

Xiongbing Li

List of Publications by Year in descending order

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papers

730
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75
docs citations

75
times ranked

353
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Evaluation of mean grain size using the multi-scale ultrasonic attenuation coefficient. NDT and E International, 2015, 72, 25-32. | 1.7 | 45 |
| 2 | Nondestructive testing of additively manufactured material based on ultrasonic scattering measurement. Measurement: Journal of the International Measurement Confederation, 2018, 118, 105-112. | 2.5 | 39 |
| 3 | Theoretical and experimental investigation of the pulse-echo nonlinearity acoustic sound fields of focused transducers. Applied Acoustics, 2017, 117, 145-149. | 1.7 | 37 |
| 4 | Receiver calibration and the nonlinearity parameter measurement of thick solid samples with diffraction and attenuation corrections. Ultrasonics, 2017, 81, 147-157. | 2.1 | 28 |
| 5 | Evaluating grain size in polycrystals with rough surfaces by corrected ultrasonic attenuation. Ultrasonics, 2017, 78, 23-29. | 2.1 | 27 |
| 6 | Enhanced Ultrasonic Flaw Detection Using an Ultrahigh Gain and Time-Dependent Threshold. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 1214-1225. | 1.7 | 22 |
| 7 | Significance of accurate diffraction corrections for the second harmonic wave in determining the acoustic nonlinearity parameter. AIP Advances, 2015, 5, . | 0.6 | 21 |
| 8 | Ultrasonic Phased Array Sparse-TFM Imaging Based on Sparse Array Optimization and New Edge-Directed Interpolation. Sensors, 2018, 18, 1830. | 2.1 | 21 |
| 9 | Modeling nonlinear Rayleigh wave fields generated by angle beam wedge transducers—A theoretical study. Wave Motion, 2016, 67, 141-159. | 1.0 | 17 |
| 10 | Statistics associated with the scattering of ultrasound from microstructure. Ultrasonics, 2017, 80, 58-61. | 2.1 | 17 |
| 11 | Investigation of frequency-dependent attenuation coefficients for multiple solids using a reliable pulse-echo ultrasonic measurement technique. Measurement: Journal of the International Measurement Confederation, 2021, 177, 109270. | 2.5 | 17 |
| 12 | Measurement of Rayleigh Wave Beams Using Angle Beam Wedge Transducers as the Transmitter and Receiver with Consideration of Beam Spreading. Sensors, 2017, 17, 1449. | 2.1 | 16 |
| 13 | Comparison of Experimental Measurements of Material Grain Size Using Ultrasound. Journal of Nondestructive Evaluation, 2020, 39, 1. | 1.1 | 15 |
| 14 | Novel path generation algorithm for high-speed pocket milling. International Journal of Production Research, 2014, 52, 397-404. | 4.9 | 14 |
| 15 | Acoustic nonlinearity parameter measurements in a pulse-echo setup with the stress-free reflection boundary. Journal of the Acoustical Society of America, 2018, 143, EL237-EL242. | 0.5 | 14 |
| 16 | Experimental investigation of material nonlinearity using the Rayleigh surface waves excited and detected by angle beam wedge transducers. Ultrasonics, 2018, 89, 118-125. | 2.1 | 14 |
| 17 | Assessment of Acoustic Nonlinearity Parameters Using an Optimized Data-Fitting Method with Multi-Gaussian Beam Model-Based Diffraction Corrections. Research in Nondestructive Evaluation, 2016, 27, 230-250. | 0.5 | 13 |
| 18 | Calibration of focused ultrasonic transducers and absolute measurements of fluid nonlinearity with diffraction and attenuation corrections. Journal of the Acoustical Society of America, 2017, 142, 984-990. | 0.5 | 13 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Enhanced ultrasonic detection of near-surface flaws using transverse-wave backscatter. <i>Ultrasonics</i> , 2019, 98, 20-27. | 2.1 | 13 |
| 20 | Flaw detection with ultrasonic backscatter signal envelopes. <i>Journal of the Acoustical Society of America</i> , 2019, 145, EL142-EL148. | 0.5 | 13 |
| 21 | Study on PCA-SAFT imaging using leaky Rayleigh waves. <i>Measurement: Journal of the International Measurement Confederation</i> , 2021, 170, 108708. | 2.5 | 13 |
| 22 | 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 |
| 23 | Simultaneous evaluation of acoustic nonlinearity parameter and attenuation coefficients using the finite amplitude method. <i>AIP Advances</i> , 2015, 5, . | 0.6 | 11 |
| 24 | 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 |
| 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 | 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 |
| 28 | 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 |
| 29 | 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 |
| 30 | 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 |
| 31 | Ultrasonic Beam Models for Angle Beam Surface Wave Transducers. <i>Research in Nondestructive Evaluation</i> , 2016, 27, 175-191. | 0.5 | 9 |
| 32 | 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 |
| 33 | 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 |
| 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 | Grain size evaluation with time-frequency ultrasonic backscatter. <i>NDT and E International</i> , 2021, 117, 102369. | 1.7 | 9 |
| 36 | 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 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 37 | Modeling linear Rayleigh wave sound fields generated by angle beam wedge transducers. AIP Advances, 2017, 7, . | 0.6 | 8 |
| 38 | Calibration of focused circular transducers using a multi-Gaussian beam model. Applied Acoustics, 2018, 133, 182-185. | 1.7 | 8 |
| 39 | Propagation of Rayleigh waves on curved surfaces. Wave Motion, 2020, 94, 102517. | 1.0 | 8 |
| 40 | A novel and practical approach for determination of the acoustic nonlinearity parameter using a pulse-echo method. AIP Conference Proceedings, 2016, , . | 0.3 | 7 |
| 41 | Diffuse ultrasonic backscatter using a multi-Gaussian beam model. Journal of the Acoustical Society of America, 2017, 142, 195-205. | 0.5 | 7 |
| 42 | Simultaneously Determining Sensitivity and Effective Geometrical Parameters of Ultrasonic Piezoelectric Transducers Using a Self-Reciprocity Method. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2019, 66, 1649-1657. | 1.7 | 7 |
| 43 | Ultrasonic measurement model-based non-destructive detection method for curved components using an immersion spherically focused transducer. Nondestructive Testing and Evaluation, 2022, 37, 184-202. | 1.1 | 7 |
| 44 | Subwavelength ultrasonic imaging using a deep convolutional neural network trained on structural noise. Ultrasonics, 2021, 117, 106552. | 2.1 | 7 |
| 45 | Application of Fresnel Zone Plate Focused Beam to Optimized Sensor Design for Pulse-Echo Harmonic Generation Measurements. Sensors, 2019, 19, 1373. | 2.1 | 6 |
| 46 | Combining physical shell mapping and reverse-compensation optimisation for spiral machining of free-form surfaces. International Journal of Production Research, 2019, 57, 4118-4131. | 4.9 | 6 |
| 47 | Dual Element Transducer Approach for Second Harmonic Generation and Material Nonlinearity Measurement of Solids in the Pulse-Echo Method. Journal of Nondestructive Evaluation, 2020, 39, 1. | 1.1 | 6 |
| 48 | Transverse-to-transverse diffuse ultrasonic double scattering. Ultrasonics, 2021, 111, 106301. | 2.1 | 6 |
| 49 | A more general model equation of nonlinear Rayleigh waves and their quasilinear solutions. Modern Physics Letters B, 2016, 30, 1650096. | 1.0 | 5 |
| 50 | Heterogeneous model integration of complex mechanical parts based on semantic feature fusion. Engineering With Computers, 2017, 33, 797-805. | 3.5 | 5 |
| 51 | Lofting-based spiral tool path generation algorithm for milling a pocket with an island. International Journal of Advanced Manufacturing Technology, 2017, 88, 2169-2178. | 1.5 | 5 |
| 52 | Triangulated surface flattening based on the physical shell model. Journal of Mechanical Science and Technology, 2018, 32, 2163-2171. | 0.7 | 5 |
| 53 | Characterizing Microstructural Evolution of TP304 Stainless Steel Using a Pulse-Echo Nonlinear Method. Materials, 2020, 13, 1395. | 1.3 | 5 |
| 54 | Improvement of pulse-echo harmonic generation from a traction-free boundary through phase shift of a dual element transducer. Ultrasonics, 2018, 87, 145-151. | 2.1 | 4 |

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|----|---|-----|-----------|
| 55 | Effects of the Oxide Coating Thickness on the Small Flaw Sizing Using an Ultrasonic Test Technique. Coatings, 2018, 8, 69. | 1.2 | 4 |
| 56 | Modeling Flaw Pulse-Echo Signals in Cylindrical Components Using an Ultrasonic Line-Focused Transducer with Consideration of Wave Mode Conversion. Sensors, 2019, 19, 2744. | 2.1 | 4 |
| 57 | Far-sided defect recognition of FRP sandwich structures based on local defect resonance. Journal of Sandwich Structures and Materials, 2021, 23, 568-579. | 2.0 | 4 |
| 58 | Development of attenuation and diffraction corrections for linear and nonlinear Rayleigh surface waves radiating from a uniform line source. AIP Advances, 2016, 6, 045313. | 0.6 | 3 |
| 59 | Generating spiral tool paths based on spiral enter assistant line. International Journal of Advanced Manufacturing Technology, 2017, 92, 869-879. | 1.5 | 3 |
| 60 | Non-paraxial multi-Gaussian beam model of Leaky Rayleigh waves generated by a focused immersion transducer. Ultrasonics, 2019, 97, 57-62. | 2.1 | 3 |
| 61 | Investigation of Material Nonlinearity Measurements Using the Third-Harmonic Generation. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 3635-3646. | 2.4 | 3 |
| 62 | Detecting small flaws in two-phase Ti-6Al-4V with rough surfaces. Ultrasonics, 2020, 106, 106128. | 2.1 | 3 |
| 63 | Modeling of wave fields generated by ultrasonic transducers using a quasi-Monte Carlo method. Journal of the Acoustical Society of America, 2021, 149, 7-15. | 0.5 | 3 |
| 64 | Simulation of ultrasonic surface waves with multi-Gaussian and point source beam models. , 2014, , . | | 2 |
| 65 | Fast Fourier transform method for determining velocities of ultrasonic Rayleigh waves using a comb transducer. Ultrasonics, 2022, 124, 106754. | 2.1 | 2 |
| 66 | Effect of diffraction on evaluation of grain size in curved component using ultrasonic attenuation method. AIP Conference Proceedings, 2016, , . | 0.3 | 1 |
| 67 | Generating spiral tool path to machine free-form surface with complex topology based on fusing constraint mapping and enriched Voronoi diagram. International Journal of Advanced Manufacturing Technology, 2019, 102, 647-658. | 1.5 | 1 |
| 68 | Sizing Small Crack-like Flaws through Non-ideal Part Surface Using Ultrasonic Measurement Model. Research in Nondestructive Evaluation, 2020, 31, 147-163. | 0.5 | 1 |
| 69 | Absolute Measurement of Material Nonlinear Parameters Using Noncontact Air-Coupled Reception. Materials, 2021, 14, 244. | 1.3 | 1 |
| 70 | Determining the Responsivity of Air-Coupled Piezoelectric Transducers Using a Comparative Method: Theory and Experiments. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 3114-3125. | 1.7 | 1 |
| 71 | Correcting the Ultrasonic Scattering Attenuation Coefficient of a Metal Using an Equivalent Medium Layer. Materials Transactions, 2016, 57, 1729-1734. | 0.4 | 0 |
| 72 | Focused ultrasonic beam behavior at a stress-free boundary and applicability for measuring nonlinear parameter in a reflection mode. AIP Conference Proceedings, 2017, , . | 0.3 | 0 |

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|----|--|-----|-----------|
| 73 | Evaluating elongated grains with diffuse ultrasonic double scattering and rectangular transducers. Journal of the Acoustical Society of America, 2022, 151, 517-528. | 0.5 | 0 |
| 74 | Propagation of leaky Rayleigh waves along a curved fluid–solid interface. Journal of the Acoustical Society of America, 2021, 150, 4395-4405. | 0.5 | 0 |
| 75 | Long-Term Ultrasonic Benchmarking for Microstructure Characterization with Bayesian Updating. Metals, 2022, 12, 1088. | 1.0 | 0 |