

# Xiongbing Li

## List of Publications by Year in descending order

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75  
papers

730  
citations

623188

14  
h-index

713013

21  
g-index

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all docs

75  
docs citations

75  
times ranked

353  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultrasonic measurement model-based non-destructive detection method for curved components using an immersion spherically focused transducer. <i>Nondestructive Testing and Evaluation</i> , 2022, 37, 184-202.	1.1	7
2	Evaluating elongated grains with diffuse ultrasonic double scattering and rectangular transducers. <i>Journal of the Acoustical Society of America</i> , 2022, 151, 517-528.	0.5	0
3	Fast Fourier transform method for determining velocities of ultrasonic Rayleigh waves using a comb transducer. <i>Ultrasonics</i> , 2022, 124, 106754.	2.1	2
4	Long-Term Ultrasonic Benchmarking for Microstructure Characterization with Bayesian Updating. <i>Metals</i> , 2022, 12, 1088.	1.0	0
5	Far-sided defect recognition of FRP sandwich structures based on local defect resonance. <i>Journal of Sandwich Structures and Materials</i> , 2021, 23, 568-579.	2.0	4
6	Transverse-to-transverse diffuse ultrasonic double scattering. <i>Ultrasonics</i> , 2021, 111, 106301.	2.1	6
7	Grain size evaluation with time-frequency ultrasonic backscatter. <i>NDT and E International</i> , 2021, 117, 102369.	1.7	9
8	Study on PCA-SAFT imaging using leaky Rayleigh waves. <i>Measurement: Journal of the International Measurement Confederation</i> , 2021, 170, 108708.	2.5	13
9	Modeling of wave fields generated by ultrasonic transducers using a quasi-Monte Carlo method. <i>Journal of the Acoustical Society of America</i> , 2021, 149, 7-15.	0.5	3
10	Absolute Measurement of Material Nonlinear Parameters Using Noncontact Air-Coupled Reception. <i>Materials</i> , 2021, 14, 244.	1.3	1
11	Investigation of frequency-dependent attenuation coefficients for multiple solids using a reliable pulse-echo ultrasonic measurement technique. <i>Measurement: Journal of the International Measurement Confederation</i> , 2021, 177, 109270.	2.5	17
12	Determining the Responsivity of Air-Coupled Piezoelectric Transducers Using a Comparative Method: Theory and Experiments. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2021, 68, 3114-3125.	1.7	1
13	3D ultrasonic imaging based on synthetic aperture focusing technique and space-dependent threshold for detecting submillimetre flaws in strongly scattering metallic materials. <i>NDT and E International</i> , 2021, 124, 102523.	1.7	10
14	Subwavelength ultrasonic imaging using a deep convolutional neural network trained on structural noise. <i>Ultrasonics</i> , 2021, 117, 106552.	2.1	7
15	Propagation of leaky Rayleigh waves along a curved fluid-solids interface. <i>Journal of the Acoustical Society of America</i> , 2021, 150, 4395-4405.	0.5	0
16	Sizing Small Crack-like Flaws through Non-ideal Part Surface Using Ultrasonic Measurement Model. <i>Research in Nondestructive Evaluation</i> , 2020, 31, 147-163.	0.5	1
17	Dual Element Transducer Approach for Second Harmonic Generation and Material Nonlinearity Measurement of Solids in the Pulse-Echo Method. <i>Journal of Nondestructive Evaluation</i> , 2020, 39, 1.	1.1	6
18	Detecting small flaws in two-phase Ti-6Al-4V with rough surfaces. <i>Ultrasonics</i> , 2020, 106, 106128.	2.1	3

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19	Characterizing Microstructural Evolution of TP304 Stainless Steel Using a Pulse-Echo Nonlinear Method. <i>Materials</i> , 2020, 13, 1395.	1.3	5
20	Optimization and Validation of Dual Element Ultrasound Transducers for Improved Pulse-Echo Measurements of Material Nonlinearity. <i>IEEE Sensors Journal</i> , 2020, 20, 13596-13606.	2.4	11
21	Higher-order spatial correlation coefficients of ultrasonic backscattering signals using partial cross-correlation analysis. <i>Journal of the Acoustical Society of America</i> , 2020, 147, 757-768.	0.5	10
22	Propagation of Rayleigh waves on curved surfaces. <i>Wave Motion</i> , 2020, 94, 102517.	1.0	8
23	Comparison of Experimental Measurements of Material Grain Size Using Ultrasound. <i>Journal of Nondestructive Evaluation</i> , 2020, 39, 1.	1.1	15
24	Simultaneously Determining Sensitivity and Effective Geometrical Parameters of Ultrasonic Piezoelectric Transducers Using a Self-Reciprocity Method. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2019, 66, 1649-1657.	1.7	7
25	Measurement of shear wave attenuation coefficient using a contact pulse-echo method with consideration of partial reflection effects. <i>Measurement Science and Technology</i> , 2019, 30, 115601.	1.4	11
26	Characterization of Aging Treated 6061 Aluminum Alloy Using Nonlinear Rayleigh Wave. <i>Journal of Nondestructive Evaluation</i> , 2019, 38, 1.	1.1	11
27	Modeling Flaw Pulse-Echo Signals in Cylindrical Components Using an Ultrasonic Line-Focused Transducer with Consideration of Wave Mode Conversion. <i>Sensors</i> , 2019, 19, 2744.	2.1	4
28	Enhanced ultrasonic detection of near-surface flaws using transverse-wave backscatter. <i>Ultrasonics</i> , 2019, 98, 20-27.	2.1	13
29	High throughput rapid detection for SLM manufactured elements using ultrasonic measurement. <i>Measurement: Journal of the International Measurement Confederation</i> , 2019, 144, 234-242.	2.5	12
30	Non-paraxial multi-Gaussian beam model of Leaky Rayleigh waves generated by a focused immersion transducer. <i>Ultrasonics</i> , 2019, 97, 57-62.	2.1	3
31	Application of Fresnel Zone Plate Focused Beam to Optimized Sensor Design for Pulse-Echo Harmonic Generation Measurements. <i>Sensors</i> , 2019, 19, 1373.	2.1	6
32	Flaw detection with ultrasonic backscatter signal envelopes. <i>Journal of the Acoustical Society of America</i> , 2019, 145, EL142-EL148.	0.5	13
33	Combining physical shell mapping and reverse-compensation optimisation for spiral machining of free-form surfaces. <i>International Journal of Production Research</i> , 2019, 57, 4118-4131.	4.9	6
34	Ultrasonic flaw detection for two-phase Ti-6Al-4V based on secondary scattering. <i>NDT and E International</i> , 2019, 102, 199-206.	1.7	9
35	Generating spiral tool path to machine free-form surface with complex topology based on fusing constraint mapping and enriched Voronoi diagram. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 102, 647-658.	1.5	1
36	Investigation of Material Nonlinearity Measurements Using the Third-Harmonic Generation. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2019, 68, 3635-3646.	2.4	3

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37	Improvement of pulse-echo harmonic generation from a traction-free boundary through phase shift of a dual element transducer. <i>Ultrasonics</i> , 2018, 87, 145-151.	2.1	4
38	Acoustic nonlinearity parameter measurements in a pulse-echo setup with the stress-free reflection boundary. <i>Journal of the Acoustical Society of America</i> , 2018, 143, EL237-EL242.	0.5	14
39	Nondestructive testing of additively manufactured material based on ultrasonic scattering measurement. <i>Measurement: Journal of the International Measurement Confederation</i> , 2018, 118, 105-112.	2.5	39
40	Calibration of focused circular transducers using a multi-Gaussian beam model. <i>Applied Acoustics</i> , 2018, 133, 182-185.	1.7	8
41	Experimental investigation of material nonlinearity using the Rayleigh surface waves excited and detected by angle beam wedge transducers. <i>Ultrasonics</i> , 2018, 89, 118-125.	2.1	14
42	Enhanced Ultrasonic Flaw Detection Using an Ultrahigh Gain and Time-Dependent Threshold. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2018, 65, 1214-1225.	1.7	22
43	Triangulated surface flattening based on the physical shell model. <i>Journal of Mechanical Science and Technology</i> , 2018, 32, 2163-2171.	0.7	5
44	Effects of the Oxide Coating Thickness on the Small Flaw Sizing Using an Ultrasonic Test Technique. <i>Coatings</i> , 2018, 8, 69.	1.2	4
45	Ultrasonic Phased Array Sparse-TFM Imaging Based on Sparse Array Optimization and New Edge-Directed Interpolation. <i>Sensors</i> , 2018, 18, 1830.	2.1	21
46	Modeling linear Rayleigh wave sound fields generated by angle beam wedge transducers. <i>AIP Advances</i> , 2017, 7, .	0.6	8
47	Statistics associated with the scattering of ultrasound from microstructure. <i>Ultrasonics</i> , 2017, 80, 58-61.	2.1	17
48	Heterogeneous model integration of complex mechanical parts based on semantic feature fusion. <i>Engineering With Computers</i> , 2017, 33, 797-805.	3.5	5
49	Focused ultrasonic beam behavior at a stress-free boundary and applicability for measuring nonlinear parameter in a reflection mode. <i>AIP Conference Proceedings</i> , 2017, , .	0.3	0
50	Evaluating grain size in polycrystals with rough surfaces by corrected ultrasonic attenuation. <i>Ultrasonics</i> , 2017, 78, 23-29.	2.1	27
51	Calibration of focused ultrasonic transducers and absolute measurements of fluid nonlinearity with diffraction and attenuation corrections. <i>Journal of the Acoustical Society of America</i> , 2017, 142, 984-990.	0.5	13
52	Diffuse ultrasonic backscatter using a multi-Gaussian beam model. <i>Journal of the Acoustical Society of America</i> , 2017, 142, 195-205.	0.5	7
53	Receiver calibration and the nonlinearity parameter measurement of thick solid samples with diffraction and attenuation corrections. <i>Ultrasonics</i> , 2017, 81, 147-157.	2.1	28
54	Generating spiral tool paths based on spiral enter assistant line. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 92, 869-879.	1.5	3

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55	Evaluating the reinforcement content and elastic properties of Mg-based composites using dual-mode ultrasonic velocities. <i>Ultrasonics</i> , 2017, 81, 167-173.	2.1	9
56	Theoretical and experimental investigation of the pulse-echo nonlinearity acoustic sound fields of focused transducers. <i>Applied Acoustics</i> , 2017, 117, 145-149.	1.7	37
57	Lofting-based spiral tool path generation algorithm for milling a pocket with an island. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 88, 2169-2178.	1.5	5
58	Analytical Diffraction Corrections for Circular Focused Transducers Expressed Using the Multi-Gaussian Beam Model. <i>Acta Acustica United With Acustica</i> , 2017, 103, 717-720.	0.8	9
59	Measurement of Rayleigh Wave Beams Using Angle Beam Wedge Transducers as the Transmitter and Receiver with Consideration of Beam Spreading. <i>Sensors</i> , 2017, 17, 1449.	2.1	16
60	A self-reciprocity calibration method for broadband focused transducers. <i>Journal of the Acoustical Society of America</i> , 2016, 140, EL236-EL241.	0.5	11
61	A novel and practical approach for determination of the acoustic nonlinearity parameter using a pulse-echo method. <i>AIP Conference Proceedings</i> , 2016, , .	0.3	7
62	Development of attenuation and diffraction corrections for linear and nonlinear Rayleigh surface waves radiating from a uniform line source. <i>AIP Advances</i> , 2016, 6, 045313.	0.6	3
63	Effect of diffraction on evaluation of grain size in curved component using ultrasonic attenuation method. <i>AIP Conference Proceedings</i> , 2016, , .	0.3	1
64	Development of explicit diffraction corrections for absolute measurements of acoustic nonlinearity parameters in the quasilinear regime. <i>Ultrasonics</i> , 2016, 70, 199-203.	2.1	8
65	Ultrasonic Beam Models for Angle Beam Surface Wave Transducers. <i>Research in Nondestructive Evaluation</i> , 2016, 27, 175-191.	0.5	9
66	Modeling nonlinear Rayleigh wave fields generated by angle beam wedge transducers—A theoretical study. <i>Wave Motion</i> , 2016, 67, 141-159.	1.0	17
67	Correcting the Ultrasonic Scattering Attenuation Coefficient of a Metal Using an Equivalent Medium Layer. <i>Materials Transactions</i> , 2016, 57, 1729-1734.	0.4	0
68	A more general model equation of nonlinear Rayleigh waves and their quasilinear solutions. <i>Modern Physics Letters B</i> , 2016, 30, 1650096.	1.0	5
69	A novel method for extracting acoustic nonlinearity parameters with diffraction corrections. <i>Journal of Mechanical Science and Technology</i> , 2016, 30, 643-652.	0.7	10
70	Assessment of Acoustic Nonlinearity Parameters Using an Optimized Data-Fitting Method with Multi-Gaussian Beam Model-Based Diffraction Corrections. <i>Research in Nondestructive Evaluation</i> , 2016, 27, 230-250.	0.5	13
71	Simultaneous evaluation of acoustic nonlinearity parameter and attenuation coefficients using the finite amplitude method. <i>AIP Advances</i> , 2015, 5, .	0.6	11
72	Significance of accurate diffraction corrections for the second harmonic wave in determining the acoustic nonlinearity parameter. <i>AIP Advances</i> , 2015, 5, .	0.6	21

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73	Evaluation of mean grain size using the multi-scale ultrasonic attenuation coefficient. NDT and E International, 2015, 72, 25-32.	1.7	45
74	Simulation of ultrasonic surface waves with multi-Gaussian and point source beam models. , 2014, , .		2
75	Novel path generation algorithm for high-speed pocket milling. International Journal of Production Research, 2014, 52, 397-404.	4.9	14