

Hu Gengkai

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

123
papers

3,643
citations

34
h-index

56
g-index

126
ext. papers

4,445
ext. citations

4
avg, IF

6
L-index

#	Paper	IF	Citations
123	Experimental study on negative effective mass in a 1D mass-spring system. <i>New Journal of Physics</i> , 2008 , 10, 043020	2.9	231
122	Ultrathin low-frequency sound absorbing panels based on coplanar spiral tubes or coplanar Helmholtz resonators. <i>Applied Physics Letters</i> , 2014 , 105, 121901	3.4	216
121	A hybrid elastic metamaterial with negative mass density and tunable bending stiffness. <i>Journal of the Mechanics and Physics of Solids</i> , 2017 , 105, 179-198	5	125
120	Smart three-dimensional lightweight structure triggered from a thin composite sheet via 3D printing technique. <i>Scientific Reports</i> , 2016 , 6, 22431	4.9	123
119	Analytic model of elastic metamaterials with local resonances. <i>Physical Review B</i> , 2009 , 79,	3.3	123
118	Chiral effect in plane isotropic micropolar elasticity and its application to chiral lattices. <i>Journal of the Mechanics and Physics of Solids</i> , 2012 , 60, 1907-1921	5	120
117	A method of plasticity for general aligned spheroidal void or fiber-reinforced composites. <i>International Journal of Plasticity</i> , 1996 , 12, 439-449	7.6	104
116	Tunable Digital Metamaterial for Broadband Vibration Isolation at Low Frequency. <i>Advanced Materials</i> , 2016 , 28, 9857-9861	24	102
115	Design method for electromagnetic cloak with arbitrary shapes based on Laplace's equation. <i>Optics Express</i> , 2009 , 17, 1308-20	3.3	96
114	Analytical coupled vibroacoustic modeling of membrane-type acoustic metamaterials: membrane model. <i>Journal of the Acoustical Society of America</i> , 2014 , 136, 969	2.2	94
113	A low-frequency sound absorbing material with subwavelength thickness. <i>Applied Physics Letters</i> , 2017 , 110, 221903	3.4	91
112	Pattern transformation of heat-shrinkable polymer by three-dimensional (3D) printing technique. <i>Scientific Reports</i> , 2015 , 5, 8936	4.9	90
111	Design method for quasi-isotropic transformation materials based on inverse Laplace's equation with sliding boundaries. <i>Optics Express</i> , 2010 , 18, 6089-96	3.3	86
110	Investigation of the negative-mass behaviors occurring below a cut-off frequency. <i>New Journal of Physics</i> , 2010 , 12, 103025	2.9	82
109	Latticed pentamode acoustic cloak. <i>Scientific Reports</i> , 2015 , 5, 15745	4.9	80
108	Digital Metamaterials: Designing 3D Digital Metamaterial for Elastic Waves: From Elastic Wave Polarizer to Vibration Control (Adv. Sci. 16/2019). <i>Advanced Science</i> , 2019 , 6, 1970097	13.6	78
107	Superlensing effect of an anisotropic metamaterial slab with near-zero dynamic mass. <i>Applied Physics Letters</i> , 2011 , 98, 263510	3.4	72

106	Broadband solid cloak for underwater acoustics. <i>Physical Review B</i> , 2017 , 95,	3.3	70
105	Analytical coupled vibroacoustic modeling of membrane-type acoustic metamaterials: plate model. <i>Journal of the Acoustical Society of America</i> , 2014 , 136, 2926	2.2	64
104	A continuum micromechanical theory of overall plasticity for particulate composites including particle size effect. <i>International Journal of Plasticity</i> , 2005 , 21, 777-799	7.6	57
103	Topological phase transition in mechanical honeycomb lattice. <i>Journal of the Mechanics and Physics of Solids</i> , 2019 , 122, 54-68	5	56
102	A programmable metasurface for real time control of broadband elastic rays. <i>Smart Materials and Structures</i> , 2018 , 27, 115011	3.4	54
101	Thermally induced vibrations of flexible beams using Absolute Nodal Coordinate Formulation. <i>Aerospace Science and Technology</i> , 2013 , 29, 386-393	4.9	53
100	Nonsingular two dimensional cloak of arbitrary shape. <i>Applied Physics Letters</i> , 2009 , 95, 011107	3.4	45
99	Effective medium theory of thin-plate acoustic metamaterials. <i>Journal of the Acoustical Society of America</i> , 2014 , 135, 1844-52	2.2	43
98	Super-resolution imaging by resonant tunneling in anisotropic acoustic metamaterials. <i>Journal of the Acoustical Society of America</i> , 2012 , 132, 2800-6	2.2	42
97	Controlling elastic waves with isotropic materials. <i>Applied Physics Letters</i> , 2011 , 98, 121904	3.4	42
96	Approximate method for controlling solid elastic waves by transformation media. <i>Physical Review B</i> , 2011 , 84,	3.3	42
95	A variational method for non-linear micropolar composites. <i>Mechanics of Materials</i> , 2005 , 37, 407-425	3.3	42
94	A finite element beam model including cross-section distortion in the absolute nodal coordinate formulation. <i>Nonlinear Dynamics</i> , 2014 , 77, 1019-1033	5	39
93	Elastic wave transparency of a solid sphere coated with metamaterials. <i>Physical Review B</i> , 2008 , 77,	3.3	38
92	Programmable elastic valley Hall insulator with tunable interface propagation routes. <i>Extreme Mechanics Letters</i> , 2019 , 28, 76-80	3.9	36
91	Experimental study for metamaterials based on dielectric resonators and wire frame. <i>Metamaterials</i> , 2008 , 2, 220-226		35
90	Effective moduli for micropolar composite with interface effect. <i>International Journal of Solids and Structures</i> , 2007 , 44, 8106-8118	3.1	34
89	Droplet Splashing on an Inclined Surface. <i>Physical Review Letters</i> , 2019 , 122, 054501	7.4	33

88	Tunable fluid-solid metamaterials for manipulation of elastic wave propagation in broad frequency range. <i>Applied Physics Letters</i> , 2018 , 112, 221906	3.4	31
87	Experimental study on acoustic subwavelength imaging based on zero-mass metamaterials. <i>Europhysics Letters</i> , 2015 , 109, 28001	1.6	31
86	Effective in plane moduli of composites with a micropolar matrix and coated fibers. <i>International Journal of Solids and Structures</i> , 2004 , 41, 247-265	3.1	31
85	Dirac degeneracy and elastic topological valley modes induced by local resonant states. <i>Physical Review B</i> , 2020 , 101,	3.3	28
84	Experimental study on acoustic subwavelength imaging of holey-structured metamaterials by resonant tunneling. <i>Journal of the Acoustical Society of America</i> , 2014 , 135, 1686-91	2.2	27
83	A numerical method for designing acoustic cloak with arbitrary shapes. <i>Computational Materials Science</i> , 2009 , 46, 708-712	3.2	27
82	A micromechanical method for particulate composites with finite particle concentration. <i>Mechanics of Materials</i> , 2004 , 36, 359-368	3.3	27
81	Overall plasticity of micropolar composites with interface effect. <i>Mechanics of Materials</i> , 2008 , 40, 721-733	3.3	26
80	Inclusion problem of microstretch continuum. <i>International Journal of Engineering Science</i> , 2004 , 42, 849-860	3.6	25
79	Mechanical behaviour of [55] filament-wound glass-fibre/epoxy-resin tubes. Macromechanical model of the macroscopic behaviour of tubular structures with damage and failure envelope prediction. <i>Composites Science and Technology</i> , 1998 , 58, 19-29	8.6	24
78	An active mechanical Willis meta-layer with asymmetric polarizabilities. <i>Nature Communications</i> , 2020 , 11, 3681	17.4	23
77	Broadband and High-Transmission Metasurface for Converting Underwater Cylindrical Waves to Plane Waves. <i>Physical Review Applied</i> , 2019 , 12,	4.3	20
76	Dynamics of 1D mass-spring system with a negative stiffness spring realized by magnets: Theoretical and experimental study. <i>Theoretical and Applied Mechanics Letters</i> , 2017 , 7, 17-21	1.8	19
75	Stress transfer for a SMA fiber pulled out from an elastic matrix and related bridging effect. <i>Composites Part A: Applied Science and Manufacturing</i> , 2005 , 36, 1142-1151	8.4	19
74	Composite plasticity based on matrix average second order stress moment. <i>International Journal of Solids and Structures</i> , 1997 , 34, 1007-1015	3.1	18
73	Eshelby tensors for an ellipsoidal inclusion in a micropolar material. <i>International Journal of Engineering Science</i> , 2006 , 44, 595-605	5.7	18
72	Design of arbitrary shaped pentamode acoustic cloak based on quasi-symmetric mapping gradient algorithm. <i>Journal of the Acoustical Society of America</i> , 2016 , 140, EL405	2.2	18
71	Thermal shock induced dynamics of a spacecraft with a flexible deploying boom. <i>Acta Astronautica</i> , 2017 , 141, 123-131	2.9	17

70	Influences of imperfectness and inner constraints on an acoustic cloak with unideal pentamode materials. <i>Journal of Sound and Vibration</i> , 2019 , 458, 62-73	3.9	17
69	Mechanism of dust removal by a standing wave electric curtain. <i>Science China: Physics, Mechanics and Astronomy</i> , 2012 , 55, 1018-1025	3.6	16
68	Non-resonant metasurface for broadband elastic wave mode splitting. <i>Applied Physics Letters</i> , 2020 , 116, 171903	3.4	15
67	Sound absorption by acoustic microlattice with optimized pore configuration. <i>Journal of the Acoustical Society of America</i> , 2018 , 144, EL138	2.2	15
66	Shape-adaptable hyperlens for acoustic magnifying imaging. <i>Applied Physics Letters</i> , 2016 , 109, 224103	3.4	15
65	Designing 3D Digital Metamaterial for Elastic Waves: From Elastic Wave Polarizer to Vibration Control. <i>Advanced Science</i> , 2019 , 6, 1900401	13.6	14
64	Acoustic cloak constructed with thin-plate metamaterials. <i>International Journal of Smart and Nano Materials</i> , 2015 , 6, 73-83	3.6	14
63	Transformation method and wave control. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2010 , 26, 889-898	2	14
62	Size-dependence of overall in-plane plasticity for fiber composites. <i>International Journal of Solids and Structures</i> , 2004 , 41, 4713-4730	3.1	14
61	Wrinkling of structured thin films via contrasted materials. <i>Soft Matter</i> , 2016 , 12, 3937-42	3.6	13
60	Dynamic effective models of two-dimensional acoustic metamaterials with cylindrical inclusions. <i>Acta Mechanica</i> , 2013 , 224, 1233-1241	2.1	13
59	Mechanical behaviour of \square 55 \square filament-wound glass-fibre/epoxy-resin tubes: II. Micromechanical model of damage initiation and the competition between different mechanisms. <i>Composites Science and Technology</i> , 1997 , 57, 155-164	8.6	13
58	Tailored Mechanical Metamaterials with Programmable Quasi-Zero-Stiffness Features for Full-Band Vibration Isolation. <i>Advanced Functional Materials</i> , 2021 , 31, 2101428	15.6	13
57	Broadband dual-anisotropic solid metamaterials. <i>Scientific Reports</i> , 2017 , 7, 13197	4.9	12
56	Optimization on microlattice materials for sound absorption by an integrated transfer matrix method. <i>Journal of the Acoustical Society of America</i> , 2015 , 137, EL334-9	2.2	12
55	Thermally Induced Dynamics of a Spinning Spacecraft with an Axial Flexible Boom. <i>Journal of Spacecraft and Rockets</i> , 2015 , 52, 1503-1508	1.5	12
54	Influence of fiber shape and size on overall elastoplastic property for micropolar composites. <i>International Journal of Solids and Structures</i> , 2006 , 43, 3025-3043	3.1	11
53	Prestress-controlled asymmetric wave propagation and reciprocity-breaking in tensegrity metastructure. <i>Extreme Mechanics Letters</i> , 2020 , 37, 100724	3.9	10

52	Theory and Realization of Nonresonant Anisotropic Singly Polarized Solids Carrying Only Shear Waves. <i>Physical Review Applied</i> , 2019 , 12,	4.3	10
51	Identification of material parameters of micropolar theory for composites by homogenization method. <i>Computational Materials Science</i> , 2009 , 46, 733-737	3.2	10
50	Eshelby tensors for an ellipsoidal inclusion in a microstretch material. <i>International Journal of Solids and Structures</i> , 2007 , 44, 3049-3061	3.1	10
49	Mixed mode fracture analysis of adhesive lap joints. <i>Composites Part B: Engineering</i> , 1995 , 5, 1043-1050		10
48	Thermal-structural dynamic analysis of a satellite antenna with the cable-network and hoop-truss supports. <i>Journal of Thermal Stresses</i> , 2019 , 42, 1339-1356	2.2	9
47	Inclusion problem in second gradient elasticity. <i>International Journal of Engineering Science</i> , 2018 , 132, 60-78	5.7	9
46	Experimental study on interaction between a positive mass and a negative effective mass through a mass-spring system. <i>Theoretical and Applied Mechanics Letters</i> , 2015 , 5, 196-199	1.8	9
45	Transformation ray method: controlling high frequency elastic waves (L). <i>Journal of the Acoustical Society of America</i> , 2012 , 132, 2942-5	2.2	9
44	Experimental study on electromagnetic wave transparency for coated metallic cylinders. <i>Journal of Applied Physics</i> , 2009 , 105, 103112	2.5	9
43	Creation of acoustic vortex knots. <i>Nature Communications</i> , 2020 , 11, 3956	17.4	9
42	Constraint condition on transformation relation for generalized acoustics. <i>Wave Motion</i> , 2013 , 50, 170-178	1.8	8
41	Sound reduction by metamaterial-based acoustic enclosure. <i>AIP Advances</i> , 2014 , 4, 124306	1.5	8
40	Thermoelastic-Structural Analysis of Space Thin-Walled Beam Under Solar Flux. <i>AIAA Journal</i> , 2019 , 57, 1781-1785	2.1	7
39	A facile method to realize perfectly matched layers for elastic waves. <i>Wave Motion</i> , 2014 , 51, 1170-1178	1.8	7
38	Explicit cross-link relations between effective elastic modulus and thermal conductivity for fiber composites. <i>Computational Materials Science</i> , 2012 , 51, 353-359	3.2	7
37	Effective viscoelastic behavior of particulate polymer composites at finite concentration. <i>Applied Mathematics and Mechanics (English Edition)</i> , 2007 , 28, 297-307	3.2	7
36	Analytical and Experimental Investigation on Sound Transmission of Double Thin Plates with Magnetic Negative Stiffness. <i>International Journal of Applied Mechanics</i> , 2018 , 10, 1850054	2.4	7
35	Small droplet bouncing on a deep pool. <i>Physics of Fluids</i> , 2020 , 32, 012107	4.4	6

34	Two-dimensional water acoustic waveguide based on pressure compensation method. <i>Review of Scientific Instruments</i> , 2018 , 89, 024902	1.7	6
33	Design method for electromagnetic cloak with arbitrary shapes based on Laplace's equation: erratum. <i>Optics Express</i> , 2009 , 17, 13070	3.3	6
32	Highly anisotropic hexagonal lattice material for low frequency water sound insulation. <i>Extreme Mechanics Letters</i> , 2020 , 40, 100916	3.9	6
31	Linear and nonlinear dielectric properties of particulate composites at finite concentration. <i>Applied Mathematics and Mechanics (English Edition)</i> , 2006 , 27, 1021-1030	3.2	5
30	Influence of Gradual Interphase on Overall Elastic and Viscoelastic Properties of Particulate Composites. <i>Journal of Thermoplastic Composite Materials</i> , 2004 , 17, 411-425	1.9	5
29	Compact acoustic double negative metamaterial based on coexisting local resonances. <i>Applied Physics Letters</i> , 2018 , 113, 244101	3.4	5
28	Quadramode materials: Their design method and wave property. <i>Materials and Design</i> , 2021 , 210, 110038.1	3.1	5
27	In-Plane Semi-Linear Cloaks with Arbitrary Shape. <i>Acta Mechanica Solida Sinica</i> , 2019 , 32, 277-286	2	4
26	Wave-based transfer matrix method for dynamic response of large net structures. <i>Journal of Sound and Vibration</i> , 2018 , 433, 265-286	3.9	4
25	Longitudinal elastic wave control by pre-deforming semi-linear materials. <i>Journal of the Acoustical Society of America</i> , 2017 , 142, 1229	2.2	4
24	Wrinkling of the membrane with square rigid elements. <i>Europhysics Letters</i> , 2016 , 116, 24005	1.6	4
23	Topological valley states in sonic crystals with Willis coupling. <i>Applied Physics Letters</i> , 2021 , 119, 051903	3.4	4
22	Wave boundary control method for vibration suppression of large net structures. <i>Acta Mechanica</i> , 2019 , 230, 3439-3456	2.1	3
21	Tunable network sound absorber based on additive manufacturing. <i>Journal of the Acoustical Society of America</i> , 2021 , 150, 94	2.2	3
20	Particle focusing in a microchannel with acoustic metafluid. <i>Applied Physics Letters</i> , 2013 , 103, 031901	3.4	2
19	Micromechanical analysis of fatigue properties of metal-matrix composites. <i>Mechanics Research Communications</i> , 1997 , 24, 65-68	2.2	2
18	Overall elastoplastic property for micropolar composites with randomly oriented ellipsoidal inclusions. <i>Computational Materials Science</i> , 2006 , 37, 582-592	3.2	2
17	Odd elasticity realized by piezoelectric material with linear feedback. <i>Science China: Physics, Mechanics and Astronomy</i> , 2021 , 64, 1	3.6	2

16	Wave characteristics of extremal elastic materials. <i>Extreme Mechanics Letters</i> , 2022 , 101789	3.9	2
15	Quasiconformal maps in transformation optics and their electrostatic analogs 2015 ,		1
14	Invisible cloak design with controlled constitutive parameters and arbitrary shaped boundaries through Helmholtz's equation: comment. <i>Optics Express</i> , 2010 , 18, 3917-8	3.3	1
13	Rational design of hyperelastic semi-linear material and its application to elastic wave control. <i>Mechanics of Materials</i> , 2022 , 166, 104237	3.3	1
12	Asymmetric droplet splashing. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	1
11	Experimental Study on Tunable Electromagnetic Shielding by Microlattice Materials with Organized Microstructures. <i>Advanced Engineering Materials</i> , 2018 , 20, 1700823	3.5	1
10	Homogenization in a simpler way: analysis and optimization of periodic unit cells with CauchyBorn hypothesis. <i>Structural and Multidisciplinary Optimization</i> ,1	3.6	1
9	Heat flow control by transformation method with grid generation method. <i>Acta Mechanica Solida Sinica</i> , 2014 , 27, 454-460	2	0
8	Interfacial wave between acoustic media with Willis coupling. <i>Wave Motion</i> , 2022 , 102922	1.8	0
7	Mass-spring model of elastic media with customizable willis coupling. <i>International Journal of Mechanical Sciences</i> , 2022 , 224, 107325	5.5	0
6	Design of elliptical underwater acoustic cloak with truss-latticed pentamode materials. <i>Theoretical and Applied Mechanics Letters</i> , 2022 , 100346	1.8	0
5	Grating effect in negative permeability meta-material. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008 , 372, 2692-2695	2.3	
4	Micromechanical modeling of local field distribution for a planar composite under plastic deformation. <i>Acta Mechanica</i> , 2006 , 187, 139-149	2.1	
3	An analytical dislocation multiple-pile-up model for the yield stress of fully lamellar TiAl alloys. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2003 , 11, 627-634	2	
2	WAVE CHARACTERISTICS IN CHIRAL LATTICE WITH LOCAL RESONATOR 2015 , 39-40		
1	A decoupling-design strategy for high sound absorption in subwavelength structures with air ventilation. <i>JASA Express Letters</i> , 2022 , 2, 033602		