies</i> , 2021, 14, 1284.	3.1	29
28	Design, modeling, and experiment of a multi-bifurcated cantilever piezoelectric energy harvester. <i>Journal of Intelligent Material Systems and Structures</i> , 2021, 32, 2403-2419.	2.5	4
29	Rotational energy harvesting for self-powered sensing. <i>Joule</i> , 2021, 5, 1074-1118.	24.0	172
30	Response regimes of nonlinear energy harvesters with a resistor-inductor resonant circuit by complexification-averaging method. <i>Science China Technological Sciences</i> , 2021, 64, 1212-1227.	4.0	39
31	Nonlinear vibration mitigation of a crane's payload using pendulum absorber. <i>Mechanical Systems and Signal Processing</i> , 2021, 156, 107558.	8.0	18
32	Combining magnet-induced nonlinearity and centrifugal softening effect to realize high-efficiency energy harvesting in ultralow-frequency rotation. <i>Journal of Sound and Vibration</i> , 2021, 505, 116146.	3.9	19
33	Parameter estimation for a damped real-valued sinusoid in noise. <i>Review of Scientific Instruments</i> , 2021, 92, 085103.	1.3	4
34	Nonlinear vibration energy harvesting and vibration suppression technologies: Designs, analysis, and applications. <i>Applied Physics Reviews</i> , 2021, 8, .	11.3	95
35	A cantilever-driven rotor for efficient vibration energy harvesting. <i>Energy</i> , 2021, 235, 121326.	8.8	21
36	Tuned bistable nonlinear energy sink for simultaneously improved vibration suppression and energy harvesting. <i>International Journal of Mechanical Sciences</i> , 2021, 212, 106838.	6.7	62

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37	Hybridizing piezoelectric and electromagnetic mechanisms with dynamic bistability for enhancing low-frequency rotational energy harvesting. <i>Applied Physics Letters</i> , 2021, 119, .	3.3	12
38	Uncertainty Analysis of Bistable Vibration Energy Harvesters Based on the Improved Interval Extension. <i>Journal of Vibration Engineering and Technologies</i> , 2020, 8, 297-306.	2.2	14
39	Approximate solutions and their stability of a broadband piezoelectric energy harvester with a tunable potential function. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2020, 80, 104984.	3.3	46
40	Remaining useful life prediction of lubricating oil with dynamic principal component analysis and proportional hazards model. <i>Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology</i> , 2020, 234, 964-971.	1.8	17
41	Damage detection techniques for wind turbine blades: A review. <i>Mechanical Systems and Signal Processing</i> , 2020, 141, 106445.	8.0	198
42	Response analysis of the nonlinear vibration energy harvester with an uncertain parameter. <i>Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics</i> , 2020, 234, 393-407.	0.8	20
43	A tri-stable energy harvester in rotational motion: Modeling, theoretical analyses and experiments. <i>Journal of Sound and Vibration</i> , 2020, 469, 115142.	3.9	80
44	Scavenging vibrational energy with a novel bistable electromagnetic energy harvester. <i>Smart Materials and Structures</i> , 2020, 29, 025022.	3.5	64
45	Robust design optimization of a nonlinear monostable energy harvester with uncertainties. <i>Meccanica</i> , 2020, 55, 1753-1762.	2.0	8
46	Transient and Harmonic Unipolar Hysteresis Model of Piezoelectric Actuators Using a System-Level Approach. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 7268.	2.5	1
47	Achieving high-speed rotations with a semi-flexible rotor driven by ultralow-frequency vibrations. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	14
48	Performance enhancement for a magnetic-coupled bi-stable flutter-based energy harvester. <i>Smart Materials and Structures</i> , 2020, 29, 085045.	3.5	35
49	Coupling mechanical and electrical nonlinearities: The effect of synchronized discharging on tristable energy harvesters. <i>Applied Energy</i> , 2020, 266, 114516.	10.1	44
50	Comprehensive theoretical and experimental investigation of the rotational impact energy harvester with the centrifugal softening effect. <i>Nonlinear Dynamics</i> , 2020, 101, 123-152.	5.2	68
51	A passively self-tuning nonlinear energy harvester in rotational motion: theoretical and experimental investigation. <i>Smart Materials and Structures</i> , 2020, 29, 045033.	3.5	39
52	Improving the off-resonance energy harvesting performance using dynamic magnetic preloading. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2020, 36, 624-634.	3.4	10
53	Exploiting the advantages of the centrifugal softening effect in rotational impact energy harvesting. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	82
54	Design, modeling and experiments of broadband tristable galloping piezoelectric energy harvester. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2020, 36, 592-605.	3.4	110

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55	Analytical and experimental investigation of the centrifugal softening and stiffening effects in rotational energy harvesting. <i>Journal of Sound and Vibration</i> , 2020, 488, 115643.	3.9	57
56	A centrifugal softening impact energy harvester with the bistability using flextensional transducers for low rotational speeds. <i>Smart Materials and Structures</i> , 2020, 29, 115024.	3.5	11
57	Tunable multi-source energy harvesting via frequency selective structures. <i>Engineering Research Express</i> , 2019, 1, 015001.	1.6	3
58	Hybrid hysteresis modeling and inverse model compensation of piezoelectric actuators. <i>Smart Materials and Structures</i> , 2019, 28, 115038.	3.5	14
59	A magnetically coupled nonlinear T-shaped piezoelectric energy harvester with internal resonance. <i>Smart Materials and Structures</i> , 2019, 28, 11LT01.	3.5	17
60	The benefits of a magnetically coupled asymmetric monostable dual-cantilever energy harvester under random excitation. <i>Journal of Intelligent Material Systems and Structures</i> , 2019, 30, 3136-3145.	2.5	9
61	An ultralight phononic beam with a broad low-frequency band gap using the complex lattice of acoustic black holes. <i>Applied Physics Express</i> , 2019, 12, 077002.	2.4	18
62	Online wear characterisation of rolling element bearing using wear particle morphological features. <i>Wear</i> , 2019, 430-431, 369-375.	3.1	35
63	Analytical analysis of the vibrational tristable energy harvester with a RL resonant circuit. <i>Nonlinear Dynamics</i> , 2019, 97, 663-677.	5.2	82
64	High-performance low-frequency bistable vibration energy harvesting plate with tip mass blocks. <i>Energy</i> , 2019, 180, 737-750.	8.8	44
65	Exploring coupled electromechanical nonlinearities for broadband energy harvesting from low-frequency rotational sources. <i>Smart Materials and Structures</i> , 2019, 28, 075001.	3.5	16
66	Automated Product Boundary Defect Detection Based on Image Moment Feature Anomaly. <i>IEEE Access</i> , 2019, 7, 52731-52742.	4.2	15
67	The benefits of an asymmetric tri-stable energy harvester in low-frequency rotational motion. <i>Applied Physics Express</i> , 2019, 12, 057002.	2.4	39
68	Tailoring multistable vibrational energy harvesters for enhanced performance: theory and numerical investigation. <i>Nonlinear Dynamics</i> , 2019, 96, 1283-1301.	5.2	17
69	Enhancing Wind Energy Harvesting Using Passive Turbulence Control Devices. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 998.	2.5	12
70	Uncertainty Analysis of Excitation Conditions on Performance of Nonlinear Monostable Energy Harvesters. <i>International Journal of Structural Stability and Dynamics</i> , 2019, 19, 1950052.	2.4	10
71	Vibration suppression of a viscoelastic isolation system by nonlinear integral resonant controller. <i>JVC/Journal of Vibration and Control</i> , 2019, 25, 1599-1613.	2.6	3
72	Compact Acoustic Rainbow Trapping in a Bioinspired Spiral Array of Graded Locally Resonant Metamaterials. <i>Sensors</i> , 2019, 19, 788.	3.8	34

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73	A quad-stable piezoelectric energy harvester for enhancing energy harvesting from rotational motion: Theoretical model and experiments. IOP Conference Series: Materials Science and Engineering, 2019, 531, 012010.	0.6	1
74	Resonance Mechanism of Nonlinear Vibrational Multistable Energy Harvesters under Narrow-Band Stochastic Parametric Excitations. Complexity, 2019, 2019, 1-20.	1.6	39
75	Theoretical and Experimental Investigation of a Multi-stable Energy Harvester for Rotation Motion. Journal of Physics: Conference Series, 2019, 1407, 012130.	0.4	0
76	The Centrifugal Softening Effect of an Inverse Nonlinear Energy Harvester in Low-frequency Rotational Motion for Enhancing Performance. , 2019, , .		1
77	High-performance piezoelectric wind energy harvester with Y-shaped attachments. Energy Conversion and Management, 2019, 181, 645-652.	9.2	388
78	Electromagnetic Energy Harvester for Vibration Control of Space Rack: Modeling, Optimization, and Analysis. Journal of Aerospace Engineering, 2019, 32, .	1.4	17
79	Nonlinear magnetic-coupled flutter-based aeroelastic energy harvester: modeling, simulation and experimental verification. Smart Materials and Structures, 2019, 28, 015020.	3.5	32
80	Theoretical analysis of multi-stable energy harvesters with high-order stiffness terms. Communications in Nonlinear Science and Numerical Simulation, 2019, 69, 270-286.	3.3	111
81	Nonlinear dynamic analysis of asymmetric tristable energy harvesters for enhanced energy harvesting. Communications in Nonlinear Science and Numerical Simulation, 2018, 61, 271-284.	3.3	356
82	High-Performance Piezoelectric Energy Harvesters and Their Applications. Joule, 2018, 2, 642-697.	24.0	803
83	Numerical analysis and experimental verification of broadband tristable energy harvesters. TM Technisches Messen, 2018, 85, 521-532.	0.7	35
84	Design, simulation and experiment of a novel high efficiency energy harvesting paver. Applied Energy, 2018, 212, 966-975.	10.1	79
85	Probability analysis of asymmetric tristable energy harvesters. AIP Advances, 2018, 8, .	1.3	7
86	Theoretical analysis of vibration energy harvesters with nonlinear damping and nonlinear stiffness. European Physical Journal Plus, 2018, 133, 1.	2.6	6
87	Bifurcation, chaotic and hysteresis phenomena of broadband tristable energy harvesters. MATEC Web of Conferences, 2018, 241, 01025.	0.2	1
88	Performance of broadband tristable energy harvesters. MATEC Web of Conferences, 2018, 211, 05007.	0.2	0
89	A Novel Nonlinear Piezoelectric Energy Harvesting System Based on Linear-Element Coupling: Design, Modeling and Dynamic Analysis. Sensors, 2018, 18, 1492.	3.8	34
90	Nonlinear Analysis of the Tristable Energy Harvester with a Resonant Circuit for Performance Enhancement. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2018, 28, 1850092.	1.7	52

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91	Dual serial vortex-induced energy harvesting system for enhanced energy harvesting. AIP Advances, 2018, 8, .	1.3	89
92	Exploiting dynamic interaction of magnets to enhance off-resonance energy harvesting performance. , 2018, , .		0
93	Design and modeling of a flexible longitudinal zigzag structure for enhanced vibration energy harvesting. Journal of Intelligent Material Systems and Structures, 2017, 28, 367-380.	2.5	48
94	Analytical and experimental investigation of flexible longitudinal zigzag structures for enhanced multi-directional energy harvesting. Smart Materials and Structures, 2017, 26, 035008.	3.5	53
95	Optimum resistance analysis and experimental verification of nonlinear piezoelectric energy harvesting from human motions. Energy, 2017, 118, 221-230.	8.8	92
96	Stochastic resonance energy harvesting for a rotating shaft subject to random and periodic vibrations: influence of potential function asymmetry and frequency sweep. Smart Materials and Structures, 2017, 26, 115011.	3.5	19
97	Tristable Energy Harvesters With Asymmetric Potential Wells: Analytical Study. , 2017, , .		2
98	Harmonic balance analysis of nonlinear tristable energy harvesters for performance enhancement. Journal of Sound and Vibration, 2016, 373, 223-235.	3.9	128
99	Two degrees of freedom piezoelectric vibration energy harvester. , 2016, , .		2
100	Theoretical analysis and experimental verification for improving energy harvesting performance of nonlinear monostable energy harvesters. Nonlinear Dynamics, 2016, 86, 1599-1611.	5.2	63
101	Nonlinear time-varying potential bistable energy harvesting from human motion. Applied Physics Letters, 2015, 107, .	3.3	124
102	Bistable Energy Harvesting From Human Motion. , 2015, , .		0
103	Nonlinear Dynamic Characteristics of Variable Inclination Magnetically Coupled Piezoelectric Energy Harvesters. Journal of Vibration and Acoustics, Transactions of the ASME, 2015, 137, .	1.6	37
104	Regular and chaotic vibration in a piezoelectric energy harvester with fractional damping. European Physical Journal Plus, 2015, 130, 1.	2.6	35
105	A Linear-Element Coupled Nonlinear Energy Harvesting System. , 2015, , .		2
106	Modeling and experimental verification of doubly nonlinear magnet-coupled piezoelectric energy harvesting from ambient vibration. Smart Materials and Structures, 2015, 24, 055008.	3.5	62
107	Impact-induced high-energy orbits of nonlinear energy harvesters. Applied Physics Letters, 2015, 106, .	3.3	156
108	Influence of potential well depth on nonlinear tristable energy harvesting. Applied Physics Letters, 2015, 106, .	3.3	158

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109	Chaos in the fractionally damped broadband piezoelectric energy generator. <i>Nonlinear Dynamics</i> , 2015, 80, 1705-1719.	5.2	56
110	Broadband tristable energy harvester: Modeling and experiment verification. <i>Applied Energy</i> , 2014, 133, 33-39.	10.1	474
111	Exploitation of a tristable nonlinear oscillator for improving broadband vibration energy harvesting. <i>EPJ Applied Physics</i> , 2014, 67, 30902.	0.7	61
112	Genetic Algorithm-Based Identification of Fractional-Order Systems. <i>Entropy</i> , 2013, 15, 1624-1642.	2.2	57
113	Enhanced broadband piezoelectric energy harvesting using rotatable magnets. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	297
114	Piezoelectric cantilevers optimization for vibration energy harvesting. <i>Proceedings of SPIE</i> , 2012, , .	0.8	2