

Lalita Udpa

List of Publications by Year in descending order

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71
papers

842
citations

623734

14
h-index

526287

27
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73
all docs

73
docs citations

73
times ranked

635
citing authors

#	ARTICLE	IF	CITATIONS
1	Pulsed Eddy-Current Based Giant Magnetoresistive System for the Inspection of Aircraft Structures. IEEE Transactions on Magnetics, 2010, 46, 910-917.	2.1	106
2	Neural network-based inversion algorithms in magnetic flux leakage nondestructive evaluation. Journal of Applied Physics, 2003, 93, 8274-8276.	2.5	77
3	Rotating Field EC-GMR Sensor for Crack Detection at Fastener Site in Layered Structures. IEEE Sensors Journal, 2015, 15, 463-470.	4.7	63
4	Reduced Magnetic Vector Potential Formulation in the Finite Element Analysis of Eddy Current Nondestructive Testing. IEEE Transactions on Magnetics, 2009, 45, 964-967.	2.1	55
5	Novel Rotating Current Probe With GMR Array Sensors for Steam Generate Tube Inspection. IEEE Sensors Journal, 2016, 16, 4995-5002.	4.7	43
6	Design of a Split-Ring Resonator Sensor for Near-Field Microwave Imaging. IEEE Sensors Journal, 2018, 18, 7066-7076.	4.7	41
7	Dynamic Beam Shaping Using a Dual-Band Electronically Tunable Reflectarray Antenna. IEEE Transactions on Antennas and Propagation, 2015, 63, 4534-4539.	5.1	40
8	Finite-Element Model for Simulation of Ferrite-Core Eddy-Current Probe. IEEE Transactions on Magnetics, 2010, 46, 905-909.	2.1	37
9	Differential Sensor Measurement With Rotating Current Excitation for Evaluating Multilayer Structures. IEEE Sensors Journal, 2016, 16, 782-789.	4.7	35
10	Magneto-Optic Imaging for Aircraft Skins Inspection: A Probability of Detection Study of Simulated and Experimental Image Data. IEEE Transactions on Reliability, 2012, 61, 901-908.	4.6	31
11	Non-invasive neuromodulation using rTMS and the electromagnetic-perceptive gene (EPC) facilitates plasticity after nerve injury. Brain Stimulation, 2020, 13, 1774-1783.	1.6	25
12	Model-Based Inversion Technique Using Element-Free Galerkin Method and State Space Search. IEEE Transactions on Magnetics, 2009, 45, 1486-1489.	2.1	21
13	Novel Transceiver Rotating Field Nondestructive Inspection Probe. IEEE Transactions on Magnetics, 2015, 51, 1-6.	2.1	19
14	Inner-Eddy-Current Transducer with Rotating Magnetic Field: Theoretical Model, Forward Problem. Research in Nondestructive Evaluation, 2005, 16, 79-100.	1.1	15
15	Magnetoresistive Sensor With Magnetic Balance Measurement for Inspection of Defects Under Magnetically Permeable Fasteners. IEEE Sensors Journal, 2016, 16, 2331-2338.	4.7	14
16	EC probe with orthogonal excitation coils and TMR sensor for CFRP inspection. International Journal of Applied Electromagnetics and Mechanics, 2019, 59, 1247-1255.	0.6	14
17	Swimming direction of the glass catfish is responsive to magnetic stimulation. PLoS ONE, 2021, 16, e0248141.	2.5	14
18	Nonlinear Eddy Current Technique for Characterizing Case Hardening Profiles. IEEE Transactions on Magnetics, 2010, 46, 1821-1824.	2.1	13

#	ARTICLE	IF	CITATIONS
19	Optimization and Validation of Rotating Current Excitation with GMR Array Sensors for Riveted Structures Inspection. <i>Sensors</i> , 2016, 16, 1512.	3.8	12
20	A Frequency Stable Volume Integral Equation Method for Anisotropic Scatterers. <i>IEEE Transactions on Antennas and Propagation</i> , 2017, 65, 1224-1235.	5.1	11
21	Monotonicity principle in pulsed eddy current testing and its application to defect sizing. , 2017, , .		11
22	Characterization of Conductor-Backed Dielectric Substrates Using a Novel Resonance-Based Method. <i>IEEE Sensors Journal</i> , 2022, 22, 2099-2109.	4.7	10
23	Particle filter based prognosis study for predicting remaining useful life of steam generator tubing. , 2011, , .		9
24	A Script-Based, Parameterized Finite Element Mesh for Design and NDE on a GPU. <i>IETE Technical Review (Institution of Electronics and Telecommunication Engineers, India)</i> , 2015, 32, 94-103.	3.2	9
25	Negative Index Metamaterial Lens for Subwavelength Microwave Detection. <i>Sensors</i> , 2021, 21, 4782.	3.8	9
26	Data-driven Prognosis of Fatigue-induced Delamination in Composites using Optical and Acoustic NDE methods. , 2019, , .		8
27	Inner-Eddy-Current Transducer with Rotating Magnetic Field, Experimental Results: Application to Nondestructive Examination of Pressure Tubes in PHWR Nuclear Power Plants. <i>Research in Nondestructive Evaluation</i> , 2005, 16, 65-77.	1.1	7
28	Three-Dimensional Finite Element Modeling of Remote Field Eddy Current Technique for Detection of Localized Defects. <i>Research in Nondestructive Evaluation</i> , 2009, 20, 145-158.	1.1	7
29	Monitoring of fatigue damage in composite lap-joints using guided waves and FBG sensors. <i>AIP Conference Proceedings</i> , 2016, , .	0.4	7
30	Optimization of coil design for eddy current testing of multi-layer structures. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2016, 52, 315-322.	0.6	7
31	Optimization of Test Parameters for Magneto-Optic Imaging Using Taguchi's Parameter Design and Response-Model Approach. <i>Research in Nondestructive Evaluation</i> , 2008, 19, 164-180.	1.1	6
32	Ultra-Wideband Microwave Imaging System for Root Phenotyping. <i>Sensors</i> , 2022, 22, 2031.	3.8	6
33	Micromagnetic measurement for characterization of ferromagnetic materials's microstructural properties. <i>AIP Advances</i> , 2018, 8, .	1.3	5
34	Monitoring and localization of buried plastic natural gas pipes using passive RF tags. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	5
35	Microwave Imaging of Penetrable Scatterers Using Deformable Mirror. <i>IEEE Transactions on Magnetics</i> , 2007, 43, 1805-1808.	2.1	4
36	NDE Based Cost-Effective Detection of Obtrusive and Coincident Defects in Pipelines Under Uncertainties. , 2019, , .		4

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37	Independent Component Analysis for Enhanced Feature Extraction from NDE. AIP Conference Proceedings, 2004, , .	0.4	3
38	Real-Time Implementation of Motion-Based Filtering in Magneto-Optic Imager. AIP Conference Proceedings, 2004, , .	0.4	3
39	An efficient finite element method for modeling ferrite-core eddy current probe. International Journal of Applied Electromagnetics and Mechanics, 2010, 33, 481-486.	0.6	3
40	Advanced Sensor Technologies for Nondestructive Testing and Evaluation and Structural Health Monitoring. Journal of Sensors, 2012, 2012, 1-2.	1.1	3
41	Embedded Thin Film Sensors Based Multi-Mode Guided Wave Filter. , 2018, , .		3
42	Deformable mirror near field microwave imaging. International Journal of Applied Electromagnetics and Mechanics, 2007, 26, 217-223.	0.6	2
43	Metamaterial-inspired miniaturized microwave edge coupled surface scanning probe. , 2013, , .		2
44	Time-Reversal Microwave Tomography Using Frequency Domain Sampling. , 2019, , .		2
45	A Microwave Tomography System Using Time-Reversal Imaging. , 2019, , .		2
46	Capacitive imaging for adhesive bonds and quality evaluation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190590.	3.4	2
47	Bioelectromagnetic Platform for Cell, Tissue, and In Vivo Stimulation. Biosensors, 2021, 11, 248.	4.7	2
48	Capacitive Imaging for Adhesive Bonds and Quality Evaluation. Studies in Applied Electromagnetics and Mechanics, 2020, , .	0.2	2
49	Robust Design of a Natural Gas Transmission Pipeline Inspection Tool using the Taguchi Method. Research in Nondestructive Evaluation, 2006, 17, 17-28.	1.1	1
50	Deformable mirror tomography “ An alternative imaging technique for inverse scattering applications. International Journal of Applied Electromagnetics and Mechanics, 2007, 26, 147-161.	0.6	1
51	GPU implementation of simultaneous iterative reconstruction techniques for computed tomography. AIP Conference Proceedings, 2013, , .	0.4	1
52	Guided wave inspection of dissimilar material joints using time reversal techniques. International Journal of Applied Electromagnetics and Mechanics, 2014, 45, 957-964.	0.6	1
53	Image processing algorithms for automated analysis of GMR data from inspection of multilayer structures. , 2015, , .		1
54	Addressing Memory and Speed Problems in Nondestructive Defect Characterization: Element-by-Element Processing on a GPU. Journal of Nondestructive Evaluation, 2015, 34, 1.	2.4	1

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55	Ensemble of classifiers for confidence-rated classification of NDE signal. AIP Conference Proceedings, 2016, , .	0.4	1
56	Microwave time reversal mirror for breast tumor detection. , 2017, , .		1
57	Design of a split-ring resonator based microstrip sensor for near- field inspection of composites. , 2018, , .		1
58	Permeability invariance transformation for inspection of magnetized steel rivets. International Journal of Applied Electromagnetics and Mechanics, 2019, 59, 1357-1364.	0.6	1
59	A computational investigation and smooth-shaped defect synthesis for eddy current testing problems using the subregion finite element method. Research in Nondestructive Evaluation, 2019, 30, 149-178.	1.1	1
60	Application of Taguchi Methodology for Optimizing Test Parameters in Magneto-Optic Imaging. AIP Conference Proceedings, 2003, , .	0.4	0
61	Finite Element Modeling of the World Federationâ€™s Second MFL Benchmark Problem. AIP Conference Proceedings, 2004, , .	0.4	0
62	An X-ray security screening technique with limited field-of-view. International Journal of Applied Electromagnetics and Mechanics, 2006, 24, 79-89.	0.6	0
63	Interface Removal for Planar Geometries: The Vector Case. AIP Conference Proceedings, 2007, , .	0.4	0
64	A Monte Carlo model for positron emission tomography imaging. International Journal of Applied Electromagnetics and Mechanics, 2008, 28, 79-85.	0.6	0
65	Nondestructive inspection using Rotating Field Eddy Current (RoFEC) Probes. , 2010, , .		0
66	3D modeling of time reversal microwave imaging in nondestructive evaluation. , 2010, , .		0
67	ROI Detection Using Spatial Kernel Based Filter for Steam Generator Tube Inspection in Eddy Current Nondestructive Evaluation. , 2012, , .		0
68	Special talk 2: Microwave based systems for imaging tissue. , 2013, , .		0
69	Designing an apparatus for behavioral testing in awake rodents during brain stimulation. , 2018, , .		0
70	Extracting Mode Converted Guided Wave Response due to Delamination using Embedded Thin Film Sensors. , 2020, , .		0
71	Proposal of magnetic field-directed eddy current probe for the fiber waviness of CFRP and its evaluation. The Proceedings of Conference of Tohoku Branch, 2019, 2019.54, 174.	0.0	0