

# Lifeng Wang

## List of Publications by Year in descending order

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147  
papers

5,800  
citations

76326  
40  
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82547  
72  
g-index

147  
all docs

147  
docs citations

147  
times ranked

4819  
citing authors

#	ARTICLE	IF	CITATIONS
1	Inplane vibration analysis of rotating beams with elastic restraints. JVC/Journal of Vibration and Control, 2023, 29, 1484-1497.	2.6	1
2	Parametric optimization of an aperiodic metastructure based on genetic algorithm. International Journal of Mechanical Sciences, 2022, 214, 106878.	6.7	19
3	Vibration analysis of a strain gradient plate model via a mesh-free moving Kriging Interpolation Method. Engineering Analysis With Boundary Elements, 2022, 135, 156-166.	3.7	8
4	A comprehensive study on the coupled multi-mode vibrations of cylindrical shells. Mechanical Systems and Signal Processing, 2022, 169, 108730.	8.0	21
5	Ultrawide bandgap in metamaterials via coupling of locally resonant and Bragg bandgaps. Acta Mechanica, 2022, 233, 477-493.	2.1	17
6	Nonlocal active metamaterial with feedback control for tunable bandgap and broadband nonreciprocity. International Journal of Mechanical Sciences, 2022, 219, 107131.	6.7	10
7	Complex Periodic Bursting Structures in the Rayleigh–van der Pol–Duffing Oscillator. Journal of Nonlinear Science, 2022, 32, 1.	2.1	11
8	Active multifunctional composite metamaterials with negative effective mass density and negative effective modulus. Composite Structures, 2022, 291, 115586.	5.8	19
9	Flutter analysis of rotating beams with elastic restraints. Applied Mathematics and Mechanics (English Edition), 2022, 43, 761-776.	3.6	4
10	Elastic wave propagation in a single-layered hexagonal boron nitride metamaterial. Journal of Applied Physics, 2022, 131, 185104.	2.5	0
11	Semi-analytical and experimental studies on travelling wave vibrations of a moderately thick cylindrical shell subject to a spinning motion. Journal of Sound and Vibration, 2022, 535, 117095.	3.9	10
12	Splitting of waves in rotor-in-rotor nonlocal metamaterials by internal rotor coupling. Materials and Design, 2022, 221, 110921.	7.0	3
13	The viscoelastic mechanical property and constitutive models of 3D printed photopolymer. Rapid Prototyping Journal, 2021, 27, 346-354.	3.2	4
14	Splitting of vibration mode in an imperfect submicron circular plate. Acta Mechanica, 2021, 232, 1729-1739.	2.1	3
15	Thermal vibration of circular single-layered MoS2 predicted by the circular Mindlin plate model. AIP Advances, 2021, 11, 025328.	1.3	1
16	An ultrawide-zero-frequency bandgap metamaterial with negative moment of inertia and stiffness. New Journal of Physics, 2021, 23, 043003.	2.9	15
17	Experimental Study on Wave Propagation in One-Dimensional Viscoelastic Metamaterial. Acta Mechanica Solida Sinica, 2021, 34, 597.	1.9	3
18	Optimization of a type of elastic metamaterial for broadband wave suppression. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2021, 477, .	2.1	8

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19	Negative interlayer shear effect on a double-layered van der Waals material resonator. Physical Review B, 2021, 104, .	3.2	5
20	Microscopic origins of the crystallographically preferred growth in evaporation-induced colloidal crystals. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	17
21	On the tool wear behavior during ultrasonic vibration-assisted form grinding with alumina wheels. Ceramics International, 2021, 47, 26465-26474.	4.8	29
22	Critical examination on in-plane inertias for vibration characteristics of cylindrical shells. Journal of Sound and Vibration, 2021, 511, 116350.	3.9	9
23	Complex mixed-mode vibration types triggered by the pitchfork bifurcation delay in a driven van der Pol-Duffing oscillator. Applied Mathematics and Computation, 2021, 411, 126522.	2.2	9
24	Nonlinear thermal vibration of a nanoplate attached to a cavity. Materials Research Express, 2021, 8, 115009.	1.6	1
25	Nonlinear vibrations of helical graphene resonators in the dynamic nano-indentation testing. Nanotechnology, 2020, 31, 025709.	2.6	5
26	Combination of stiffness, strength, and toughness in 3D printed interlocking nacre-like composites. Extreme Mechanics Letters, 2020, 35, 100621.	4.1	50
27	Nonlinear forced vibration of bilayer van der Waals materials drum resonator. Journal of Applied Physics, 2020, 128, .	2.5	14
28	The Shape of Heavy Droplets on Superhydrophobic Surfaces. ACS Omega, 2020, 5, 26732-26737.	3.5	3
29	Transverse shear and normal deformation effects on vibration behaviors of functionally graded micro-beams. Applied Mathematics and Mechanics (English Edition), 2020, 41, 1303-1320.	3.6	3
30	Three-Dimensional Aeroelastic Stability of Elastically Restrained Plates in Subsonic Flow. AIAA Journal, 2020, 58, 5490-5495.	2.6	0
31	Ultrawide coupled bandgap in hybrid periodic system with multiple resonators. Journal of Applied Physics, 2020, 127, .	2.5	25
32	Tough and Strong: Cross-Lamella Design Imparts Multifunctionality to Biomimetic Nacre. ACS Nano, 2020, 14, 9771-9779.	14.6	41
33	Effects of the Van der Waals Force on the Vibration of Typical Multi-layered Two-dimensional Nanostructures. Scientific Reports, 2020, 10, 644.	3.3	6
34	Engineering lattice metamaterials for extreme property, programmability, and multifunctionality. Journal of Applied Physics, 2020, 127, .	2.5	77
35	The speed-locking effect of particles on a graphene layer with travelling surface wave. Nanoscale Research Letters, 2020, 15, 203.	5.7	4
36	The effect of van der Waals force on the vibrational properties of low-dimensional nanostructure. Chinese Science Bulletin, 2020, 65, 2371-2383.	0.7	0

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37	Supersonic Flutter Analysis of Functionally Graded Fiber Orientation Plates with Elastic Restraints. AIAA Journal, 2019, 57, 3104-3109.	2.6	3
38	Thermal vibration of MoS <sub>2</sub> /Black phosphorus Bi-layered heterostructure. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 114, 113597.	2.7	2
39	Effect of Nanosecond Laser Beam Shaping on Cu(In,Ga)Se <sub>2</sub> Thin Film Solar Cell Scribing. ACS Applied Energy Materials, 2019, 2, 5057-5065.	5.1	6
40	Free vibration of single-layered MoS <sub>2</sub> suspended over a circular hole. Journal of Applied Physics, 2019, 126, 135106.	2.5	7
41	Instability-Triggered Triply Negative Mechanical Metamaterial. Physical Review Applied, 2019, 12, .	3.8	19
42	Flexural Wave Propagation in Mass Chain-Filled Carbon Nanotubes. Materials, 2019, 12, 2986.	2.9	2
43	Vibration characteristic and flutter analysis of elastically restrained stiffened functionally graded plates in thermal environment. International Journal of Mechanical Sciences, 2019, 157-158, 872-884.	6.7	38
44	Differential Quadrature Element Method for Free Vibration of Strain Gradient Beams with Elastic Boundary Conditions. Journal of Vibration Engineering and Technologies, 2019, 7, 579-589.	2.2	4
45	3D printing of biomimetic composites with improved fracture toughness. Acta Materialia, 2019, 173, 61-73.	7.9	113
46	Learning from nature: Use material architecture to break the performance tradeoffs. Materials and Design, 2019, 168, 107650.	7.0	55
47	Vibration of functionally graded Mindlin plate based on a modified strain gradient elasticity theory. IOP Conference Series: Materials Science and Engineering, 2019, 531, 012023.	0.6	3
48	Hypersonic Aeroelastic Response of Elastic Boundary Panel Based on a Modified Fourier Series Method. International Journal of Aerospace Engineering, 2019, 2019, 1-13.	0.9	5
49	Wave motion in double-resonator metamaterials. Engineering Research Express, 2019, 1, 025049.	1.6	0
50	Biomimetic architected materials with improved dynamic performance. Journal of the Mechanics and Physics of Solids, 2019, 125, 178-197.	4.8	108
51	Finite element method of bond-based peridynamics and its ABAQUS implementation. Engineering Fracture Mechanics, 2019, 206, 408-426.	4.3	34
52	Modeling the Large Deformation and Microstructure Evolution of Nonwoven Polymer Fiber Networks. Journal of Applied Mechanics, Transactions ASME, 2019, 86, .	2.2	21
53	Thermal Vibration of Carbon Nanostructures. , 2019, , 421-481.		1
54	The two-dimensional elasticity of a chiral hinge lattice metamaterial. International Journal of Solids and Structures, 2018, 141-142, 254-263.	2.7	21

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55	Prediction of the Effective Thermal Conductivity of Hollow Sphere Foams. ACS Applied Energy Materials, 2018, 1, 1146-1157.	5.1	45
56	Thermal vibration of rectangular single-layered black phosphorus predicted by orthotropic plate model. Journal of Applied Physics, 2018, 123, 095101.	2.5	14
57	Designing Phononic Crystals with Wide and Robust Band Gaps. Physical Review Applied, 2018, 9, .	3.8	66
58	Hoberman-sphere-inspired lattice metamaterials with tunable negative thermal expansion. Composite Structures, 2018, 189, 586-597.	5.8	88
59	Exploiting negative Poisson's ratio to design 3D-printed composites with enhanced mechanical properties. Materials and Design, 2018, 142, 247-258.	7.0	234
60	Analytical solutions for the thermal vibration of strain gradient beams with elastic boundary conditions. Acta Mechanica, 2018, 229, 2203-2219.	2.1	13
61	3D printed hierarchical honeycombs with shape integrity under large compressive deformations. Materials and Design, 2018, 137, 226-234.	7.0	189
62	An experimental investigation of the temperature effect on the mechanics of carbon fiber reinforced polymer composites. Composites Science and Technology, 2018, 154, 53-63.	7.8	133
63	Vibration of two-dimensional hexagonal boron nitride. Theoretical and Applied Mechanics Letters, 2018, 8, 408-414.	2.8	7
64	Mechanical properties of sandwich composites with 3d-printed auxetic and non-auxetic lattice cores under low velocity impact. Materials and Design, 2018, 160, 1305-1321.	7.0	145
65	Nonlinear vibrations of circular single-layer black phosphorus resonators. Applied Physics Letters, 2018, 113, .	3.3	13
66	Thermally stimulated nonlinear vibration of rectangular single-layered black phosphorus. Journal of Applied Physics, 2018, 124, 135101.	2.5	5
67	Thermo-Mechanical Vibration Analysis of Size-Dependent Functionally Graded Micro-Beams with General Boundary Conditions. International Journal of Applied Mechanics, 2018, 10, 1850088.	2.2	14
68	Harnessing 3D printed residual stress to design heat-shrinkable metamaterials. Results in Physics, 2018, 11, 85-95.	4.1	12
69	Enhanced fracture toughness in architected interpenetrating phase composites by 3D printing. Composites Science and Technology, 2018, 167, 251-259.	7.8	67
70	Thermal Vibration of Carbon Nanostructures. , 2018, , 1-61.		0
71	Vibration of single-walled carbon nanotubes with elastic boundary conditions. International Journal of Mechanical Sciences, 2017, 122, 156-166.	6.7	24
72	Lattice Metamaterials with Mechanically Tunable Poisson's Ratio for Vibration Control. Physical Review Applied, 2017, 7, .	3.8	250

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73	Bending behavior of sandwich composite structures with tunable 3D-printed core materials. Composite Structures, 2017, 175, 46-57.	5.8	272
74	Broadband and multiband vibration mitigation in lattice metamaterials with sinusoidally-shaped ligaments. Extreme Mechanics Letters, 2017, 17, 24-32.	4.1	77
75	Nonlinear vibrations of carbon chain resonators tuned by temperature. Materials Research Express, 2017, 4, 105026.	1.6	2
76	Timoshenko beam model for vibrational analysis of double-walled carbon nanotubes bridged on substrate. Current Applied Physics, 2017, 17, 1670-1690.	2.4	9
77	Hierarchical-structure induced adjustable deformation of super carbon nanotubes with radial shrinkage up to 66%. Carbon, 2017, 125, 289-298.	10.3	7
78	Harnessing out-of-plane deformation to design 3D architected lattice metamaterials with tunable Poisson's ratio. Scientific Reports, 2017, 7, 8949.	3.3	50
79	Analytical solutions for thermal vibration of nanobeams with elastic boundary conditions. Acta Mechanica Sinica, 2017, 30, 474-483.	1.9	15
80	A mesh-free vibration analysis of strain gradient nano-beams. Engineering Analysis With Boundary Elements, 2017, 84, 231-236.	3.7	25
81	Free vibration of super-graphene carbon nanotube networks via a beam element based coarse-grained method. Materials Research Express, 2017, 4, 085002.	1.6	0
82	Topology optimization of multi-material negative Poisson's ratio metamaterials using a reconciled level set method. CAD Computer Aided Design, 2017, 83, 15-32.	2.7	177
83	Vibration of Rectangular Single-Layered Black Phosphorus. , 2017, , .		0
84	Vibration of Zinc Oxide Nanowires in Electric Field. , 2017, , .		1
85	Thermal vibration of a double-layered graphene sheet with initial stress at low temperature. Chinese Science Bulletin, 2017, 62, 245-253.	0.7	1
86	Thermal vibration of a simply supported single-walled carbon nanotube with thermal stress. Acta Mechanica, 2016, 227, 1957-1967.	2.1	16
87	Hierarchical honeycomb lattice metamaterials with improved thermal resistance and mechanical properties. Composite Structures, 2016, 152, 395-402.	5.8	131
88	Thermal vibration of a single-layered graphene with initial stress predicted by semiquantum molecular dynamics. Materials Research Express, 2016, 3, 095601.	1.6	6
89	Bio-inspired heterogeneous composites for broadband vibration mitigation. Scientific Reports, 2016, 5, 17865.	3.3	59
90	Harnessing structural hierarchy to design stiff and lightweight phononic crystals. Extreme Mechanics Letters, 2016, 9, 91-96.	4.1	45

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91	Anomalous elastic buckling of layered crystalline materials in the absence of structure slenderness. Journal of the Mechanics and Physics of Solids, 2016, 88, 83-99.	4.8	24
92	Strain Gradient Finite Element Analysis on the Vibration of Double-Layered Graphene Sheets. International Journal of Computational Methods, 2016, 13, 1650011.	1.3	15
93	Coupling between flexural modes in free vibration of single-walled carbon nanotubes. AIP Advances, 2015, 5, 127110.	1.3	15
94	Enhanced stiffness, strength and energy absorption for co-continuous composites with liquid filler. Composite Structures, 2015, 128, 274-283.	5.8	35
95	Thermal vibration of a circular single-layered graphene sheet with simply supported or clamped boundary. Journal of Sound and Vibration, 2015, 349, 206-215.	3.9	15
96	Thermal vibration of a single-walled carbon nanotube predicted by semiquantum molecular dynamics. Physical Chemistry Chemical Physics, 2015, 17, 5194-5201.	2.8	17
97	Multiband wave filtering and waveguiding in bio-inspired hierarchical composites. Extreme Mechanics Letters, 2015, 5, 18-24.	4.1	57
98	Vibration of Cantilevered Double-Walled Carbon Nanotubes Predicted by Timoshenko Beam Model and Molecular Dynamics. International Journal of Computational Methods, 2015, 12, 1540017.	1.3	11
99	Novel strategy for mechanically tunable and bioactive metal implants. Biomaterials, 2015, 37, 49-61.	11.4	51
100	ISOLATION OF SURFACE WAVE-INDUCED VIBRATION USING PERIODICALLY MODULATED PILES. International Journal of Applied Mechanics, 2014, 06, 1450042.	2.2	8
101	Thermal vibration of a rectangular single-layered graphene sheet with quantum effects. Journal of Applied Physics, 2014, 115, 233515.	2.5	19
102	Thermal vibration of single-walled carbon nanotubes with quantum effects. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2014, 470, 20140087.	2.1	20
103	Tunable band gaps in bio-inspired periodic composites with nacre-like microstructure. Journal of Applied Physics, 2014, 116, .	2.5	37
104	Periodic co-continuous acoustic metamaterials with overlapping locally resonant and Bragg band gaps. Applied Physics Letters, 2014, 105, .	3.3	88
105	Mechanics of network materials with responsive crosslinks. Comptes Rendus - Mecanique, 2014, 342, 264-272.	2.1	16
106	Coarse-grained potentials of single-walled carbon nanotubes. Journal of the Mechanics and Physics of Solids, 2014, 71, 197-218.	4.8	61
107	Thermally Tunable, Self-Healing Composites for Soft Robotic Applications. Macromolecular Materials and Engineering, 2014, 299, 1279-1284.	3.6	135
108	Enhanced mechanical properties of carbon nanotube networks by mobile and discrete binders. Carbon, 2013, 64, 237-244.	10.3	44

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109	A comparative study of two molecular mechanics models based on harmonic potentials. Journal of Applied Physics, 2013, 113, .	2.5	23
110	Acoustic band gaps of three-dimensional periodic polymer cellular solids with cubic symmetry. Journal of Applied Physics, 2013, 114, .	2.5	28
111	Thermal Vibrations of Single-Layered Graphene Sheets by Molecular Dynamics. Journal of Nanoscience and Nanotechnology, 2013, 13, 1059-1062.	0.9	10
112	BUCKLING PROPERTIES OF PRE-STRESSED MULTI-WALLED CARBON NANOTUBES. International Journal for Multiscale Computational Engineering, 2013, 11, 17-26.	1.2	3
113	Mechanically tunable phononic band gaps in three-dimensional periodic elastomeric structures. International Journal of Solids and Structures, 2012, 49, 2881-2885.	2.7	85
114	Tunable stimulus-responsive friction mechanisms of polyelectrolyte films and tube forests. Soft Matter, 2012, 8, 8642.	2.7	19
115	Strength, plasticity, interlayer interactions and phase transition of low-dimensional nanomaterials under multiple fields. Acta Mechanica Solida Sinica, 2012, 25, 221-243.	1.9	7
116	Thermal vibration of double-walled carbon nanotubes predicted via double-Euler-beam model and molecular dynamics. Acta Mechanica, 2012, 223, 2107-2115.	2.1	21
117	Periodic Bicontinuous Composites for High Specific Energy Absorption. Nano Letters, 2012, 12, 4392-4396.	9.1	95
118	Stochastically driven vibrations of single-layered graphene sheets. Science China: Physics, Mechanics and Astronomy, 2012, 55, 1103-1110.	5.1	18
119	Growth strain-induced wrinkled membrane morphology of white blood cells. Soft Matter, 2011, 7, 11319.	2.7	30
120	Elucidation of the Reinforcing Mechanism in Carbon Nanotube/Rubber Nanocomposites. ACS Nano, 2011, 5, 3858-3866.	14.6	117
121	FREE VIBRATION ANALYSIS OF DOUBLE-WALLED CARBON NANOTUBES USING THE SMOOTHED FINITE ELEMENT METHOD. International Journal of Computational Methods, 2011, 08, 879-890.	1.3	13
122	Direct Quantification of the Mechanical Anisotropy and Fracture of an Individual Exoskeleton Layer via Uniaxial Compression of Micropillars. Nano Letters, 2011, 11, 3868-3874.	9.1	49
123	Co-Continuous Composite Materials for Stiffness, Strength, and Energy Dissipation. Advanced Materials, 2011, 23, 1524-1529.	21.0	218
124	Super Deformability and Young's Modulus of GaAs Nanowires. Advanced Materials, 2011, 23, 1356-1360.	21.0	114
125	Geometrically Controlled Mechanically Responsive Polyelectrolyte Tube Arrays. Advanced Materials, 2011, 23, 4667-4673.	21.0	14
126	Mechanics of Indentation into Micro- and Nanoscale Forests of Tubes, Rods, or Pillars. Journal of Engineering Materials and Technology, Transactions of the ASME, 2011, 133, .	1.4	24



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127	Bioinspired Structural Material Exhibiting Post-Yield Lateral Expansion and Volumetric Energy Dissipation During Tension. Advanced Functional Materials, 2010, 20, 3025-3030.	14.9	46
128	Thermal vibration of carbon nanotubes predicted by beam models and molecular dynamics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2010, 466, 2325-2340.	2.1	34
129	Vibration of a Multilayered Graphene Sheet With Initial Stress. Journal of Nanotechnology in Engineering and Medicine, 2010, 1, .	0.8	11
130	Reversible high-pressure carbon nanotube vessel. Physical Review B, 2010, 81, .	3.2	7
131	Enhanced Energy Dissipation in Periodic Epoxy Nanoframes. Nano Letters, 2010, 10, 2592-2597.	9.1	68
132	Anisotropic design of a multilayered biological exoskeleton. Journal of Materials Research, 2009, 24, 3477-3494.	2.6	48
133	Plastic Dissipation Mechanisms in Periodic Microframe-Structured Polymers. Advanced Functional Materials, 2009, 19, 1343-1350.	14.9	36
134	Flexural wave dispersion in multi-walled carbon nanotubes conveying fluids. Acta Mechanica Sinica, 2009, 22, 623-629.	1.9	27
135	Wrinkled surface topographies of electrospun polymer fibers. Applied Physics Letters, 2009, 94, .	3.3	87
136	Enhanced Mechanical Properties of Prestressed Multi-Walled Carbon Nanotubes. Small, 2008, 4, 733-737.	10.0	30
137	Using Model of Strain Gradient Membrane Shell to Characterize Longitudinal Wave Dispersion in Multi-Walled Carbon Nanotubes. Journal of Computational and Theoretical Nanoscience, 2008, 5, 1980-1988.	0.4	4
138	Group velocity of wave propagation in carbon nanotubes. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 1423-1438.	2.1	39
139	Validation of the non-local elastic shell model for studying longitudinal waves in single-walled carbon nanotubes. Nanotechnology, 2006, 17, 1408-1415.	2.6	78
140	SIZE EFFECTS ON EFFECTIVE YOUNG'S MODULUS OF NANO CRYSTAL COPPER WIRES. International Journal of Computational Methods, 2005, 02, 315-326.	1.3	4
141	Dynamic Buckling of a Nano-Wire of Crystal Copper. International Journal of Nonlinear Sciences and Numerical Simulation, 2005, 6, .	1.0	0
142	Size Dependence of the Thin-Shell Model for Carbon Nanotubes. Physical Review Letters, 2005, 95, 105501.	7.8	157
143	Flexural wave propagation in single-walled carbon nanotubes. Physical Review B, 2005, 71, .	3.2	453
144	Molecular Dynamics and Quantum Mechanics Investigation on Mechanic-electric Behaviors of Nanotubes. International Journal of Nonlinear Sciences and Numerical Simulation, 2002, 3, .	1.0	3

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145	Wave Propagation in Carbon Nanotubes. , 0, , .		1
146	Effects of Van Der Waals Forces on the Vibration of Stacked Multilayered Graphene/Black Phosphorus Heterostructures. International Journal of Structural Stability and Dynamics, 0, , 2150115.	2.4	0
147	Free Vibration of Elastically Constrained Single-Layered $\text{MoS}_2$ . Acta Mechanica Sinica, 0, , 1.	1.9	2