Xinlin Qing

List of Publications by Year
in descending order

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112	2,980	186265 28	189892 50
papers	citations	h-index	g-index

112	112	112	1993
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Piezoelectric Transducer-Based Structural Health Monitoring for Aircraft Applications. Sensors, 2019, 19, 545.	3.8	285
2	Acousto-ultrasonics-based fatigue damage characterization: Linear versus nonlinear signal features. Mechanical Systems and Signal Processing, 2014, 45, 225-239.	8.0	136
3	Modeling nonlinearities of ultrasonic waves for fatigue damage characterization: Theory, simulation, and experimental validation. Ultrasonics, 2014, 54, 770-778.	3.9	132
4	Built-in Sensor Network for Structural Health Monitoring of Composite Structure. Journal of Intelligent Material Systems and Structures, 2007, 18, 39-49.	2.5	108
5	A quantitative multidamage monitoring method for large-scale complex composite. Structural Health Monitoring, 2013, 12, 183-196.	7.5	102
6	<title>SMART Layer and SMART Suitcase for structural health monitoring applications</title>. , 2001, , .		96
7	A flexible capacitive sensor based on the electrospun PVDF nanofiber membrane with carbon nanotubes. Sensors and Actuators A: Physical, 2019, 299, 111579.	4.1	94
8	Locating fatigue damage using temporal signal features of nonlinear Lamb waves. Mechanical Systems and Signal Processing, 2015, 60-61, 182-197.	8.0	93
9	Principle and Topology Synthesis of Integrated Single-Input Dual-Output and Dual-Input Single-Output DCâ€“DC Converters. IEEE Transactions on Industrial Electronics, 2018, 65, 3815-3825.	7.9	89
10	Effect of adhesive on the performance of piezoelectric elements used to monitor structural health. International Journal of Adhesion and Adhesives, 2006, 26, 622-628.	2.9	83
11	An Active Diagnostic System for Structural Health Monitoring of Rocket Engines. Journal of Intelligent Material Systems and Structures, 2006, 17, 619-628.	2.5	78
12	Principle and Topology Derivation of Single-Inductor Multi-Input Multi-Output DCâ€“DC Converters. IEEE Transactions on Industrial Electronics, 2021, 68, 25-36.	7.9	68
13	A flexible ionic liquid-polyurethane sponge capacitive pressure sensor. Sensors and Actuators A: Physical, 2019, 285, 67-72.	4.1	66
14	A hybrid piezoelectric/fiber optic diagnostic system for structural health monitoring. Smart Materials and Structures, 2005, 14, S98-S103.	3.5	64
15	Damage Detection for Composite Laminate Plates with A Distributed Hybrid PZT/FBG Sensor Network. Journal of Intelligent Material Systems and Structures, 2009, 20, 1069-1077.	2.5	60
16	The Response of Composite Joints with Bolt-Clamping Loads, Part II: Model Verification. Journal of Composite Materials, 2002, 36, 69-92.	2.4	58
17	Advances in the development of built-in diagnostic system for filament wound composite structures. Composites Science and Technology, 2006, 66, 1694-1702.	7.8	55
18	The Response of Composite Joints with Bolt-Clamping Loads, Part I: Model Development. Journal of Composite Materials, 2002, 36, 47-67.	2.4	53

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19	A real-time active smart patch system for monitoring the integrity of bonded repair on an aircraft structure. Smart Materials and Structures, 2006, 15, N66-N73.	3.5	51
20	Programmable Topology Derivation and Analysis of Integrated Three-Port DC-DC Converters with Reduced Switches for Low-Cost Applications. IEEE Transactions on Industrial Electronics, 2019, , 1-1.	7.9	51
21	Development of a real-time active pipeline integrity detection system. Smart Materials and Structures, 2009, 18, 115010.	3.5	50
22	Stress-strain response of a cast 319-T6 aluminum under thermomechanical loading. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2000, 31, 139-151.	2.2	45
23	An adaptive filterâ€“based temperature compensation technique for structural health monitoring. Journal of Intelligent Material Systems and Structures, 2014, 25, 2187-2198.	2.5	43
24	A Flexible Capacitive Pressure Sensor Based on Ionic Liquid. Sensors, 2018, 18, 2395.	3.8	37
25	Synthesis of Integrated Multiport DCâ€“DC Converters With Reduced Switches. IEEE Transactions on Industrial Electronics, 2020, 67, 4536-4546.	7.9	36
26	Electromechanical impedance-based damage localization with novel signatures extraction methodology and modified probability-weighted algorithm. Mechanical Systems and Signal Processing, 2021, 146, 107001.	8.0	36
27	Topology-Reconfigurable Fault-Tolerant LLC Converter With High Reliability and Low Cost for More Electric Aircraft. IEEE Transactions on Power Electronics, 2019, 34, 2479-2493.	7.9	34
28	Characteristics Study of In-Situ Capacitive Sensor for Monitoring Lubrication Oil Debris. Sensors, 2017, 17, 2851.	3.8	32
29	Modified electromechanical impedance-based disbond monitoring for honeycomb sandwich composite structure. Composite Structures, 2019, 217, 175-185.	5.8	30
30	A novel eddy current array sensing film for quantitatively monitoring hole-edge crack growth in bolted joints. Smart Materials and Structures, 2019, 28, 015018.	3.5	30
31	A real-time electromechanical impedance-based active monitoring for composite patch bonded repair structure. Composite Structures, 2019, 212, 513-523.	5.8	30
32	Hidden corrosion detection using laser ultrasonic guided waves with multi-frequency local wavenumber estimation. Ultrasonics, 2020, 108, 106182.	3.9	30
33	Machine Learning Based Quantitative Damage Monitoring of Composite Structure. International Journal of Smart and Nano Materials, 2022, 13, 167-202.	4.2	27
34	Graph Theory-Based Programmable Topology Derivation of Multiport DCâ€“DC Converters With Reduced Switches. IEEE Transactions on Industrial Electronics, 2022, 69, 5745-5755.	7.9	24
35	A new micro-tensile system for measuring the mechanical properties of low-dimensional materialsâ€”Fibers and films. Polymer Testing, 2007, 26, 513-518.	4.8	23
36	Active Monitoring of Fatigue Crack in the Weld Zone of Bogie Frames Using Ultrasonic Guided Waves. Sensors, 2019, 19, 3372.	3.8	23

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37	Identification and Compensation Technique of Non-Uniform Temperature Field for Lamb Wave-and Multiple Sensors-Based Damage Detection. Sensors, 2019, 19, 2930.	3.8	22
38	Characterization of Microstructural Evolution by Ultrasonic Nonlinear Parameters Adjusted by Attenuation Factor. Metals, 2019, 9, 271.	2.3	22
39	Multi-frequency localized wave energy for delamination identification using laser ultrasonic guided wave. Ultrasonics, 2021, 116, 106486.	3.9	22
40	Cure monitoring and damage identification of CFRP using embedded piezoelectric sensors network. Ultrasonics, 2021, 115, 106470.	3.9	21
41	A two-dimensional eddy current arrayâ€“based sensing film for estimating failure modes and tracking damage growth of bolted joints. Structural Health Monitoring, 2021, 20, 877-893.	7.5	19
42	Quantitative defect inspection in the curved composite structure using the modified probabilistic tomography algorithm and fusion of damage index. Ultrasonics, 2021, 113, 106358.	3.9	19
43	In-situ capacitive sensor for monitoring debris of lubricant oil. Industrial Lubrication and Tribology, 2018, 70, 1310-1319.	1.3	18
44	In-situ monitoring of liquid composite molding process using piezoelectric sensor network. Structural Health Monitoring, 2020, , 147592172095808.	7.5	18
45	Practical issues in real-world implementation of structural health monitoring systems. , 2005, 5762, 196.		17
46	Monitoring of Fatigue Crack Propagation by Damage Index of Ultrasonic Guided Waves Calculated by Various Acoustic Features. Applied Sciences (Switzerland), 2019, 9, 4254.	2.5	16
47	Weighted adaptive Kalman filtering-based diverse information fusion for hole edge crack monitoring. Mechanical Systems and Signal Processing, 2022, 167, 108534.	8.0	16
48	K-BP neural network-based strain field inversion and load identification for CFRP. Measurement: Journal of the International Measurement Confederation, 2022, 187, 110227.	5.0	15
49	A New In Situ Coaxial Capacitive Sensor Network for Debris Monitoring of Lubricating Oil. Sensors, 2022, 22, 1777.	3.8	15
50	A two-step impact localization method for composite structures with a parameterized laminate model. Composite Structures, 2018, 192, 500-506.	5.8	14
51	Quantitative imaging of surface cracks in polymer bonded explosives by surface wave tomographic approach. Polymer Testing, 2019, 74, 63-71.	4.8	14
52	Propagation characteristics of ultrasonic weld-guided waves in Friction stir welding joint of same material. Ultrasonics, 2020, 102, 106058.	3.9	14
53	A Distributed Robust Power System State Estimation Approach Using t-Distribution Noise Model. IEEE Systems Journal, 2021, 15, 1066-1076.	4.6	14
54	Monitoring of resin flow front and degree of cure in vacuumâ€assisted resin infusion process using multifunctional piezoelectric sensor network. Polymer Composites, 2021, 42, 113-125.	4.6	14

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55	High Strain Survivability of Piezoceramics by Optimal Bonding Adhesive Design. Sensors, 2018, 18, 2554.	3.8	13
56	A novel electromechanical impedance model for surface-bonded circular piezoelectric transducer. Smart Materials and Structures, 2019, 28, 105052.	3.5	13
57	Computer-Aided Identification of Equivalent Power Electronics Converters. IEEE Transactions on Power Electronics, 2019, 34, 9374-9378.	7.9	13
58	Monitoring the integrity of filament-wound structures using built-in sensor networks. , 2003, , .		12
59	On-Site Health Monitoring of Composite Bolted Joint Using Built-In Distributed Eddy Current Sensor Network. Materials, 2019, 12, 2785.	2.9	12
60	Baseline-free damage imaging for metal and composite plate-type structures based on similar paths. International Journal of Distributed Sensor Networks, 2019, 15, 155014771984305.	2.2	12
61	An Improved Matching Pursuit-Based Temperature and Load Compensation Method for Ultrasonic Guided Wave Signals. IEEE Access, 2020, 8, 67530-67541.	4.2	12
62	A new interleaving eddy current array-based sensing film for fatigue crack quantification of bolted joints. Journal of Intelligent Material Systems and Structures, 2021, 32, 1867-1877.	2.5	11
63	Computer-Aided Systematic Topology Derivation of Single-Inductor Multi-Input Multi-Output Converters From Working Principle. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 2637-2649.	5.4	11
64	Magnetic Coupling Branch Based Dual-Input/Output DCâ€“DC Converters With Improved Cross-Regulation and Soft-Switching Operation. IEEE Transactions on Industrial Electronics, 2020, 67, 7167-7178.	7.9	9
65	A New Laser Ultrasonic Inspection Method for the Detection of Multiple Delamination Defects. Materials, 2021, 14, 2424.	2.9	9
66	A distributed robust state estimation algorithm for power systems considering maximum exponential absolute value. International Journal of Electrical Power and Energy Systems, 2021, 133, 107267.	5.5	9
67	Electrospun Ionic Nanofiber Membrane-Based Fast and Highly Sensitive Capacitive Pressure Sensor. IEEE Access, 2019, 7, 139984-139993.	4.2	8
68	Life-cycle health monitoring of composite structures using piezoelectric sensor network. Smart Materials and Structures, 2022, 31, 015033.	3.5	8
69	A Flexible Pressure Sensor Based on Composite Piezoresistive Layer. IEEE Sensors Journal, 2022, 22, 405-411.	4.7	8
70	Lamb wave-based damage localization and quantification algorithms for CFRP composite structures. Composite Structures, 2022, 295, 115849.	5.8	8
71	<title>Advances in utilization of structurally integrated sensor networks for health monitoring in commercial applications</title>. , 2002, , .		7
72	Monitoring of Fiber-Reinforced Composite Single-Lap Joint with Electromechanical Impedance of Piezoelectric Transducer. Materials, 2019, 12, 3241.	2.9	7

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73	Prognosis of fatigue cracks in an aircraft wing using an adaptive tunable network and guided wave based structural health monitoring. Smart Materials and Structures, 2021, 30, 105025.	3.5	7
74	Leaky Lamb waveâ€“based resin impregnation monitoring with noninvasive and integrated piezoelectric sensor network. Measurement: Journal of the International Measurement Confederation, 2022, 189, 110480.	5.0	7
75	Optical fringe multiplication in moirÃ© interferometry. Applied Optics, 1995, 34, 7291.	2.1	6
76	An Enhanced Fault-Tolerant DC-DC Converter with Redundant Circuit and Topology Reconstruction. , 2018, , .		6
77	Crack Monitoring for Hot-Spot Areas Under Time-Varying Load Condition Based on FCM Clustering Algorithm. IEEE Access, 2019, 7, 118850-118856.	4.2	6
78	Assessment of low-velocity impact damage in composites by the measure of second-harmonic guided waves with the phase-reversal approach. Science Progress, 2020, 103, 003685041988107.	1.9	6
79	An Eddy Current-Based Structural Health Monitoring Technique for Tracking Bolt Cracking. Sensors, 2020, 20, 6843.	3.8	6
80	A flexible microfluidic sensor based on main-channel and branch-channels for aerodynamic pressure measurement. Sensors and Actuators A: Physical, 2021, 319, 112546.	4.1	6
81	On-site monitoring of bearing failure in composite bolted joints using built-in eddy current sensing film. Journal of Composite Materials, 2021, 55, 1893-1905.	2.4	6
82	Real-Time Life-Cycle Monitoring of Composite Structures Using Piezoelectric-Fiber Hybrid Sensor Network. Sensors, 2021, 21, 8213.	3.8	6
83	The numerical and experimental investigations for the curing monitoring of woven composites with Lamb waves. Measurement: Journal of the International Measurement Confederation, 2022, 200, 111604.	5.0	6
84	Health Monitoring of Metallic Structures with Electromechanical Impedance and Piezoelectric Sensors. Nanomaterials, 2019, 9, 1268.	4.1	5
85	Identification and imaging of multi-defects on a complicated composite structure by ultrasonic guided wave. Polymer Testing, 2022, 106, 107466.	4.8	5
86	Lamb Wave-Based Damage Localization and Quantification in Composites Using Probabilistic Imaging Algorithm and Statistical Method. Sensors, 2022, 22, 4810.	3.8	5
87	An experimental investigation of carbon-fiber/aluminium laminates with double-edge cracks. Composites Science and Technology, 1995, 53, 393-397.	7.8	4
88	Reusable piezoelectric transducer for structural health monitoring using both Lamb wave and electromechanical impedance modes. Journal of Intelligent Material Systems and Structures, 2020, 31, 1898-1909.	2.5	4
89	Embedded FBG Sensor Based Impact Identification of CFRP Using Ensemble Learning. Sensors, 2021, 21, 1452.	3.8	4
90	Identification of multi-defects in an arched composite structure by the corrected probabilistic diagnostic imaging with the fused damage index. Journal of Intelligent Material Systems and Structures, 2022, 33, 799-810.	2.5	4

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91	<title>Potential applications of SMART Layer technology for homeland security</title>. , 2004, , .		3
92	Structural health monitoring of composite repair patches in bridge rehabilitation. , 2006, , .		3
93	A reverberation-ray matrix method for guided wave-based non-destructive evaluation. Ultrasonics, 2017, 77, 79-87.	3.9	3
94	Damage Detection of Thermal Barrier Coating by Ultrasonic Guided Wave. IOP Conference Series: Materials Science and Engineering, 0, 493, 012063.	0.6	3
95	Energy Management for a Microgrid With Different Charging and Discharging Priorities of Batteries Using Modified Grey Wolf Optimizer. , 2019, , .		3
96	An Independently Controlled Magnetic Coupling Multi-Output Buck Converter With Mixed Modes for Unbalanced Loads. IEEE Transactions on Industrial Informatics, 2020, 16, 7499-7509.	11.3	3
97	The Design and Verification of an Active SAMSR Ultrasonic Guided Wave Monitoring System with Ultra-Low Crosstalk. Sensors, 2020, 20, 898.	3.8	3
98	Damage Tolerance of Notched Composite Laminates with Reinforcing Strips. Journal of Composite Materials, 2003, 37, 111-128.	2.4	2
99	In situ monitoring of the integrity of bonded repair patches on aircraft and civil infrastructures. , 2006, , .		2
100	Multi-field coupled sensing network for health monitoring of composite bolted joint. , 2016, , .		2
101	EGT Baseline Model of Aeroengine Based on Kernel Principal Component Analysis and Deep Belief Network. , 2018, , .		2
102	Spectral element method for modeling Lamb wave interaction with open and closed crack. Journal of Vibroengineering, 2017, 19, 4965-4976.	1.0	2
103	Crack-tip transformation zones of CeO2-stabilized tetragonal ZrO2 polycrystals. Journal of Materials Science Letters, 1997, 16, 652-655.	0.5	1
104	An experimental study on disbond detection in a thermal insulation system using guided waves under a load-temperature environment. , 2012, , .		1
105	A new temperature compensation method for guided wave-based structural health monitoring. , 2013, , .		1
106	Uncertainty quantification of relative acoustic nonlinearity parameter of guided waves for damage detection in composite structures. Proceedings of SPIE, 2015, , .	0.8	1
107	Electromechanical Impedance Model for Free 1D Thin-Walled Piezoelectric Ceramics with a Novel Derivation. Materials, 2020, 13, 4735.	2.9	1
108	Curing monitoring of bonded composite patch at constant temperature with electromechanical impedance and system parameters evaluation approach. Smart Materials and Structures, 2022, 31, 015039.	3.5	1

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109	Quantitative monitoring of two-dimensional damage using envelope locating curves method. , 2013, , .		0
110	Prediction of the biaxial failure strength of composite laminates with unit cell analytic model. Journal Wuhan University of Technology, Materials Science Edition, 2014, 29, 923-927.	1.0	0
111	Random demodulation for structural health monitoring excited by the five-cycle sine burst. MATEC Web of Conferences, 2017, 139, 00075.	0.2	0
112	Quantitative monitoring of hole-edge damage growth using eddy current array sensor-based intelligent bolt. , 2018, , .		0