Alper Erturk

List of Publications by Year
in descending order

268 papers	15,374 citations	24809 57 h-index	20777 116 g-index
273 all docs	273 docs citations	273 times ranked	6538 citing authors

#	Article	IF	Citations
1	An experimentally validated bimorph cantilever model for piezoelectric energy harvesting from base excitations. Smart Materials and Structures, 2009, 18, 025009.	3.5	1,113
2	A Distributed Parameter Electromechanical Model for Cantilevered Piezoelectric Energy Harvesters. Journal of Vibration and Acoustics, Transactions of the ASME, 2008, 130, .	1.7	953
3	A piezomagnetoelastic structure for broadband vibration energy harvesting. Applied Physics Letters, 2009, 94, .	3.2	844
4	Broadband piezoelectric power generation on high-energy orbits of the bistable Duffing oscillator with electromechanical coupling. Journal of Sound and Vibration, 2011, 330, 2339-2353.	4.1	712
5	On the Role of Nonlinearities in Vibratory Energy Harvesting: A Critical Review and Discussion. Applied Mechanics Reviews, 2014, 66, .	10.3	664
6	On Mechanical Modeling of Cantilevered Piezoelectric Vibration Energy Harvesters. Journal of Intelligent Material Systems and Structures, 2008, 19, 1311-1325.	2.6	548
7	A piezoelectric bistable plate for nonlinear broadband energy harvesting. Applied Physics Letters, 2010, 97, .	3.2	419
8	Modeling of Piezoelectric Energy Harvesting from an L-shaped Beam-mass Structure with an Application to UAVs. Journal of Intelligent Material Systems and Structures, 2009, 20, 529-544.	2.6	363
9	Issues in mathematical modeling of piezoelectric energy harvesters. Smart Materials and Structures, 2008, 17, 065016.	3.5	347
10	On the energy harvesting potential of piezoaeroelastic systems. Applied Physics Letters, 2010, 96, .	3.2	325
11	Enhanced broadband piezoelectric energy harvesting using rotatable magnets. Applied Physics Letters, 2013, 102, .	3.2	315
12	Nanoscale flexoelectric energy harvesting. International Journal of Solids and Structures, 2014, 51, 3218-3225.	2.7	304
13	Resistive Impedance Matching Circuit for Piezoelectric Energy Harvesting. Journal of Intelligent Material Systems and Structures, 2010, 21, 1293-1302.	2.6	302
14	An electromechanical finite element model for piezoelectric energy harvester plates. Journal of Sound and Vibration, 2009, 327, 9-25.	4.1	276
15	Nonlinear piezoelectricity in electroelastic energy harvesters: Modeling and experimental identification. Journal of Applied Physics, 2010, 108, .	2.3	207
16	On the mechanism of bandgap formation in locally resonant finite elastic metamaterials. Journal of Applied Physics, 2016, 120, .	2.3	197
17	A general theory for bandgap estimation in locally resonant metastructures. Journal of Sound and Vibration, 2017, 406, 104-123.	4.1	193
18	Metamaterial-inspired structures and concepts for elastoacoustic wave energy harvesting. Smart Materials and Structures, 2013, 22, 065004.	3.5	187

#	Article	IF	Citations
19	Effect of Strain Nodes and Electrode Configuration on Piezoelectric Energy Harvesting From Cantilevered Beams. Journal of Vibration and Acoustics, Transactions of the ASME, 2009, 131, .	1.7	163
20	Unified nonlinear electroelastic dynamics of a bimorph piezoelectric cantilever for energy harvesting, sensing, and actuation. Nonlinear Dynamics, 2015, 79, 1727-1743.	5.3	159
21	On the efficiency of piezoelectric energy harvesters. Extreme Mechanics Letters, 2017, 15, 26-37.	4.2	151
22	Phononic crystal Luneburg lens for omnidirectional elastic wave focusing and energy harvesting. Applied Physics Letters, 2017, 111, .	3.2	139
23	Time-Periodic Stiffness Modulation in Elastic Metamaterials for Selective Wave Filtering: Theory and Experiment. Physical Review Letters, 2019, 122, 124301.	8.0	139
24	Gradient-index phononic crystal lens-based enhancement of elastic wave energy harvesting. Applied Physics Letters, 2016, 109, .	3.2	135
25	Underwater thrust and power generation using flexible piezoelectric composites: an experimental investigation toward self-powered swimmer-sensor platforms. Smart Materials and Structures, 2011, 20, 125013.	3.5	134
26	Piezoaeroelastic Modeling and Analysis of a Generator Wing with Continuous and Segmented Electrodes. Journal of Intelligent Material Systems and Structures, 2010, 21, 983-993.	2.6	131
27	Piezoelectric energy harvesting for civil infrastructure system applications: Moving loads and surface strain fluctuations. Journal of Intelligent Material Systems and Structures, 2011, 22, 1959-1973.	2.6	121
28	Multistable vibration energy harvesters: Principle, progress, and perspectives. Journal of Sound and Vibration, 2022, 528, 116886.	4.1	119
29	M-shaped asymmetric nonlinear oscillator for broadband vibration energy harvesting: Harmonic balance analysis and experimental validation. Journal of Sound and Vibration, 2014, 333, 6209-6223.	4.1	118
30	Nonlinear nonconservative behavior and modeling of piezoelectric energy harvesters including proof mass effects. Journal of Intelligent Material Systems and Structures, 2012, 23, 183-199.	2.6	116
31	Enhanced aeroelastic energy harvesting by exploiting combined nonlinearities: theory and experiment. Smart Materials and Structures, 2011, 20, 094007.	3.5	115
32	Stretchable quaternary phasic PVDF-HFP nanocomposite films containing graphene-titania-SrTiO3 for mechanical energy harvesting. Emergent Materials, 2018, 1, 55-65.	5.7	108
33	Internal resonance for nonlinear vibration energy harvesting. European Physical Journal: Special Topics, 2015, 224, 2867-2880.	2.6	107
34	An investigation of electroelastic bandgap formation in locally resonant piezoelectric metastructures. Smart Materials and Structures, 2017, 26, 055029.	3.5	104
35	On the stochastic excitation of monostable and bistable electroelastic power generators: Relative advantages and tradeoffs in a physical system. Applied Physics Letters, 2013, 102, .	3.2	103
36	Nonlinear M-shaped broadband piezoelectric energy harvester for very low base accelerations: primary and secondary resonances. Smart Materials and Structures, 2015, 24, 055021.	3.5	100

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37	Assumed-modes modeling of piezoelectric energy harvesters: Eulerâ€“Bernoulli, Rayleigh, and Timoshenko models with axial deformations. Computers and Structures, 2012, 106-107, 214-227.	4.5	98
38	Bio-inspired aquatic robotics by untethered piezohydroelastic actuation. Bioinspiration and Biomimetics, 2013, 8, 016006.	2.9	91
39	Piezoelectret foamâ€“based vibration energy harvesting. Journal of Intelligent Material Systems and Structures, 2014, 25, 1681-1692.	2.6	91
40	Multifunctional self-charging structures using piezoceramics and thin-film batteries. Smart Materials and Structures, 2010, 19, 115021.	3.5	86
41	Modeling and Analysis of Piezoelectric Energy Harvesting From Aeroelastic Vibrations Using the Doublet-Lattice Method. Journal of Vibration and Acoustics, Transactions of the ASME, 2011, 133, .	1.7	86
42	Merging mechanical and electromechanical bandgaps in locally resonant metamaterials and metastructures. Journal of the Mechanics and Physics of Solids, 2018, 116, 323-333.	4.9	86
43	Electroelastic modeling and experimental validations of piezoelectric energy harvesting from broadband random vibrations of cantilevered bimorphs. Smart Materials and Structures, 2013, 22, 015002.	3.5	85
44	Analysis of multifunctional piezoelectric metastructures for low-frequency bandgap formation and energy harvesting. Journal Physics D: Applied Physics, 2018, 51, 215103.	2.9	80
45	Electroaeroelastic analysis of airfoil-based wind energy harvesting using piezoelectric transduction and electromagnetic induction. Journal of Intelligent Material Systems and Structures, 2013, 24, 846-854.	2.6	79
46	Hybrid piezoelectric-inductive flow energy harvesting and dimensionless electroaeroelastic analysis for scaling. Applied Physics Letters, 2013, 102, .	3.2	79
47	Energy harvesting from hydraulic pressure fluctuations. Smart Materials and Structures, 2013, 22, 025036.	3.5	78
48	Deterministic and band-limited stochastic energy harvesting from uniaxial excitation of a multilayer piezoelectric stack. Sensors and Actuators A: Physical, 2014, 214, 58-65.	4.2	78
49	Dramatic enhancement of structure-borne wave energy harvesting using an elliptical acoustic mirror. Applied Physics Letters, 2012, 100, .	3.2	77
50	Analytical modeling and experimental validation of a structurally integrated piezoelectric energy harvester on a thin plate. Smart Materials and Structures, 2014, 23, 045039.	3.5	71
51	Experimental Observation of Temporal Pumping in Electromechanical Waveguides. Physical Review Letters, 2021, 126, 095501.	8.0	68
52	Design and Analysis of Piezoelectric Metamaterial Beams With Synthetic Impedance Shunt Circuits. IEEE/ASME Transactions on Mechatronics, 2018, 23, 2144-2155.	6.1	67
53	Bistable attachments for wideband nonlinear vibration attenuation in a metamaterial beam. Nonlinear Dynamics, 2020, 102, 1285-1296.	5.3	67
54	Power generation and shunt damping performance of a single crystal lead magnesium niobate-lead zirconate titanate unimorph: Analysis and experiment. Applied Physics Letters, 2008, 93, .	3.2	65

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55	An analytical framework for locally resonant piezoelectric metamaterial plates. International Journal of Solids and Structures, 2020, 182-183, 281-294.	2.7	65
56	Tunable metamaterial beam with shape memory alloy resonators: Theory and experiment. Applied Physics Letters, 2018, 113, .	3.2	61
57	Multifunctional Unmanned Aerial Vehicle Wing Spar for Low-Power Generation and Storage. Journal of Aircraft, 2012, 49, 292-301.	2.3	58
58	Graded multifunctional piezoelectric metastructures for wideband vibration attenuation and energy harvesting. Smart Materials and Structures, 2021, 30, 015029.	3.5	58
59	3D-Printed Gradient-Index Phononic Crystal Lens for Underwater Acoustic Wave Focusing. Physical Review Applied, 2020, 13, .	3.8	57
60	Dramatic bandwidth enhancement in nonlinear metastructures via bistable attachments. Applied Physics Letters, 2019, 114, .	3.2	56
61	Resonant manifestation of intrinsic nonlinearity within electroelastic micropower generators. Applied Physics Letters, 2010, 97, .	3.2	55
62	Piezoelectric, solar and thermal energy harvesting for hybrid low-power generator systems with thin-film batteries. Measurement Science and Technology, 2012, 23, 015101.	2.7	55
63	Analytical and Experimental Characterization of Macro-Fiber Composite Actuated Thin Clamped-Free Unimorph Benders. Journal of Vibration and Acoustics, Transactions of the ASME, 2010, 132, .	1.7	54
64	Contactless ultrasonic energy transfer for wireless systems: acoustic-piezoelectric structure interaction modeling and performance enhancement. Smart Materials and Structures, 2014, 23, 125032.	3.5	51
65	Ultrasonic power transfer from a spherical acoustic wave source to a free-free piezoelectric receiver: Modeling and experiment. Journal of Applied Physics, 2015, 117, .	2.3	50
66	Three-Degree-of-Freedom Hybrid Piezoelectric-Inductive Aeroelastic Energy Harvester Exploiting a Control Surface. AIAA Journal, 2015, 53, 394-404.	2.6	49
67	Topological Edge States in Quasiperiodic Locally Resonant Metastructures. Physical Review Applied, 2020, 13, .	3.8	49
68	An experimentally validated model for geometrically nonlinear plucking-based frequency up-conversion in energy harvesting. Smart Materials and Structures, 2018, 27, 015024.	3.5	47
69	3D-printed phononic crystal lens for elastic wave focusing and energy harvesting. Additive Manufacturing, 2019, 29, 100780.	3.1	46
70	Bending strength of piezoelectric ceramics and single crystals for multifunctional load-bearing applications. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2012, 59, 1085-1092.	3.2	45
71	Digitally Programmable Resonant Elastic Metamaterials. Physical Review Applied, 2020, 13, .	3.8	44
72	An experimentally validated piezoelectric nonlinear energy sink for wideband vibration attenuation. Journal of Sound and Vibration, 2018, 437, 68-78.	4.1	43

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73	Electroelastodynamics of flexoelectric energy conversion and harvesting in elastic dielectrics. Journal of Applied Physics, 2017, 121, .	2.3	40
74	Adaptive locally resonant metamaterials leveraging shape memory alloys. Journal of Applied Physics, 2018, 124, .	2.3	39
75	Nonreciprocal piezoelectric metamaterial framework and circuit strategies. Physical Review B, 2020, 102, .	3.3	38
76	Electrohydroelastic Eulerâ€“Bernoulliâ€“Morison model for underwater resonant actuation of macro-fiber composite piezoelectric cantilevers. Smart Materials and Structures, 2016, 25, 105007.	3.5	37
77	Coupling of experimentally validated electroelastic dynamics and mixing rules formulation for macro-fiber composite piezoelectric structures. Journal of Intelligent Material Systems and Structures, 2017, 28, 1575-1588.	2.6	36
78	Fourier transform-based design of a patterned piezoelectric energy harvester integrated with an elastoacoustic mirror. Applied Physics Letters, 2015, 106, .	3.2	34
79	Equivalent circuit modeling of a piezo-patch energy harvester on a thin plate with ACâ€“DC conversion. Smart Materials and Structures, 2016, 25, 055015.	3.5	34
80	Multiple patchâ€“based broadband piezoelectric energy harvesting on plate-based structures. Journal of Intelligent Material Systems and Structures, 2014, 25, 1664-1680.	2.6	33
81	Nonlinear elastodynamics of piezoelectric macro-fiber composites with interdigitated electrodes for resonant actuation. Composite Structures, 2018, 187, 137-143.	5.9	33
82	Power performance improvements for high pressure ripple energy harvesting. Smart Materials and Structures, 2014, 23, 104011.	3.5	30
83	Programmable Rainbow Trapping and Band-Gap Enhancement via Spatial Group-Velocity Tailoring in Elastic Metamaterials. Physical Review Applied, 2022, 17, .	3.8	30
84	Programmable mode conversion and bandgap formation for surface acoustic waves using piezoelectric metamaterials. Applied Physics Letters, 2019, 115, .	3.2	29
85	Mechanical Considerations for Modeling of Vibration-Based Energy Harvesters. , 2007, , .		28
86	Random vibration energy harvesting on thin plates using multiple piezopatches. Journal of Intelligent Material Systems and Structures, 2016, 27, 2744-2756.	2.6	28
87	Soft and Hard Piezoelectric Ceramics and Single Crystals for Random Vibration Energy Harvesting. Energy Technology, 2018, 6, 935-942.	3.8	28
88	Resonant nonlinearities of piezoelectric macro-fiber composite cantilevers with interdigitated electrodes in energy harvesting. Nonlinear Dynamics, 2018, 92, 1935-1945.	5.3	25
89	Trout-like multifunctional piezoelectric robotic fish and energy harvester. Bioinspiration and Biomimetics, 2021, 16, 046024.	2.9	25
90	Structurally embedded reflectors and mirrors for elastic wave focusing and energy harvesting. Journal of Applied Physics, 2017, 122, .	2.3	22

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91	On the electrode segmentation for piezoelectric energy harvesting from nonlinear limit cycle oscillations in axial flow. Journal of Fluids and Structures, 2018, 82, 492-504.	3.4	22
92	Experimental identification of high order Lamb waves and estimation of the mechanical properties of a dry human skull. Ultrasonics, 2021, 113, 106343.	4.0	22
93	Mechanically and electrically nonlinear non-ideal piezoelectric energy harvesting framework with experimental validations. Nonlinear Dynamics, 2020, 99, 625-641.	5.3	21
94	Equivalent electrical circuit framework for nonlinear and high quality factor piezoelectric structures. Mechatronics, 2018, 54, 133-143.	3.4	20
95	Sound energy harvesting by leveraging a 3D-printed phononic crystal lens. Applied Physics Letters, 2021, 118, .	3.2	19
96	Introduction to Piezoelectric Energy Harvesting. , 2011, , 1-18.		18
97	Experimentally validated geometrically exact model for extreme nonlinear motions of cantilevers. Nonlinear Dynamics, 2022, 107, 457-475.	5.3	18
98	Ceramic-Based Polymer Nanocomposites as Piezoelectric Materials. Springer Series on Polymer and Composite Materials, 2017, , 77-93.	0.0	17
99	Experimentally validated broadband self-collimation of elastic waves. International Journal of Mechanical Sciences, 2021, 192, 106131.	6.9	17
100	Parameter identification and optimization in piezoelectric energy harvesting: analytical relations, asymptotic analyses, and experimental validations. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2011, 225, 485-496.	1.1	16
101	Hydrodynamic thrust generation and power consumption investigations for piezoelectric fins with different aspect ratios. European Physical Journal: Special Topics, 2015, 224, 3419-3434.	2.6	16
102	Self-bending elastic waves and obstacle circumventing in wireless power transfer. Applied Physics Letters, 2017, 110, .	3.2	16
103	Piezoelectric energy harvesting from an L-shaped beam-mass structure. Proceedings of SPIE, 2008, , .	1.0	14
104	Effect of actuation method on hydrodynamics of elastic plates oscillating at resonance. Journal of Fluid Mechanics, 2021, 910, .	3.5	14
105	Macro-Fiber Composite Actuated Piezoelectric Robotic Fish. Springer Tracts in Mechanical Engineering, 2015, , 255-283.	0.0	13
106	Characterization of hydrogel structural damping. Extreme Mechanics Letters, 2020, 40, 100841.	4.2	13
107	Tunable elastic metamaterials using rotatable coupled dual-beam resonators. Journal of Applied Physics, 2019, 126, .	2.3	11
108	Vibration attenuation in a nonlinear flexible structure via nonlinear switching circuits and energy harvesting implications. Journal of Intelligent Material Systems and Structures, 2019, 30, 965-976.	2.6	11

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109	Vibration Sensing Systems Based on Poly(Vinylidene Fluoride) and Microwave-Assisted Synthesized ZnO Star-Like Particles with Controllable Structural and Physical Properties. Nanomaterials, 2020, 10, 2345.	4.2	11
110	Three-dimensional nonlinear extreme vibrations of cantilevers based on a geometrically exact model. Journal of Sound and Vibration, 2021, 510, 116295.	4.1	11
111	Spatially programmable wave compression and signal enhancement in a piezoelectric metamaterial waveguide. Physical Review B, 2022, 106, .	3.3	11
112	Piezoelectric energy harvesting from multifunctional wing spars for UAVs: Part 1. Coupled modeling and preliminary analysis. , 2009, , .		10
113	Electromechanical Modeling of Cantilevered Piezoelectric Energy Harvesters for Persistent Base Motions. , 2009, , 41-77.		10
114	Strength analysis of piezoceramic materials for structural considerations in energy harvesting for UAVs. Proceedings of SPIE, 2010, , .	1.0	10
115	Introduction and Methods of Mechanical Energy Harvesting. , 2013, , 3-14.		10
116	Modeling and Characterization of a Curved Piezoelectric Energy Harvester for Smart Paver Tiles. Procedia Computer Science, 2017, 109, 1060-1066.	2.1	10
117	Nonlinear piezoelectric plate framework for aeroelastic energy harvesting and actuation applications. Smart Materials and Structures, 2020, 29, 105006.	3.5	10
118	Experimental and Computational Investigation of Guided Waves in a Human Skull. Ultrasound in Medicine and Biology, 2021, 47, 787-798.	1.6	10
119	Radiation Characteristics of Cranial Leaky Lamb Waves. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 2129-2140.	3.2	10
120	Assumed-Modes Formulation of Piezoelectric Energy Harvesters: Euler-Bernoulli, Rayleigh and Timoshenko Models With Axial Deformations. , 2010, , .		9
121	Piezoelectric power generation for civil infrastructure systems. Proceedings of SPIE, 2011, , .	1.0	9
122	Energy harvesting from harmonic and noise excitation of multilayer piezoelectric stacks: modeling and experiment. Proceedings of SPIE, 2013, , .	1.0	9
123	Combined piezoelectric and flexoelectric effects in resonant dynamics of nanocantilevers. Journal of Intelligent Material Systems and Structures, 2018, 29, 3949-3959.	2.6	9
124	Aspect Ratio-Dependent Dynamics of Piezoelectric Transducers in Wireless Acoustic Power Transfer. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 984-996.	3.2	9
125	Vibration Characterization of the Human Knee Joint in Audible Frequencies. Sensors, 2020, 20, 4138.	4.0	9
126	Hydrodynamic performance of oscillating elastic propulsors with tapered thickness. Journal of Fluid Mechanics, 2022, 944, .	3.5	9

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127	Duffing-type digitally programmable nonlinear synthetic inductance for piezoelectric structures. Smart Materials and Structures, 2022, 31, 095044.	3.5	9
128	Comment on â€˜Modeling and analysis of a bimorph piezoelectric cantilever beam for voltage generationâ€™. Smart Materials and Structures, 2008, 17, 058001.	3.5	8
129	Self-Charging Structures Using Piezoceramics and Thin-Film Batteries. , 2009, , .		8
130	Piezoelectric transducer design for simultaneous ultrasonic power transfer and backscatter communication. Smart Materials and Structures, 2022, 31, 095003.	3.5	8
131	Programmable hardening and softening cubic inductive shunts for piezoelectric structures: Harmonic balance analysis and experiments. Journal of Sound and Vibration, 2024, 571, 118029.	4.1	8
132	On the Fundamental Transverse Vibration Frequency of a Free-Free Thin Beam With Identical End Masses. Journal of Vibration and Acoustics, Transactions of the ASME, 2007, 129, 656-662.	1.7	7
133	Figure of merit comparison of PP-based electret and PVDF-based piezoelectric polymer energy harvesters. Proceedings of SPIE, 2016, , .	1.0	7
134	Piezoelectric power extraction from bending waves: Electroelastic modeling, experimental validation, and performance enhancement. Wave Motion, 2016, 60, 20-34.	2.1	7
135	Transduction as energy conversion; harvesting of acoustic energy in hydraulic systems. Proceedings of Meetings on Acoustics, 2013, , .	0.0	6
136	Underwater Dynamic Actuation of Macro-Fiber Composite Flaps With Different Aspect Ratios: Electrohydroelastic Modeling, Testing, and Characterization. , 2014, , .		6
137	Vibration-based elastic parameter identification of the diploÃ« and cortical tables in dry cranial bones. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 123, 104747.	3.1	6
138	Extreme parametric resonance oscillations of a cantilever: An exact theory and experimental validation. Mechanical Systems and Signal Processing, 2023, 196, 110342.	8.2	6
139	Effect of Material Constants and Mechanical Damping on Piezoelectric Power Generation. , 2009, , .		5
140	Electromechanical Modelling and Experiments of a Bistable Plate for Nonlinear Energy Harvesting. , 2010, , .		5
141	Experimentally Validated Nonlinear Electrohydroelastic Euler-Bernoulli-Morison Model for Macro-Fiber Composites With Different Aspect Ratios. , 2015, , .		5
142	Concurrent vibration attenuation and low-power electricity generation in a locally resonant metastructure. Journal of Intelligent Material Systems and Structures, 2022, 33, 1990-1999.	2.6	5
143	System-Level DC-to-DC Analysis and Experiments of Ultrasonic Power Transfer Through Metallic Barriers. IEEE/ASME Transactions on Mechatronics, 2023, 28, 15-25.	6.1	5
144	Harnessing rainbow trapping via hybrid electromechanical metastructures for enhanced energy harvesting and vibration attenuation. Journal of Applied Physics, 2022, 132, .	2.3	5

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145	Effect of Segmented Electrodes on Piezo-Elastic and Piezo-Aero-Elastic Responses of Generator Plates. , 2009, , .		4
146	Energy Harvesting From Hydraulic Pressure Fluctuations. , 2012, , .		4
147	Design and performance enhancement of hydraulic pressure energy harvesting systems. Proceedings of SPIE, 2013, , .	1.0	4
148	Electrohydroelastic dynamics of macro-fiber composites for underwater energy harvesting from base excitation. Proceedings of SPIE, 2014, , .	1.0	4
149	Modeling and identification of nonlinear electroelastic and dissipative parameters for PZT-5A and PZT-5H bimorphs: a dynamical systems approach. Proceedings of SPIE, 2015, , .	1.0	4
150	An experimentally validated contactless acoustic energy transfer model with resistive-reactive electrical loading. Proceedings of SPIE, 2015, , .	1.0	4
151	Bimorph disk piezoelectric energy harvester under base excitation: electroelastic modeling and experimental validation. Proceedings of SPIE, 2015, , .	1.0	4
152	Energy harvesting from acoustic fields for self-powered sensors in pumped fluid systems. Proceedings of SPIE, 2017, , .	1.0	4
153	On the coupling of nonlinear macro-fiber composite piezoelectric cantilever dynamics with hydrodynamic loads. , 2018, , .		4
154	Aspect ratio effects in wind energy harvesting using piezoelectric inverted flags. , 2019, , .		4
155	Aspect ratio-dependent hysteresis response of a heavy inverted flag. Journal of Fluid Mechanics, 2022, 942, .	3.5	4
156	Investigation of Soft and Hard Ceramics and Single Crystals for Resonant and Off-Resonant Piezoelectric Energy Harvesting. , 2010, , .		3
157	Base Excitation Problem for Cantilevered Structures and Correction of the Lumpedâ€Parameter Electromechanical Model. , 2011, , 19-48.		3
158	Experimental Validation of the Analytical Solution for Bimorph Configurations. , 2011, , 97-130.		3
159	Electroaeroelastic modeling and analysis of a hybrid piezoelectric-inductive flow energy harvester. Proceedings of SPIE, 2013, , .	1.0	3
160	Closure to â€œDiscussion of â€˜On the Role of Nonlinearities in Energy Harvesting: A Critical Review and Discussionâ€™â€•(Daqaq, M., Masana, R., Erturk, A., and Quinn, D. D., 2014, ASME Appl. Mech. Rev., 66(4), p.) Tj ET Q q 0 0 0 rg BT /Overl		
161	Hydraulic pressure energy harvester enhanced by Helmholtz resonator. Proceedings of SPIE, 2015, , .	1.0	3
162	Power conditioning for low-voltage piezoelectric stack energy harvesters. Proceedings of SPIE, 2016, , .	1.0	3

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163	Low-Frequency Elastic Wave Focusing and Harvesting via Locally Resonant Metamaterials. , 2017, , .		3
164	Multifunctional Energy Harvesting Locally Resonant Metastructures. , 2017, , .		3
165	Dynamics of Hybrid Mechanical-Electromechanical Locally Resonant Piezoelectric Metastructures. , 2017, , .		3
166	Machined phononic crystals to block high-order Lamb waves and crosstalk in through-metal ultrasonic communication systems. Applied Physics Letters, 2022, 120, .	3.2	3
167	Programmable Moving Defect for Spatiotemporal Wave Localization in Piezoelectric Metamaterials. Physical Review Applied, 2023, 19, .	3.8	3
168	Ultrasound-Powered Wireless Underwater Acoustic Identification Tags for Backscatter Communication. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2024, 71, 304-313.	3.2	3
169	Energy harvesting from small unmmaned air vehicles. , 2008, , .		2
170	Performance Analysis of Single Crystal PMN-PZT Unimorphs for Piezoelectric Energy Harvesting. , 2008, , .		2
171	Effects of Material Constants and Mechanical Damping on Power Generation. , 2011, , 301-324.		2
172	Linear and Nonlinear Aeroelastic Energy Harvesting Using Electromagnetic Induction. , 2011, , .		2
173	Comparative Investigation of the Electroelastic Dynamics of Piezoceramics With Interdigitated and Uniform Electrodes. , 2012, , .		2
174	Fish-Like Self Propulsion Using Flexible Piezoelectric Composites. , 2012, , .		2
175	Harvesting of Bending Waves in One-Dimensional Infinite Beams Using Resistive-Reactive Circuits. , 2013, , .		2
176	Modeling and Characterization of Elastic, Coupling, and Dissipative Nonlinearities in PZT Bimorphs for Vibration Energy Harvesting. , 2014, , .		2
177	Unified electrohydroelastic investigation of underwater energy harvesting and dynamic actuation by incorporating Morison's equation. Proceedings of SPIE, 2015, , .	1.0	2
178	Embedded elastic wave mirrors for enhanced energy harvesting. , 2016, , .		2
179	Dramatic Enhancement of Elastic Wave Energy Harvesting Using a Gradient-Index Phononic Crystal Lens. , 2016, , .		2
180	A Distributed-Parameter Flexoelectric Energy Harvester Model Accounting for Two-Way Coupling and Size Effects. , 2016, , .		2

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181	Toward structurally integrated locally resonant metamaterials for vibration attenuation. Proceedings of SPIE, 2017, , .	1.0	2
182	Nonlinear Structural Dynamics of Macro-Fiber Composite Cantilevers for Resonant Actuation. , 2017, , .		2
183	On the Origin of the Nonclassical Softening Nonlinearity in MEMS/NEMS Cantilevers. , 2017, , .		2
184	Numerical and Experimental Investigations of Energy Harvesting From Piezoelectric Inverted Flags. , 2021, , .		2
185	Vibration Stimulation as a Non-Invasive Approach to Monitor the Severity of Meniscus Tears. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 350-359.	5.0	2
186	Comparison of various models for piezoelectric receivers in wireless acoustic power transfer. , 2019, , .		2
187	Matrix Pencil Estimation of Guided Waves Dispersion in a Human Skull. , 2020, , .		2
188	Digital programming of reciprocity breaking in resonant piezoelectric metamaterials. Physical Review Research, 2023, 5, .	3.6	2
189	Analytical Distributedâ€Parameter Electromechanical Modeling of Cantilevered Piezoelectric Energy Harvesters. , 2011, , 49-96.		1
190	Modeling of Piezoelectric Energy Harvesting for Various Forms of Dynamic Loading. , 2011, , 199-232.		1
191	Modeling and Exploiting Mechanical Nonlinearities in Piezoelectric Energy Harvesting. , 2011, , 233-271.		1
192	A Brief Review of the Literature of Piezoelectric Energy Harvesting Circuits. , 2011, , 325-342.		1
193	Hydroelastic Power and Thrust Generation Using Macro-Fiber Composite Piezoelectrics. , 2011, , .		1
194	Electroelastic Modeling and Experimental Validation of Piezoelectric Energy Harvesting From Broadband Random Vibrations. , 2012, , .		1
195	Metamaterial Concepts for Structure-Borne Wave Energy Harvesting: Focusing, Funneling, and Localization. , 2012, , .		1
196	Numerical and experimental comparison of bistable and monostable vibration energy harvesters under broadband random excitation. , 2013, , .		1
197	Airfoil-Based Linear and Nonlinear Electroaeroelastic Energy Harvesting. , 2013, , 269-294.		1
198	Power Density Performance Improvements for High Pressure Ripple Energy Harvesting. , 2013, , .		1

#	Article	IF	Citations
199	Multifunctional double-bimorph piezoelectric composite for bending-twisting actuation, adaptive stiffness change, and energy harvesting. , 2013, , .		1
200	Design and Modeling of Hydraulic Pressure Energy Harvesters for Low Dynamic Pressure Environments. , 2014, , .		1
201	Optimal piezoelectric energy harvesting using elastoacoustic mirrors by frequency-wavenumber domain investigation. Proceedings of SPIE, 2014, , .	1.0	1
202	Broadband and band-limited random vibration energy harvesting using a piezoelectric patch on a thin plate. Proceedings of SPIE, 2014, , .	1.0	1
203	Ultrasound acoustic wave energy transfer and harvesting. Proceedings of SPIE, 2014, , .	1.0	1
204	Hydrodynamic Thrust Generation and Power Consumption Investigations for Piezoelectric Fins With Different Aspect Ratios. , 2015, , .		1
205	Harmonic Balance Analysis and Experimental Validation of a Nonlinear Broadband Piezoelectric Energy Harvester for Low Ambient Vibrations. , 2015, , .		1
206	Equivalent Circuit Modeling of Patch-Based Piezoelectric Energy Harvesting on Plate-Like Structures With AC-DC Conversion. , 2015, , .		1
207	Multiple piezo-patch energy harvesters integrated to a thin plate with AC-DC conversion: analytical modeling and numerical validation. Proceedings of SPIE, 2016, , .	1.0	1
208	Exploiting material softening in hard PZTs for resonant bandwidth enhancement. Proceedings of SPIE, 2016, , .	1.0	1
209	Metamaterial piezoelectric beam with synthetic impedance shunts. Proceedings of SPIE, 2017, , .	1.0	1
210	Size effects in piezoelectric cantilevers at submicron thickness levels due to flexoelectricity. Proceedings of SPIE, 2017, , .	1.0	1
211	Omni-directional lens for structure-borne wave focusing and energy harvesting. Proceedings of SPIE, 2017, , .	1.0	1
212	3D-printed lens for structure-borne wave focusing and energy harvesting. Proceedings of SPIE, 2017, , .	1.0	1
213	Resonant Nonlinearities of Macro-Fiber Composite Cantilevers in Energy Harvesting. , 2017, , .		1
214	Phased Array Ultrasonic Testing of Inconel 625 Produced by Selective Laser Melting. Journal of Nondestructive Evaluation, Diagnostics and Prognostics of Engineering Systems, 2021, 4, .	1.1	1
215	Characterization of a Multifunctional Bioinspired Piezoelectric Swimmer and Energy Harvester. , 2020, , .		1
216	An analytical framework for Kirchhoff plate-type locally resonant piezoelectric metastructures. , 2019, , .		1

#	Article	IF	Citations
217	Nonlinearities in resonant dynamics of piezoelectric macro-fiber composite cantilevers. , 2019, , .		1
218	Nonlinear synthetic impedance circuits for piezoelectric structures. , 2022, , .		1
219	Flapping dynamics of an inverted flag behind a cylinder. Bioinspiration and Biomimetics, 2022, 17, 065011.	2.9	1
220	Analogous piezoelectric network for multimodal vibration attenuation of a thin circular ring. Smart Materials and Structures, 2023, 32, 115024.	3.5	1
221	The effects of shear deformation and rotary inertia on the electrical analogs of beams and plates for multimodal piezoelectric damping. International Journal of Circuit Theory and Applications, 2024, 52, 2985-2998.	2.1	1
222	Subwavelength negative refraction and flexural wave lens design via resonant double-negative piezoelectric metamaterial. Smart Materials and Structures, 2024, 33, 025005.	3.5	1
223	Finite Element Analysis of a UAV Wing Spar with Piezoceramics for Vibration Energy Harvesting. , 2009, , .		0
224	On the Manifestation and Influence of Material Nonlinearity in Electroelastic Power Generators. , 2010, , .		0
225	Frequency Domain Piezo-Aero-Elastic Analysis and Optimization of an Energy Harvester Wing. , 2010, , .		0
226	Appendix D: Strain Nodes of a Uniform Thin Beam for Cantilevered and Other Boundary Conditions. , 2011, , 367-372.		0
227	Approximate Analytical Distributedâ€Parameter Electromechanical Modeling of Cantilevered Piezoelectric Energy Harvesters. , 2011, , 151-197.		0
228	Frequency Domain Solution of a Piezo-aero-elastic Wing for Energy Harvesting. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 247-259.	0.0	0
229	Piezoelectric Energy Harvesting from Aeroelastic Vibrations. , 2011, , 273-300.		0
230	Energy Harvesting From Broadband Random Vibrations: Comparison of Single-Mode and Multi-Mode Electroelastic Solutions. , 2012, , .		0
231	Two Architectures for Bending-Twisting Flapping Using Macro-Fiber Composites. , 2012, , .		0
232	An Experimental Investigation Into the Performance of a T-Shaped Piezoelectric Flow Energy Harvester. , 2013, , .		0
233	Electroelastic Finite Element Modeling and Experimental Validation of Structurally-Integrated Piezoelectric Energy Harvester. , 2013, , .		0
234	Adaptive and active materials: selected papers from the ASME 2012 Conference on Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS 12) (Stone Mountain, GA, USA, 19â€“21 September) Tj ETQq0 0 0 rgBT /Overlock	0.0	

#	Article	IF	Citations
235	Dimensionless analysis and scaling of a hybrid 3DOF airfoil-based piezoelectric-inductive aeroelastic energy harvester. , 2013, , .		0
236	Multiple Patch-Based Piezoelectric Energy Harvesting From Multiple Vibration Modes of Thin Plates. , 2013, , .		0
237	Contactless Ultrasonic Energy Transfer: Acoustic-Piezoelectric Structure Interaction Modeling and Performance Enhancement. , 2014, , .		0
238	Nonlinear Dissipative Electroelastic Dynamics of an M-Shaped Broadband Piezoelectric Energy Harvester. , 2014, , .		0
239	Modeling and enhancement of piezoelectric power extraction from one-dimensional bending waves. Proceedings of SPIE, 2014, , .	1.0	0
240	Nonlinear modeling, strength-based design, and testing of flexible piezoelectric energy harvesters under large dynamic loads for rotorcraft applications. Proceedings of SPIE, 2014, , .	1.0	0
241	Global nonlinear electroelastic dynamics of a bimorph piezoelectric cantilever for energy harvesting, sensing, and actuation. Proceedings of SPIE, 2014, , .	1.0	0
242	Nonlinear Two-to-One Internal Resonance for Broadband Energy Harvesting. , 2015, , .		0
243	Broadband performance of a patterned piezoelectric energy harvester integrated with a continuous elastoacoustic mirror. Proceedings of SPIE, 2015, , .	1.0	0
244	Electroelastic Bandgap Formation in Locally Resonant Metamaterial Beams With Piezoelectric Shunts: A Modal Analysis Approach. , 2016, , .		0
245	On the Optimal Piezoelectric Material Distribution in Energy Harvesting From a Nonlinear Beam Under Axial Flow. , 2016, , .		0
246	Suppression of Nonlinear Bifurcations in Flexible Structures Using Nonlinear Switching Shunt Damping Circuits. , 2016, , .		0
247	Dramatic effect of fluid damping on the performance of a nonlinear M-shaped broadband energy harvester. Proceedings of SPIE, 2016, , .	1.0	0
248	In vacuo elastodynamics of a flexible cantilever for wideband energy harvesting. Proceedings of SPIE, 2016, , .	1.0	0
249	Evaluation of human-scale motion energy harvesting for wearable electronics. Proceedings of SPIE, 2017, , .	1.0	0
250	Selective Wave Filtering in Time-Modulated Elastic Metamaterials. , 2018, , .		0
251	Leveraging size effects in flexoelectric-piezoelectric vibration energy harvesting. , 2021, , 107-146.		0
252	Limit Cycle Oscillations of a Nonlinear Piezo-magneto-elastic Structure for Broadband Vibration Energy Harvesting. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 305-316.	0.0	0

#	Article	IF	Citations
253	Varying cross-section and axial strain-gradient effects in flexoelectric cantilevers at submicron thickness levels. , 2018, , .		0
254	Dispersion tailoring in varying-inductance piezoelectric metamaterials. , 2018, , .		0
255	Effects of a piezoelectric based nonlinear energy sink on the behavior of an electromechanically coupled beam. , 2018, , .		0
256	Locally resonant metamaterials with shape-memory alloy springs. , 2018, , .		0
257	Characterization of a bio-inspired piezoelectric swimmer in a quiescent water and under imposed flow. , 2019, , .		0
258	Wideband Acoustic Data Transmission Through Staircase Piezoelectric Transducers. , 2021, , .		0
259	Experimental Validation of Crosstalk Minimization in Metallic Barriers with Simultaneous Ultrasonic Power and Data Transfer. , 2021, , .		0
260	Radiation Characterization of Leaky Guided Waves in Monolithic and Sutured Cranial Bones. , 2021, , .		0
261	Mechanical Characterization of Cranial Sutures Using Guided Ultrasonic Waves. , 2021, , .		0
262	Ultrasonic Communication through a Metallic Barrier: Transmission Modeling and Crosstalk Minimization. , 2020, , .		0
263	Programmable spatial and spatiotemporal modulation of piezoelectric metamaterials with synthetic impedance circuits. , 2022, , .		0
264	Large-scale simulation of high-intensity focused ultrasound with Sierra/SD. Proceedings of Meetings on Acoustics, 2023, , .	0.0	0
265	Experimental realization of tunable exceptional points in a resonant non-Hermitian piezoelectrically coupled waveguide. Applied Physics Letters, 2024, 124, .	3.2	0
266	Broadening the frequency response of a Duffing-type piezoelectric shunt by means of negative capacitance. Journal of Sound and Vibration, 2024, 578, 118344.	4.1	0
267	Multimodal vibration damping of a three-dimensional circular ring coupled to analogous piezoelectric networks. Journal of Sound and Vibration, 2024, 581, 118385.	4.1	0
268	Portable through-metal ultrasonic power transfer using a dry-coupled detachable transmitter. Ultrasonics, 2024, 141, 107339.	4.0	0