

Ching-Tai Ng

List of Publications by Year in descending order

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95
papers

2,391
citations

159585

30
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243625

44
g-index

97
all docs

97
docs citations

97
times ranked

1325
citing authors

#	ARTICLE	IF	CITATIONS
1	A Lamb-wave-based technique for damage detection in composite laminates. <i>Smart Materials and Structures</i> , 2009, 18, 074006.	3.5	116
2	Second harmonic generation at fatigue cracks by low-frequency Lamb waves: Experimental and numerical studies. <i>Mechanical Systems and Signal Processing</i> , 2018, 99, 760-773.	8.0	112
3	Scattering of the fundamental anti-symmetric Lamb wave at delaminations in composite laminates. <i>Journal of the Acoustical Society of America</i> , 2011, 129, 1288-1296.	1.1	84
4	The selection of pattern features for structural damage detection using an extended Bayesian ANN algorithm. <i>Engineering Structures</i> , 2008, 30, 2762-2770.	5.3	82
5	Locating delaminations in laminated composite beams using nonlinear guided waves. <i>Engineering Structures</i> , 2017, 131, 207-219.	5.3	71
6	Analytical and finite element prediction of Lamb wave scattering at delaminations in quasi-isotropic composite laminates. <i>Journal of Sound and Vibration</i> , 2012, 331, 4870-4883.	3.9	70
7	Guided wave-based identification of multiple cracks in beams using a Bayesian approach. <i>Mechanical Systems and Signal Processing</i> , 2017, 84, 324-345.	8.0	68
8	Higher harmonic generation of guided waves at delaminations in laminated composite beams. <i>Structural Health Monitoring</i> , 2017, 16, 400-417.	7.5	65
9	An efficient finite element model for buckling analysis of grid stiffened laminated composite plates. <i>Composite Structures</i> , 2015, 122, 41-50.	5.8	59
10	On the selection of advanced signal processing techniques for guided wave damage identification using a statistical approach. <i>Engineering Structures</i> , 2014, 67, 50-60.	5.3	53
11	Time-domain spectral finite element method for analysis of torsional guided waves scattering and mode conversion by cracks in pipes. <i>Mechanical Systems and Signal Processing</i> , 2019, 128, 305-317.	8.0	51
12	Bayesian model updating approach for experimental identification of damage in beams using guided waves. <i>Structural Health Monitoring</i> , 2014, 13, 359-373.	7.5	46
13	Optimum design of phononic crystal perforated plate structures for widest bandgap of fundamental guided wave modes and maximized in-plane stiffness. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 89, 31-58.	4.8	46
14	Electrochemically produced graphene with ultra large particles enhances mechanical properties of Portland cement mortar. <i>Construction and Building Materials</i> , 2020, 234, 117403.	7.2	46
15	A probabilistic approach for quantitative identification of multiple delaminations in laminated composite beams using guided waves. <i>Engineering Structures</i> , 2016, 127, 602-614.	5.3	45
16	Effect of uniaxial stress on the propagation of higher-order Lamb wave modes. <i>International Journal of Non-Linear Mechanics</i> , 2016, 86, 104-111.	2.6	45
17	Nonlinear guided wave mixing in pipes for detection of material nonlinearity. <i>Journal of Sound and Vibration</i> , 2020, 485, 115541.	3.9	44
18	Implication of changing loading conditions on structural health monitoring utilising guided waves. <i>Smart Materials and Structures</i> , 2018, 27, 025003.	3.5	43

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19	Debonding detection in CFRP-retrofitted reinforced concrete structures using nonlinear Rayleigh wave. <i>Mechanical Systems and Signal Processing</i> , 2019, 125, 245-256.	8.0	43
20	Bolted joint integrity monitoring with second harmonic generated by guided waves. <i>Structural Health Monitoring</i> , 2019, 18, 193-204.	7.5	43
21	Modelling and analysis of nonlinear guided waves interaction at a breathing crack using time-domain spectral finite element method. <i>Smart Materials and Structures</i> , 2017, 26, 085002.	3.5	42
22	Rayleigh wave propagation and scattering characteristics at debondings in fibre-reinforced polymer-retrofitted concrete structures. <i>Structural Health Monitoring</i> , 2019, 18, 303-317.	7.5	42
23	Experimental characterization of multiple cracks in a cantilever beam utilizing transient vibration data following a probabilistic approach. <i>Journal of Sound and Vibration</i> , 2007, 305, 34-49.	3.9	39
24	A probabilistic method for the detection of obstructed cracks of beam-type structures using spatial wavelet transform. <i>Probabilistic Engineering Mechanics</i> , 2008, 23, 237-245.	2.7	38
25	A baseline-free and non-contact method for detection and imaging of structural damage using 3D laser vibrometry. <i>Structural Control and Health Monitoring</i> , 2017, 24, e1894.	4.0	38
26	Guided wave damage characterisation in beams utilising probabilistic optimisation. <i>Engineering Structures</i> , 2009, 31, 2842-2850.	5.3	37
27	Influence of stacking sequence on scattering characteristics of the fundamental anti-symmetric Lamb wave at through holes in composite laminates. <i>Journal of the Acoustical Society of America</i> , 2011, 129, 1280-1287.	1.1	36
28	A model-based method for damage detection with guided waves. <i>Structural Control and Health Monitoring</i> , 2017, 24, e1884.	4.0	32
29	Ambient- and oven-cured geopolymer concretes under active confinement. <i>Construction and Building Materials</i> , 2019, 228, 116722.	7.2	30
30	Sensor Networks for Structures Health Monitoring: Placement, Implementations, and Challenges – A Review. <i>Vibration</i> , 2021, 4, 551-584.	1.9	30
31	Scattering characteristics of Lamb waves from debondings at structural features in composite laminates. <i>Journal of the Acoustical Society of America</i> , 2012, 132, 115-123.	1.1	28
32	Application of Bayesian-designed artificial neural networks in Phase II structural health monitoring benchmark studies. <i>Australian Journal of Structural Engineering</i> , 2014, 15, .	1.1	27
33	Influence of crack opening and incident wave angle on second harmonic generation of Lamb waves. <i>Smart Materials and Structures</i> , 2018, 27, 055013.	3.5	27
34	Second-order harmonic generation of Lamb wave in prestressed plates. <i>Journal of Sound and Vibration</i> , 2019, 460, 114903.	3.9	27
35	A two-stage approach for quantitative damage imaging in metallic plates using Lamb waves. <i>Earthquake and Structures</i> , 2015, 8, 821-841.	1.0	27
36	Reconstruction of baseline time-trace under changing environmental and operational conditions. <i>Smart Materials and Structures</i> , 2016, 25, 035018.	3.5	26

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37	Debonding detection in rebar-reinforced concrete structures using second harmonic generation of longitudinal guided wave. <i>NDT and E International</i> , 2021, 122, 102496.	3.7	25
38	Scattering of the fundamental anti-symmetric Lamb wave at through-thickness notches in isotropic plates. <i>Journal of Civil Structural Health Monitoring</i> , 2016, 6, 447-459.	3.9	24
39	Enhancing the performance of stochastic subspace identification method via energy-oriented categorization of modal components. <i>Engineering Structures</i> , 2021, 233, 111917.	5.3	24
40	Mode Conversion and Scattering of Lamb Waves at Delaminations in Composite Laminates. <i>Journal of Aerospace Engineering</i> , 2019, 32, .	1.4	23
41	Influence of pristine graphene particle sizes on physicochemical, microstructural and mechanical properties of Portland cement mortars. <i>Construction and Building Materials</i> , 2020, 264, 120188.	7.2	23
42	Multicrack Detection on Semirigidly Connected Beams Utilizing Dynamic Data. <i>Journal of Engineering Mechanics - ASCE</i> , 2008, 134, 90-99.	2.9	22
43	Railway ballast damage detection by Markov chain Monte Carlo-based Bayesian method. <i>Structural Health Monitoring</i> , 2018, 17, 706-724.	7.5	22
44	Finite element prediction of acoustoelastic effect associated with Lamb wave propagation in pre-stressed plates. <i>Smart Materials and Structures</i> , 2019, 28, 095007.	3.5	22
45	CFRP-reinforced concrete-filled steel tubes with timber core under axial loading. <i>Composite Structures</i> , 2019, 217, 37-49.	5.8	22
46	On Accuracy of Analytical Modeling of Lamb Wave Scattering at Delaminations in Multilayered Isotropic Plates. <i>International Journal of Structural Stability and Dynamics</i> , 2015, 15, 1540010.	2.4	21
47	Generation of higher harmonics with the fundamental edge wave mode. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	21
48	On the determination of the third-order elastic constants of homogeneous isotropic materials utilising Rayleigh waves. <i>Ultrasonics</i> , 2019, 96, 96-103.	3.9	19
49	Comparative evaluation of in situ stress monitoring with Rayleigh waves. <i>Structural Health Monitoring</i> , 2019, 18, 205-215.	7.5	18
50	Numerical analysis of shear transfer across an initially uncrack reinforced concrete member. <i>Engineering Structures</i> , 2015, 102, 296-309.	5.3	17
51	Higher harmonic generation of Rayleigh wave at debondings in FRP-retrofitted concrete structures. <i>Smart Materials and Structures</i> , 2018, 27, 105038.	3.5	17
52	Second Harmonic Generation of Guided Wave at Crack-Induced Debonding in FRP-Strengthened Metallic Plates. <i>International Journal of Structural Stability and Dynamics</i> , 2019, 19, 1940006.	2.4	16
53	The fundamental ultrasonic edge wave mode: Propagation characteristics and potential for distant damage detection. <i>Ultrasonics</i> , 2021, 114, 106369.	3.9	16
54	Quasistatic pulse generation of ultrasonic guided waves propagation in composites. <i>Journal of Sound and Vibration</i> , 2022, 524, 116764.	3.9	15

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55	Damage detection with the fundamental mode of edge waves. <i>Structural Health Monitoring</i> , 2021, 20, 74-83.	7.5	14
56	Assessment of damage in composites using static component generation of ultrasonic guided waves. <i>Smart Materials and Structures</i> , 2022, 31, 045025.	3.5	14
57	Reliability Analysis of Single-Degree-of-Freedom Elastoplastic Systems. I: Critical Excitations. <i>Journal of Engineering Mechanics - ASCE</i> , 2007, 133, 1072-1080.	2.9	12
58	Single-Plant Biocomposite from <i>Ricinus Communis</i> : Preparation, Properties and Environmental Performance. <i>Journal of Polymers and the Environment</i> , 2013, 21, 366-374.	5.0	12
59	Scattering characteristics of quasi-Scholte waves at blind holes in metallic plates with one side exposed to water. <i>NDT and E International</i> , 2021, 117, 102379.	3.7	12
60	Mode conversion and scattering analysis of guided waves at delaminations in laminated composite beams. <i>Structural Monitoring and Maintenance</i> , 2015, 2, 213-236.	1.7	12
61	Structural Responses of a Supertall Building Subjected to a Severe Typhoon at Landfall. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 2965.	2.5	11
62	Scattering analysis of nonlinear Lamb waves at delaminations in composite laminates. <i>JVC/Journal of Vibration and Control</i> , 2022, 28, 1311-1323.	2.6	11
63	Niching particle swarm optimization techniques for multimodal buckling maximization of composite laminates. <i>Applied Soft Computing Journal</i> , 2017, 57, 495-503.	7.2	10
64	Investigating the reinforcing mechanism and optimized dosage of pristine graphene for enhancing mechanical strengths of cementitious composites. <i>RSC Advances</i> , 2020, 10, 42777-42789.	3.6	10
65	Investigation of feeding behaviour in <i>C. elegans</i> reveals distinct pharmacological and antibacterial effects of nicotine. <i>Invertebrate Neuroscience</i> , 2018, 18, 14.	1.8	9
66	Double-skin concrete-timber-filled steel columns under compression. <i>Engineering Structures</i> , 2019, 200, 109537.	5.3	9
67	Time-Domain Spectral Finite Element Method for Modeling Second Harmonic Generation of Guided Waves Induced by Material, Geometric and Contact Nonlinearities in Beams. <i>International Journal of Structural Stability and Dynamics</i> , 2020, 20, 2042005.	2.4	9
68	Early damage detection of metallic plates with one side exposed to water using the second harmonic generation of ultrasonic guided waves. <i>Thin-Walled Structures</i> , 2022, 176, 109284.	5.3	9
69	Mode shape scaling and implications in modal identification with known input. <i>Engineering Structures</i> , 2018, 156, 411-416.	5.3	8
70	Large acoustoelastic effect for Lamb waves propagating in an incompressible elastic plate. <i>Journal of the Acoustical Society of America</i> , 2019, 145, 1221-1229.	1.1	8
71	Damage detection of ultra-high-performance fibre-reinforced concrete using a harmonic wave modulation technique. <i>Construction and Building Materials</i> , 2021, 313, 125306.	7.2	8
72	Integrated piezoceramic transducers for imaging damage in composite laminates. <i>Proceedings of SPIE</i> , 2009, , .	0.8	7

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73	Scattering analysis of fundamental anti-symmetric Lamb wave at delaminations in composite laminates. Australian Journal of Mechanical Engineering, 2011, 8, 197-205.	2.1	7
74	Plastic buckling and axial crushing of concrete-filled steel tubes: usage of multiple wood blocks. Thin-Walled Structures, 2020, 150, 106487.	5.3	7
75	Effect of randomly distributed voids on effective linear and nonlinear elastic properties of isotropic materials. International Journal of Solids and Structures, 2021, 216, 83-93.	2.7	7
76	Wave mixing with the fundamental mode of edge waves for evaluation of material nonlinearities. Journal of Sound and Vibration, 2022, 527, 116855.	3.9	7
77	Static component generation and measurement of nonlinear guided waves with group velocity mismatch. JASA Express Letters, 2021, 1, .	1.1	6
78	Probabilistic Damage Characterisation in Beams using Guided Waves. Procedia Engineering, 2011, 14, 490-497.	1.2	5
79	Effect of central and non-central frequency components on the quality of damage imaging. Journal of Civil Structural Health Monitoring, 2018, 8, 49-61.	3.9	5
80	Understanding the interaction of the fundamental Lamb-wave modes with material discontinuity: finite element analysis and experimental validation. Structural Health Monitoring, 2022, 21, 640-665.	7.5	5
81	Numerical and experimental investigations on mode conversion of guided waves in partially immersed plates. Measurement: Journal of the International Measurement Confederation, 2022, 190, 110750.	5.0	5
82	Ultrasonic Guided Wave Field Modeling in a One-Side Water-Immersed Steel Plate. Lecture Notes in Civil Engineering, 2021, , 1131-1140.	0.4	4
83	Prediction and Measurement of Lamb Wave from Debondings at Structural Features in Composite Laminates. Key Engineering Materials, 2013, 558, 139-148.	0.4	3
84	Sensor Networks for Structural Health Monitoring. Journal of Sensors, 2020, 2020, 1-2.	1.1	3
85	Feasibility of early fatigue damage evaluation using the Neutron diffraction method. Engineering Failure Analysis, 2022, 141, 106603.	4.0	3
86	Special Issue on Structural Health Monitoring of Civil Structures. Structural Health Monitoring, 2014, 13, 345-346.	7.5	2
87	Mechanics and Evaluation of Early Damage. Structural Integrity, 2019, , 359-365.	1.4	2
88	Effective elastic properties of a weakly nonlinear particulate composite. International Journal of Non-Linear Mechanics, 2022, 141, 103949.	2.6	2
89	The performance optimization of combinational harmonic generation for quasi-synchronous Lamb wave mixing. , 2022, , .		1
90	Reliability Analysis of Single-Degree-of-Freedom Elastoplastic Systems. II: Suboptimal Excitations. Journal of Engineering Mechanics - ASCE, 2007, 133, 1081-1085.	2.9	0

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91	Closure to "Reliability Analysis of Single-Degree-of-Freedom Elastoplastic Systems. I: Critical Excitations" by Siu-Kui Au, Heung-Fai Lam, and Ching-Tai Ng. Journal of Engineering Mechanics - ASCE, 2008, 134, 924-925.	2.9	0
92	EXPERIMENTAL MEASUREMENT AND NUMERICAL SIMULATION OF FUNDAMENTAL ANTI-SYMMETRIC LAMB WAVE SCATTERING IN COMPOSITES. , 2011, , .		0
93	APPLICATION OF BAYESIAN APPROACH FOR DAMAGE CHARACTERIZATION IN BEAMS UTILIZING GUIDED WAVES. , 2011, , .		0
94	Measurement of Elastic Nonlinearities Using the Fundamental Edge Wave Mode. Structural Integrity, 2020, , 133-139.	1.4	0
95	Development of Micro-mechanical Models of Fatigue Damage. Structural Integrity, 2020, , 145-150.	1.4	0