Zhenmao Chen

List of Publications by Year
in descending order

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44 papers	787 citations	516710 16 h-index	526287 27 g-index
44 all docs	44 docs citations	44 times ranked	374 citing authors

#	Article	IF	Citations
1	Enhancement of crack reconstruction through inversion of eddy current testing signals with a new crack model and a deterministic optimization method. Measurement Science and Technology, 2022, 33, 055011.	2.6	2
2	Quantitative mapping of depth profile of fatigue cracks using eddy current pulsed thermography assisted by PCA and 2D wavelet transformation. Mechanical Systems and Signal Processing, 2022, 175, 109139.	8.0	18
3	A Flexible Thin-Film Magnetostrictive Patch Guided-Wave Transducer for Structural Health Monitoring. IEEE Sensors Journal, 2022, 22, 12237-12244.	4.7	8
4	Pulse-Modulation Eddy Current Evaluation of Interlaminar Corrosion in Stratified Conductors: Semi-Analytical Modeling and Experiments. Sensors, 2022, 22, 3458.	3.8	6
5	Quantitative sizing of compound location defects based on PECT-EMAT hybrid testing methods. Mechanical Systems and Signal Processing, 2022, 178, 109267.	8.0	4
6	Remote measurement and shape reconstruction of surface-breaking fatigue cracks by laser-line thermography. International Journal of Fatigue, 2021, 142, 105950.	5.7	8
7	Pulse-modulation eddy current imaging and evaluation of subsurface corrosion via the improved small sub-domain filtering method. NDT and E International, 2021, 119, 102404.	3.7	5
8	A Reconstruction Scheme Using an Average Conductivity Element for Pitting Corrosion Defects in Steam Generator Tubes From Eddy Current Testing Signals. IEEE Transactions on Magnetics, 2021, 57, 1-6.	2.1	2
9	Pulse-Modulation Eddy Current Imaging for 3D Profile Reconstruction of Subsurface Corrosion in Metallic Structures of Aviation. IEEE Sensors Journal, 2021, 21, 28087-28096.	4.7	7
10	Inversion Technique for Quantitative Infrared Thermography Evaluation of Delamination Defects in Multilayered Structures. IEEE Transactions on Industrial Informatics, 2020, 16, 4592-4602.	11.3	14
11	Joint effect of residual stress and plastic deformation on pulsed eddy current response signals in 304 austenitic stainless steel. International Journal of Applied Electromagnetics and Mechanics, 2020, 63, 19-30.	0.6	6
12	A Stable FEM-BEM Hybrid Method for the Numerical Simulation of Magnetomechanical Coupled Problem With Both Inductive and Conductive Current Excitations Aiming to Application to Tokamak In-Vessel Structures. IEEE Transactions on Plasma Science, 2020, 48, 2902-2907.	1.3	0
13	Quantitative evaluation of electrical conductivity inside stress corrosion crack with electromagnetic NDE methods. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190589.	3.4	8
14	An efficient electromagnetic and thermal modelling of eddy current pulsed thermography for quantitative evaluation of blade fatigue cracks in heavy-duty gas turbines. Mechanical Systems and Signal Processing, 2020, 142, 106781.	8.0	23
15	A funnel-shaped probe for sensitivity enhancement in pulse-modulation eddy current inspection of subsurface flaws in conductors. Sensors and Actuators A: Physical, 2020, 307, 111991.	4.1	11
16	Reconstruction of complex shaped crack from ECT signals based on a fast forward solver using an advanced multi-media element. International Journal of Applied Electromagnetics and Mechanics, 2020, 64, 621-629.	0.6	2
17	Efficient numerical simulation of eddy current pulsed thermography NDT signals based on FEM-BEM method and energy equivalent principle. Infrared Physics and Technology, 2019, 101, 138-145.	2.9	10
18	A Simplified Analytical Model for the Analysis of Magnetomechanical Dynamic Response of a Test Module in J-TEXT Tokamak. IEEE Transactions on Plasma Science, 2019, 47, 4402-4408.	1.3	1

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19	Recognition and evaluation of corrosion profile via pulse-modulation eddy current inspection in conjunction with improved Canny algorithm. NDT and E International, 2019, 106, 18-28.	3.7	25
20	Advanced Multi-Media Element for Simulating Distribution of Magnetic Flux Density Influenced by Narrow Crack. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	5
21	Inspection of delamination defect in first wall with a flexible EMAT-scanning system. Fusion Engineering and Design, 2018, 136, 549-553.	1.9	7
22	Thermo-magneto-elastoplastic coupling model of metal magnetic memory testing method for ferromagnetic materials. Journal of Applied Physics, 2018, 123, .	2.5	47
23	An FEM-BEM method for halo current problem and its application to HL-2M Tokamak. Fusion Engineering and Design, 2018, 136, 667-673.	1.9	6
24	Development of a Fast Numerical Simulator for Infrared Thermography Testing Signals of Delamination Defect in a Multilayered Plate. IEEE Transactions on Industrial Informatics, 2018, 14, 5544-5552.	11.3	11
25	Quantitative Inversion of Stress and Crack in Ferromagnetic Materials Based on Metal Magnetic Memory Method. IEEE Transactions on Magnetics, 2018, 54, 1-11.	2.1	27
26	Inspection of Delamination Defect in First Wall Panel of Tokamak Device by Using Laser Infrared Thermography Technique. IEEE Transactions on Plasma Science, 2018, 46, 2699-2707.	1.3	5
27	Pulse-modulation eddy current probes for imaging of external corrosion in nonmagnetic pipes. NDT and E International, 2017, 88, 51-58.	3.7	36
28	Remote inspection of surface cracks in metallic structures with fiber-guided laser array spots thermography. NDT and E International, 2017, 92, 213-220.	3.7	29
29	Electromagneto-mechanical coupling analysis of a test module in J-TEXT Tokamak during plasma disruption. Fusion Engineering and Design, 2016, 109-111, 634-641.	1.9	7
30	Numerical simulation method for IR thermography NDE of delamination defect in multilayered plate. International Journal of Applied Electromagnetics and Mechanics, 2016, 52, 381-389.	0.6	9
31	Pulse-modulation eddy current inspection of subsurface corrosion in conductive structures. NDT and E International, 2016, 79, 142-149.	3.7	37
32	Simulation of surface cracks measurement in first walls by laser spot array thermography. Fusion Engineering and Design, 2016, 109-111, 1237-1241.	1.9	9
33	Quantitative non-destructive evaluation of wall thinning defect in double-layer pipe of nuclear power plants using pulsed ECT method. NDT and E International, 2015, 75, 87-95.	3.7	69
34	An Efficient Numerical Scheme for Sizing of Cavity Defect in Metallic Foam From Signals of DC Potential Drop Method. IEEE Transactions on Magnetics, 2014, 50, 125-128.	2.1	6
35	Efficient numerical simulation of DC potential drop signals for application to NDT of metallic foam. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2013, 33, 147-156.	0.9	6
36	Dependence of deformation-induced magnetic field on plastic deformation for SUS304 stainless steel. International Journal of Applied Electromagnetics and Mechanics, 2012, 38, 17-26.	0.6	20

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37	An inversion scheme for sizing of wall thinning defects from pulsed eddy current testing signals. International Journal of Applied Electromagnetics and Mechanics, 2012, 39, 203-211.	0.6	9
38	Development of a very fast simulator for pulsed eddy current testing signals of local wall thinning. NDT and E International, 2012, 51, 45-50.	3.7	45
39	Efficient Numerical Solver for Simulation of Pulsed Eddy-Current Testing Signals. IEEE Transactions on Magnetics, 2011, 47, 4582-4591.	2.1	59
40	Enhancements of eddy current testing techniques for quantitative nondestructive testing of key structural components of nuclear power plants. Nuclear Engineering and Design, 2008, 238, 1651-1656.	1.7	36
41	Inversion techniques for eddy current NDE using optimization strategies and a rapid 3D forward simulator. International Journal of Applied Electromagnetics and Mechanics, 2004, 20, 179-187.	0.6	20
42	Reconstruction of crack shapes from the MFLT signals by using a rapid forward solver and an optimization approach. IEEE Transactions on Magnetics, 2002, 38, 1025-1028.	2.1	37
43	Rapid prediction of eddy current testing signals using Aâˆ’Ï† method and database. NDT and E International, 1999, 32, 29-36.	3.7	65
44	Reconstruction of Cracks with Multiple Eddy Current Coils Using a Database Approach. Journal of Nondestructive Evaluation, 1999, 18, 149-160.	2.4	20