

# Shuzeng Zhang

## List of Publications by Year in descending order

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39  
papers

349  
citations

840776

11  
h-index

940533

16  
g-index

39  
all docs

39  
docs citations

39  
times ranked

163  
citing authors

#	ARTICLE	IF	CITATIONS
1	Theoretical and experimental investigation of the pulse-echo nonlinearity acoustic sound fields of focused transducers. <i>Applied Acoustics</i> , 2017, 117, 145-149.	3.3	37
2	Receiver calibration and the nonlinearity parameter measurement of thick solid samples with diffraction and attenuation corrections. <i>Ultrasonics</i> , 2017, 81, 147-157.	3.9	28
3	Significance of accurate diffraction corrections for the second harmonic wave in determining the acoustic nonlinearity parameter. <i>AIP Advances</i> , 2015, 5, .	1.3	21
4	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.	5.0	17
5	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.	3.8	16
6	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.	1.1	14
7	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.	3.9	14
8	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.	1.1	13
9	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.	1.1	13
10	Simultaneous evaluation of acoustic nonlinearity parameter and attenuation coefficients using the finite amplitude method. <i>AIP Advances</i> , 2015, 5, .	1.3	11
11	A self-reciprocity calibration method for broadband focused transducers. <i>Journal of the Acoustical Society of America</i> , 2016, 140, EL236-EL241.	1.1	11
12	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.	2.6	11
13	Characterization of Aging Treated 6061 Aluminum Alloy Using Nonlinear Rayleigh Wave. <i>Journal of Nondestructive Evaluation</i> , 2019, 38, 1.	2.4	11
14	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.	4.7	11
15	A novel method for extracting acoustic nonlinearity parameters with diffraction corrections. <i>Journal of Mechanical Science and Technology</i> , 2016, 30, 643-652.	1.5	10
16	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.	3.7	10
17	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
18	Development of explicit diffraction corrections for absolute measurements of acoustic nonlinearity parameters in the quasilinear regime. <i>Ultrasonics</i> , 2016, 70, 199-203.	3.9	8

#	ARTICLE	IF	CITATIONS
19	Modeling linear Rayleigh wave sound fields generated by angle beam wedge transducers. AIP Advances, 2017, 7, .	1.3	8
20	Calibration of focused circular transducers using a multi-Gaussian beam model. Applied Acoustics, 2018, 133, 182-185.	3.3	8
21	A novel and practical approach for determination of the acoustic nonlinearity parameter using a pulse-echo method. AIP Conference Proceedings, 2016, , .	0.4	7
22	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.	3.0	7
23	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.	2.1	7
24	Application of Fresnel Zone Plate Focused Beam to Optimized Sensor Design for Pulse-Echo Harmonic Generation Measurements. Sensors, 2019, 19, 1373.	3.8	6
25	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.	2.4	6
26	Characterizing Microstructural Evolution of TP304 Stainless Steel Using a Pulse-Echo Nonlinear Method. Materials, 2020, 13, 1395.	2.9	5
27	Improvement of pulse-echo harmonic generation from a traction-free boundary through phase shift of a dual element transducer. Ultrasonics, 2018, 87, 145-151.	3.9	4
28	Effects of the Oxide Coating Thickness on the Small Flaw Sizing Using an Ultrasonic Test Technique. Coatings, 2018, 8, 69.	2.6	4
29	Modeling Flaw Pulse-Echo Signals in Cylindrical Components Using an Ultrasonic Line-Focused Transducer with Consideration of Wave Mode Conversion. Sensors, 2019, 19, 2744.	3.8	4
30	Development of attenuation and diffraction corrections for linear and nonlinear Rayleigh surface waves radiating from a uniform line source. AIP Advances, 2016, 6, 045313.	1.3	3
31	Investigation of Material Nonlinearity Measurements Using the Third-Harmonic Generation. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 3635-3646.	4.7	3
32	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.	1.1	3
33	Design and Application of Partial Immersion Focused Ultrasonic Transducers for Austenitic Weld Inspection. Sensors, 2022, 22, 2671.	3.8	3
34	Fast Fourier transform method for determining velocities of ultrasonic Rayleigh waves using a comb transducer. Ultrasonics, 2022, 124, 106754.	3.9	2
35	Nonlinear Rayleigh wave sound fields generated by a wedge transducer. AIP Conference Proceedings, 2016, , .	0.4	1
36	Sizing Small Crack-like Flaws through Non-ideal Part Surface Using Ultrasonic Measurement Model. Research in Nondestructive Evaluation, 2020, 31, 147-163.	1.1	1

#	ARTICLE	IF	CITATIONS
37	Absolute Measurement of Material Nonlinear Parameters Using Noncontact Air-Coupled Reception. <i>Materials</i> , 2021, 14, 244.	2.9	1
38	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.	3.0	1
39	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, , .	0.4	0