Maosen Cao

List of Publications by Year
in descending order

125	3,187	201385	174990
papers	citations	27 h-index	52 g-index

125	125	125	2354
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fractal Dimension Analysis of Higher-Order Mode Shapes for Damage Identification of Beam Structures. Mathematical Problems in Engineering, 2012, 2012, 1-16.	0.6	715
2	Structural damage detection using finite element model updating with evolutionary algorithms: a survey. Neural Computing and Applications, 2018, 30, 389-411.	3.2	141
3	Identification of multiple damage in beams based on robust curvature mode shapes. Mechanical Systems and Signal Processing, 2014, 46, 468-480.	4.4	133
4	Damage identification for beams in noisy conditions based on Teager energy operator-wavelet transform modal curvature. Journal of Sound and Vibration, 2014, 333, 1543-1553.	2.1	108
5	Structural damage identification using damping: a compendium of uses and features. Smart Materials and Structures, 2017, 26, 043001.	1.8	104
6	A novel method for single and multiple damage detection in beams using relative natural frequency changes. Mechanical Systems and Signal Processing, 2019, 132, 335-352.	4.4	100
7	A CFD analysis of the dynamics of a direct-operated safety relief valve mounted on a pressure vessel. Energy Conversion and Management, 2014, 81, 407-419.	4.4	98
8	Two-dimensional curvature mode shape method based on wavelets and Teager energy for damage detection in plates. Journal of Sound and Vibration, 2015, 347, 266-278.	2.1	71
9	Waveform fractal dimension for mode shape-based damage identification of beam-type structures. International Journal of Solids and Structures, 2008, 45, 5946-5961.	1.3	70
10	Novel Laplacian scheme and multiresolution modal curvatures for structural damage identification. Mechanical Systems and Signal Processing, 2009, 23, 1223-1242.	4.4	67
11	Integrated wavelet transform and its application to vibration mode shapes for the damage detection of beam-type structures. Smart Materials and Structures, 2008, 17, 055014.	1.8	54
12	A multi-scale pseudo-force model in wavelet domain for identification of damage in structural components. Mechanical Systems and Signal Processing, 2012, 28, 638-659.	4.4	54
13	Neural network ensemble-based parameter sensitivity analysis in civil engineering systems. Neural Computing and Applications, 2017, 28, 1583-1590.	3.2	53
14	A concept of complex-wavelet modal curvature for detecting multiple cracks in beams under noisy conditions. Mechanical Systems and Signal Processing, 2016, 76-77, 555-575.	4.4	49
15	Sensitivity of fundamental mode shape and static deflection for damage identification in cantilever beams. Mechanical Systems and Signal Processing, 2011, 25, 630-643.	4.4	47
16	Nondestructive Assessment of Reinforced Concrete Structures Based on Fractal Damage Characteristic Factors. Journal of Engineering Mechanics - ASCE, 2006, 132, 924-931.	1.6	43
17	Damage detection in plates using two-dimensional directional Gaussian wavelets and laser scanned operating deflection shapes. Structural Health Monitoring, 2013, 12, 457-468.	4.3	43
18	Multiple damage detection in laminated composite beams by data fusion of Teager energy operator-wavelet transform mode shapes. Composite Structures, 2020, 235, 111798.	3.1	42

#	Article	IF	Citations
19	A Data-Driven Damage Identification Framework Based on Transmissibility Function Datasets and One-Dimensional Convolutional Neural Networks: Verification on a Structural Health Monitoring Benchmark Structure. Sensors, 2020, 20, 1059.	2.1	41
20	Neural network committee-based sensitivity analysis strategy for geotechnical engineering problems. Neural Computing and Applications, 2008, 17, 509-519.	3.2	36
21	3D crack propagation by the numerical manifold method. Computers and Structures, 2018, 194, 116-129.	2.4	35
22	Non-uniform crack identification in plate-like structures using wavelet 2D modal curvature under noisy conditions. Mechanical Systems and Signal Processing, 2019, 126, 469-489.	4.4	35
23	Permutation entropy-based 2D feature extraction for bearing fault diagnosis. Nonlinear Dynamics, 2020, 102, 1717-1731.	2.7	34
24	Crack detection in beams in noisy conditions using scale fractal dimension analysis of mode shapes. Smart Materials and Structures, 2014, 23, 065014.	1.8	32
25	Recent advances in damage detection of wind turbine blades: A state-of-the-art review. Renewable and Sustainable Energy Reviews, 2022, 167, 112723.	8.2	32
26	Multiscale shear-strain gradient for detecting delamination in composite laminates. Applied Physics Letters, 2013, 103, .	1.5	29
27	Damage Identification in Bridges by Processing Dynamic Responses to Moving Loads: Features and Evaluation. Sensors, 2019, 19, 463.	2.1	29
28	Nonlinear pseudo-force in a breathing crack to generate harmonics. Journal of Sound and Vibration, 2021, 492, 115734.	2.1	28
29	On the moisture migration of concrete subject to high temperature with different heating rates. Cement and Concrete Research, 2021, 146, 106492.	4.6	27
30	Fractal mechanism for characterizing singularity of mode shape for damage detection. Applied Physics Letters, 2013, 103, .	1.5	26
31	The combined social engineering particle swarm optimization for real-world engineering problems: A case study of model-based structural health monitoring. Applied Soft Computing Journal, 2022, 123, 108919.	4.1	25
32	A Critical Review of Nonlinear Damping Identification in Structural Dynamics: Methods, Applications, and Challenges. Sensors, 2020, 20, 7303.	2.1	24
33	Improved hybrid wavelet neural network methodology for time-varying behavior prediction of engineering structures. Neural Computing and Applications, 2009, 18, 821-832.	3.2	23
34	A Hybrid Particle Swarm Optimization (PSO)-Simplex Algorithm for Damage Identification of Delaminated Beams. Mathematical Problems in Engineering, 2012, 2012, 1-11.	0.6	23
35	Advanced Methods in Neural Networks-Based Sensitivity Analysis with their Applications in Civil Engineering. , 0, , .		23
36	Damage identification in three-dimensional structures using single-objective evolutionary algorithms and finite element model updating: evaluation and comparison. Engineering Optimization, 2018, 50, 1695-1714.	1.5	23

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37	Identification of instantaneous tension of bridge cables from dynamic responses: STRICT algorithm and applications. Mechanical Systems and Signal Processing, 2020, 142, 106729.	4.4	23
38	Guided wavefield curvature imaging of invisible damage in composite structures. Mechanical Systems and Signal Processing, 2021, 150, 107240.	4.4	23
39	Structural Damage Detection Using Slopes of Longitudinal Vibration Shapes. Journal of Vibration and Acoustics, Transactions of the ASME, 2016, 138, .	1.0	21
40	Delamination monitoring in CFRP laminated plates under noisy conditions using complex-wavelet 2D curvature mode shapes. Smart Materials and Structures, 2017, 26, 104008.	1.8	21
41	A multi-scale pseudo-force model for characterization of damage in beam components with unknown material and structural parameters. Journal of Sound and Vibration, 2013, 332, 5566-5583.	2.1	20
42	Delamination-induced relative natural frequency change curve and its use for delamination localization in laminated composite beams. Composite Structures, 2019, 230, 111501.	3.1	20
43	Neural network ensemble-based sensitivity analysis in structural engineering: Comparison of selected methods and the influence of statistical correlation. Computers and Structures, 2021, 242, 106376.	2.4	20
44	A new self-adaptive quasi-oppositional stochastic fractal search for the inverse problem of structural damage assessment. AEJ - Alexandria Engineering Journal, 2022, 61, 1922-1936.	3.4	20
45	Damage localization in irregular shape structures using intelligent FE model updating approach with a new hybrid objective function and social swarm algorithm. Applied Soft Computing Journal, 2019, 83, 105604.	4.1	19
46	A novel damage characterization approach for laminated composites in the absence of material and structural information. Mechanical Systems and Signal Processing, 2020, 143, 106831.	4.4	19
47	A noise-robust damage indicator for characterizing singularity of mode shapes for incipient delamination identification in CFRP laminates. Mechanical Systems and Signal Processing, 2019, 121, 183-200.	4.4	18
48	Use of Bispectrum Analysis to Inspect the Non-Linear Dynamic Characteristics of Beam-Type Structures Containing a Breathing Crack. Sensors, 2021, 21, 1177.	2.1	17
49	A directional continuous wavelet transform of mode shape for line-type damage detection in plate-type structures. Mechanical Systems and Signal Processing, 2022, 167, 108510.	4.4	16
50	Singular energy component for identification of initial delamination in CFRP laminates through piezoelectric actuation and non-contact measurement. Smart Materials and Structures, 2020, 29, 045001.	1.8	15
51	On the waveletâ€“fractal nonlinear damage diagnosis of mechanical systems. Smart Materials and Structures, 2009, 18, 085022.	1.8	14
52	Wavelet Packet Singular Entropy-Based Method for Damage Identification in Curved Continuous Girder Bridges under Seismic Excitations. Sensors, 2019, 19, 4272.	2.1	14
53	Damage Quantification with Embedded Piezoelectric Aggregates Based on Wavelet Packet Energy Analysis. Sensors, 2019, 19, 425.	2.1	14
54	A thermal cracking pattern-based multiscale homogenization method for effective thermal conductivity of steel fiber reinforced concrete after high temperature. International Journal of Heat and Mass Transfer, 2021, 180, 121732.	2.5	14

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55	Delamination imaging in laminated composite plates using 2D wavelet analysis of guided wavefields. Smart Materials and Structures, 2021, 30, 015001.	1.8	14
56	Numerical Evaluation of High-Order Modes for Stepped Beam. Journal of Vibration and Acoustics, Transactions of the ASME, 2014, 136, .	1.0	13
57	Vibrational damage detection using fractal surface singularities with noncontact laser measurement. JVC/Journal of Vibration and Control, 2016, 22, 2569-2581.	1.5	13
58	Automatic uncoupling of massive dynamic strains induced by vehicle- and temperature-loads for monitoring of operating bridges. Mechanical Systems and Signal Processing, 2022, 166, 108332.	4.4	13
59	A nonlinearity-sensitive approach for detection of â€œbreathingâ€•cracks relying on energy modulation effect. Journal of Sound and Vibration, 2022, 524, 116754.	2.1	13
60	Crack Identification in CFRP Laminated Beams Using Multi-Resolution Modal Teagerâ€“Kaiser Energy under Noisy Environments. Materials, 2017, 10, 656.	1.3	12
61	Damage Diagnosis in 3D Structures Using a Novel Hybrid Multiobjective Optimization and FE Model Updating Framework. Complexity, 2018, 2018, 1-13.	0.9	12
62	Permutation Entropy Based on Non-Uniform Embedding. Entropy, 2018, 20, 612.	1.1	12
63	An Enhanced Time-Reversal Imaging Algorithm-Driven Sparse Linear Array for Progressive and Quantitative Monitoring of Cracks. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 3433-3445.	2.4	12
64	Numerical study on crack thermal resistance effect on thermo-mechanical coupled behavior of concrete structure at room temperature. International Journal of Solids and Structures, 2020, 182-183, 141-155.	1.3	12
65	Reconstruction of full-field complex deformed shapes of thin-walled special-section beam structures based on in situ strain measurement. Advances in Structural Engineering, 2020, 23, 3335-3350.	1.2	12
66	Damage characterization in plates using singularity of scale mode shapes. Applied Physics Letters, 2015, 106, 121906.	1.5	9
67	Identification of multiple cracks in noisy conditions using scale-correlation-based multiscale product of SWPT with laser vibration measurement. Mechanical Systems and Signal Processing, 2020, 145, 106889.	4.4	9
68	Enhanced Intelligent Identification of Concrete Cracks Using Multi-Layered Image Preprocessing-Aided Convolutional Neural Networks. Sensors, 2020, 20, 2021.	2.1	9
69	Mechanical Responses of Steel Fiberâ€“Reinforced Concrete after Exposure to High Temperature: Experiments and Mesoscale Discrete Modeling. Journal of Engineering Mechanics - ASCE, 2021, 147, .	1.6	9
70	A Dynamic Equilibriumâ€“Based Damage Identification Method Free of Structural Baseline Parameters: Experimental Validation in a Two-Dimensional Plane Structure. Journal of Aerospace Engineering, 2018, 31, .	0.8	8
71	Nonlinear pseudo-force in â€œbreathingâ€•delamination to generate harmonics: A mechanism and application study. International Journal of Mechanical Sciences, 2021, 192, 106124.	3.6	8
72	A novel structural damage identification approach using damage-induced perturbation in longitudinal vibration. Journal of Sound and Vibration, 2021, 496, 115932.	2.1	8

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73	An Energy-Based Safety Evaluation Index of Blast Vibration. Shock and Vibration, 2015, 2015, 1-9.	0.3	7
74	Digital Twin-Driven Intelligent Construction: Features and Trends. SDHM Structural Durability and Health Monitoring, 2021, 15, 183-206.	0.6	7
75	Structural Damage Identification Based on Integrated Utilization of Inverse Finite Element Method and Pseudo-Excitation Approach. Sensors, 2021, 21, 606.	2.1	7
76	A novel embedding method for characterization of low-dimensional nonlinear dynamical systems. Nonlinear Dynamics, 2021, 104, 125-148.	2.7	7
77	Wavelet-aided guided wavefield imaging of delaminations in laminated composite plates. Smart Materials and Structures, 2020, 29, 105029.	1.8	7
78	Synchronization Measure Based on a Geometric Approach to Attractor Embedding Using Finite Observation Windows. Complexity, 2018, 2018, 1-16.	0.9	6
79	A comparison of sensitivity analyses for selected prestressed concrete structures. Structural Concrete, 2019, 20, 38-51.	1.5	6
80	A multiscale reconstructed attractors-based method for identification of structural damage under impact excitations. Journal of Sound and Vibration, 2021, 495, 115925.	2.1	6
81	A novel damage index for damage detection and localization of plate-type structures using twist derivatives of laser-measured mode shapes. Journal of Sound and Vibration, 2020, 481, 115448.	2.1	6
82	Numerical Investigation of a Liquid-Gas Ejector Used for Shipping Ballast Water Treatment. Mathematical Problems in Engineering, 2014, 2014, 1-7.	0.6	5
83	Effects of Contraction Joints on Vibrational Characteristics of Arch Dams: Experimental Study. Shock and Vibration, 2015, 2015, 1-7.	0.3	4
84	Homoclinic and heteroclinic solutions to a hepatitis C evolution model. Open Mathematics, 2018, 16, 1537-1555.	0.5	4
85	A Comparative Study on Structural Damage Detection Using Derivatives of Laser-Measured Flexural and Longitudinal Vibration Shapes. Journal of Nondestructive Evaluation, 2020, 39, 1.	1.1	4
86	Preisach Elasto-Plastic Model for Mild Steel Hysteretic Behavior-Experimental and Theoretical Considerations. Sensors, 2021, 21, 3546.	2.1	4
87	Bispectral dynamics features for characterizing structural fatigue damage. Journal of Vibroengineering, 2018, 20, 2073-2084.	0.5	4
88	Nonlinear oscillations of cracked large-amplitude vibrating plates subjected to harmonic loads. Nonlinear Dynamics, 2022, 107, 247-267.	2.7	4
89	Seismic Damage Identification Method for Curved Beam Bridges Based on Wavelet Packet Norm Entropy. Sensors, 2022, 22, 239.	2.1	4
90	Effective Identification and Localization of Single and Multiple Breathing Cracks in Beams under Gaussian Excitation Using Time-Domain Analysis. Mathematics, 2022, 10, 1853.	1.1	4

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91	Damage detection of laminated composite beams with progressive wavelet transforms. Proceedings of SPIE, 2008, , .	0.8	3
92	Vibration-Based Damage Identification and Condition Monitoring in Mechanical Structures and Components. Shock and Vibration, 2018, 2018, 1-2.	0.3	3
93	Identification of Multiple Cracks in Composite Laminated Beams Using Perturbation to Dynamic Equilibrium. Sensors, 2021, 21, 6171.	2.1	3
94	Identification of Damage on Sluice Hoist Beams Using Local Mode Evoked by Swept Frequency Excitation. Sensors, 2021, 21, 6357.	2.1	3
95	A two-step method for additional mass identification in beam structures by measurements of natural frequencies and guided waves. Measurement: Journal of the International Measurement Confederation, 2021, 186, 110049.	2.5	3
96	Detection of debonding in steel-reinforced bridges using wavelet curvature features of laser-measured operating deflection shapes. Journal of Vibroengineering, 2017, 19, 1845-1853.	0.5	3
97	Investigation of Time-Varying Cable Tension of Bridges Using Time-Frequency Reassignment Techniques Based on Structural Health Monitoring Data. Applied Sciences (Switzerland), 2022, 12, 4008.	1.3	3
98	Instantaneous identification of tension in bridge cables using synchrosqueezing wave-packet transform of acceleration responses. Structure and Infrastructure Engineering, 2024, 20, 199-214.	2.0	3
99	Identification of Incipient Damage Using High-Frequency Vibrational Responses. Shock and Vibration, 2015, 2015, 1-1.	0.3	2
100	Control of a dendritic neuron driven by a phase-independent stimulation. Chaos, Solitons and Fractals, 2016, 85, 77-83.	2.5	2
101	Evaluation of high-order modes and damage effects of multi-crack beams using enhanced spectral element method. JVC/Journal of Vibration and Control, 0, , 107754631774750.	1.5	2
102	Vibration based methods for damage detection of plates. AIP Conference Proceedings, 2018, , .	0.3	2
103	Novel Techniques for Damage Detection Based on Mode Shape Analysis. Computational and Experimental Methods in Structures, 2018, , 173-196.	0.2	2
104	Time-averaged computer generated holography for the estimation of torsional amplitudes of oscillating microdevices. Optics Communications, 2019, 439, 260-269.	1.0	2
105	A segmenting scheme for evaluating exact high-order modes of uniform Timoshenko beams. Applied Acoustics, 2019, 150, 76-80.	1.7	2
106	Imaging Delamination in Composite Laminates Using Perturbation to Steady-state Wavefields. Smart Materials and Structures, 0, , .	1.8	2
107	Damage Identification in Cantilever Beams Based on High-Order Frequency Response Function with Improved Sensitivity. Journal of Testing and Evaluation, 2020, 48, 4040-4052.	0.4	2
108	Combined vibration and guided wave-based approach for composite panels health assessment. Proceedings of SPIE, 2017, , .	0.8	1

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109	Vibration Based Damage Detection of Rotating Beams. MATEC Web of Conferences, 2018, 148, 14008.	0.1	1
110	Fault Identification, Diagnosis, and Prognostics Based on Complex Signal Analysis. Complexity, 2018, 2018, 1-2.	0.9	1
111	Predicting the Ultimate Bearing Capacity of Bolts with an Optimized Function Model. Advances in Civil Engineering, 2020, 2020, 1-9.	0.4	1
112	Nonlinear crack assessment method in beams based on bispectrum-normal cloud model. Vibroengineering PROCEDIA, 2019, 28, 30-34.	0.3	1
113	Vibration-based damage growth monitoring in beam-like structures. Vibroengineering PROCEDIA, 2019, 28, 12-17.	0.3	1
114	Novel approximate waveform capacity dimension for damage identification of beam-type structures. , 2008, , .		0
115	Factor Sensitivity Analysis for Multivariable Systems Using Bayesian Neural Networks. , 2009, , .		0
116	Detection of damage in beams using Teager energy operator. Proceedings of SPIE, 2013, , .	0.8	0
117	Multiscale characterization of damage in plates based on 2D Mexican wavelet. Proceedings of SPIE, 2013, , .	0.8	0
118	Robust modal curvature features for identifying multiple damage in beams. , 2014, , .		0
119	F-Operators for the Construction of Closed Form Solutions to Linear Homogenous PDEs with Variable Coefficients. Mathematics, 2021, 9, 918.	1.1	0
120	A damage index for identifying incipient delamination in CFRP laminated plates relying on 2D multi-resolution modal Teager-Kaiser energy. , 2018, , .		0
121	Damage detection in sluice hoist beams subject to excitation at resonance frequency band based on local primary frequency. Vibroengineering PROCEDIA, 2019, 28, 40-45.	0.3	0
122	Concentrated mass localization in beam-like structures using natural frequencies. , 2020, , .		0
123	Frequency Contour-Strip Method for Characterization of Damage in Structures under Noisy Conditions. Applied Sciences (Switzerland), 2021, 11, 11479.	1.3	0
124	Shear Strain Singularity-Inspired Identification of Initial Delamination in CFRP Laminates: Multiscale Modulation Filter for Extraction of Damage Features. Polymers, 2022, 14, 2305.	2.0	0
125	Service performance evaluation of long-span cable-stayed bridge based on health monitoring data. Journal of Vibroengineering, 2022, 24, 651-665.	0.5	0