

Tetsuya Uchimoto

List of Publications by Year in descending order

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118
papers

1,641
citations

331670

21
h-index

377865

34
g-index

118
all docs

118
docs citations

118
times ranked

842
citing authors

#	ARTICLE	IF	CITATIONS
1	High-Selectivity imaging of the closed fatigue crack due to thermal environment using surface-acoustic-wave phased array (SAW PA). <i>Ultrasonics</i> , 2022, 119, 106629.	3.9	7
2	Water Uptake in Epoxy Ionic Liquid Free Film Polymer by Gravimetric Analysis and Comparison with Nondestructive Dielectric Analysis. <i>Nanomaterials</i> , 2022, 12, 651.	4.1	4
3	Electromagnetic pulse-induced acoustic testing and the pulsed guided wave propagation in composite/metal adhesive bonding specimens. <i>Composites Science and Technology</i> , 2021, 201, 108499.	7.8	13
4	Comparison of electromagnetic inspection methods for creep-degraded high chromium ferritic steels. <i>NDT and E International</i> , 2021, 118, 102399.	3.7	14
5	A numerical simulation method of nonlinear magnetic flux leakage testing signals for nondestructive evaluation of plastic deformation in a ferromagnetic material. <i>Mechanical Systems and Signal Processing</i> , 2021, 155, 107670.	8.0	10
6	Mechanism study for directivity of TR probe when applying Eddy current testing to ferro-magnetic structural materials. <i>NDT and E International</i> , 2021, 122, 102464.	3.7	5
7	Mechanism study of the residual stress evaluation of low-carbon steels using the eddy current magnetic signature method. <i>Journal of Magnetism and Magnetic Materials</i> , 2021, 538, 168268.	2.3	8
8	A novel circumferential eccentric eddy current probe and its application for defect detection of small-diameter tubes. <i>Sensors and Actuators A: Physical</i> , 2021, 331, 113023.	4.1	12
9	Non-destructive testing on creep degraded 12% Cr-Mo-W-V ferritic test samples using Barkhausen noise. <i>Journal of Magnetism and Magnetic Materials</i> , 2020, 498, 166102.	2.3	19
10	Features extraction and discussion in a novel frequency-band-selecting pulsed eddy current testing method for the detection of a certain depth range of defects. <i>NDT and E International</i> , 2020, 111, 102211.	3.7	41
11	Evaluation of detectability of differential type probe using directional eddy current for fibre waviness in CFRP. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020, 378, 20190587.	3.4	9
12	Dielectric analysis of water uptake in polymer coating using spatially defined Fick's law and mixing rule. <i>Progress in Organic Coatings</i> , 2020, 148, 105846.	3.9	3
13	An efficient electromagnetic and thermal modelling of eddy current pulsed thermography for quantitative evaluation of blade fatigue cracks in heavy-duty gas turbines. <i>Mechanical Systems and Signal Processing</i> , 2020, 142, 106781.	8.0	23
14	Stochastic fluid dynamics simulations of the velocity distribution in protoplasmic streaming. <i>Physics of Fluids</i> , 2020, 32, 121902.	4.0	4
15	A Fast Forward Simulation Scheme for Eddy Current Testing of Crack in a Structure of Carbon Fiber Reinforced Polymer Laminate. <i>IEEE Access</i> , 2019, 7, 152278-152288.	4.2	8
16	A novel frequency-band-selecting pulsed eddy current testing method for the detection of a certain depth range of defects. <i>NDT and E International</i> , 2019, 107, 102154.	3.7	15
17	Investigation of measurement conditions of eddy current magnetic signature method for evaluating plastic deformation in carbon steels. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2019, 59, 1213-1220.	0.6	6
18	Nondestructive evaluation of plastic damage in a RAFM steel considering the influence of loading history. <i>Journal of Nuclear Materials</i> , 2019, 523, 248-259.	2.7	6

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19	Physical interpretation of the microstructure for aged 12 Cr-Mo-V-W steel creep test samples based on simulation of magnetic incremental permeability. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 486, 165250.	2.3	16
20	Magnetic incremental permeability non-destructive evaluation of 12 Cr-Mo-W-V steel creep test samples with varied ageing levels and thermal treatments. <i>NDT and E International</i> , 2019, 104, 42-50.	3.7	37
21	Investigation of electromagnetic nondestructive evaluation of residual strain in low carbon steels using the eddy current magnetic signature (EC-MS) method. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 479, 212-221.	2.3	44
22	Novel electromagnetic acoustic transducer for measuring the thickness of small specimen areas. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2019, 59, 1495-1504.	0.6	4
23	Development and performance evaluation of a high-temperature electromagnetic acoustic transducer for monitoring metal processing. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2018, 58, 309-318.	0.6	5
24	A simulation method to evaluate electrical conductivity of closed-cell aluminum foam. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2018, 58, 289-307.	0.6	2
25	Influence of Plastic Deformation and Fatigue Damage on Electromagnetic Properties of 304 Austenitic Stainless Steel. <i>IEEE Transactions on Magnetics</i> , 2018, 54, 1-10.	2.1	16
26	High precision ultrasonic guided wave technique for inspection of power transmission line. <i>Chinese Journal of Mechanical Engineering (English Edition)</i> , 2017, 30, 170-179.	3.7	4
27	Application of low frequency ECT method in noncontact detection and visualization of CFRP material. <i>Composites Part B: Engineering</i> , 2017, 110, 141-152.	12.0	69
28	Evaluation of a Nitrided Case Depth by the Magnetic Barkhausen Noise. <i>Journal of Nondestructive Evaluation</i> , 2017, 36, 1.	2.4	19
29	Ultrasonic phased array with surface acoustic wave for imaging cracks. <i>AIP Advances</i> , 2017, 7, .	1.3	27
30	Graphite structure and magnetic parameters of flake graphite cast iron. <i>Journal of Magnetism and Magnetic Materials</i> , 2017, 442, 397-402.	2.3	2
31	Evaluation of wall thinning defect in magnetic material based on PECT method under magnetic saturation. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2017, 55, 49-59.	0.6	2
32	Evaluation of chill structure in ductile cast iron by incremental permeability method. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2016, 52, 1599-1605.	0.6	11
33	Visualization method for detecting of residual stress using magnetic domain scope. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2016, 52, 1213-1219.	0.6	0
34	Optimum design of a truncated-cone antenna element used in microwave irradiation of liquid objects. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2016, 52, 1525-1530.	0.6	1
35	Novel NDT methods for composite materials in aerospace structures. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2016, 52, 25-33.	0.6	1
36	Application of Monte Carlo method for magnetic clusters introduced thermal distributions. , 2016, , .		0

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37	Research advances in eddy current testing for maintenance of carbon fiber reinforced plastic composites. International Journal of Applied Electromagnetics and Mechanics, 2016, 51, 261-284.	0.6	33
38	Changes in eddy current testing signals of fatigue cracks by heat processing. International Journal of Applied Electromagnetics and Mechanics, 2016, 52, 677-684.	0.6	4
39	Thickness evaluation of thermally sprayed coatings after exposure to boiler tube environments by eddy current testing. International Journal of Applied Electromagnetics and Mechanics, 2015, 47, 993-1001.	0.6	5
40	Nondestructive characterization of flake graphite cast iron by magnetic adaptive testing. NDT and E International, 2015, 74, 8-14.	3.7	11
41	Evaluation of fatigue cracks by an angle beam EMAT dual probe. NDT and E International, 2015, 72, 10-16.	3.7	19
42	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
43	Novel electromagnetic modeling approach of carbon fiber-reinforced polymer laminate for calculation of eddy currents and eddy current testing signals. Journal of Composite Materials, 2015, 49, 617-631.	2.4	35
44	A study on influence of plastic deformation on the global conductivity and permeability of carbon steel. International Journal of Applied Electromagnetics and Mechanics, 2014, 45, 371-378.	0.6	9
45	Numerical simulation of magnetic incremental permeability for ferromagnetic material. International Journal of Applied Electromagnetics and Mechanics, 2014, 45, 379-386.	0.6	14
46	Comparisons of damage-induced magnetizations between austenitic stainless and carbon steel. International Journal of Applied Electromagnetics and Mechanics, 2014, 46, 991-996.	0.6	5
47	Evaluation of the electromagnetic characteristics of type 316L stainless steel welds from the viewpoint of eddy current inspections. Journal of Nuclear Science and Technology, 2014, 51, 127-132.	1.3	8
48	Evaluation of an EMAT dual probe in sizing extent of wall thinning. NDT and E International, 2014, 62, 160-166.	3.7	14
49	Flake Graphite Cast Iron Investigated by a Magnetic Method. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	4
50	Role of interlaminar interface on bulk conductivity and electrical anisotropy of CFRP laminates measured by eddy current method. NDT and E International, 2014, 68, 1-12.	3.7	61
51	An arrayed uniform eddy current probe design for crack monitoring and sizing of surface breaking cracks with the aid of a computational inversion technique. NDT and E International, 2014, 61, 29-34.	3.7	35
52	Quantitative Nondestructive Evaluation of Plastic Deformation in Carbon Steel Based on Electromagnetic Methods. Materials Transactions, 2014, 55, 1806-1815.	1.2	30
53	Evaluation of plastic deformation and characterization of electromagnetic properties using pulsed eddy current testing method. International Journal of Applied Electromagnetics and Mechanics, 2014, 45, 755-761.	0.6	13
54	Equivalent Circuit Analysis and Demonstration of Eddy Current Testing using Resonance. IEEE Transactions on Fundamentals and Materials, 2014, 134, 340-346.	0.2	0

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55	Sizing of Wall Thinning Defects Using Pulsed Eddy Current Testing Signals Based on a Hybrid Inverse Analysis Method. IEEE Transactions on Magnetics, 2013, 49, 1653-1656.	2.1	35
56	A Numerical Method for Simulation of Nonlinear Eddy Current Testing Signals Based on Transient Formulation. Materials Transactions, 2013, 54, 964-968.	1.2	8
57	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
58	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
59	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
60	Thickness evaluation of thermal spraying on boiler tubes by eddy current testing. International Journal of Applied Electromagnetics and Mechanics, 2012, 39, 419-425.	0.6	17
61	Electromagnetic modeling of fatigue cracks in plant environment for eddy current testing. International Journal of Applied Electromagnetics and Mechanics, 2012, 39, 261-268.	0.6	6
62	Numerical analysis of correlation between fibre orientation and eddy current testing signals of carbon-fibre reinforced polymer composites. International Journal of Applied Electromagnetics and Mechanics, 2012, 39, 251-259.	0.6	18
63	Nondestructive investigation of wall thinning in layered ferromagnetic material by magnetic adaptive testing. NDT and E International, 2012, 47, 51-55.	3.7	16
64	An accurately controllable imitative stress corrosion cracking for electromagnetic nondestructive testing and evaluations. Nuclear Engineering and Design, 2012, 245, 1-7.	1.7	11
65	Hysteresis properties for local magnetic sites distribution on grain boundary. Physica B: Condensed Matter, 2012, 407, 1420-1423.	2.7	0
66	Development of a magnetic sensor system for predictive IASCC diagnosis on stainless steels in a nuclear reactor. International Journal of Applied Electromagnetics and Mechanics, 2011, 35, 123-139.	0.6	2
67	SCC susceptibility of cold-worked stainless steel with minor element additions. Journal of Nuclear Materials, 2011, 417, 883-886.	2.7	4
68	Magnetic Dynamic Process of Magnetic Layers Around Grain Boundary for Sensitized Alloy 600. IEEE Transactions on Magnetics, 2011, 47, 1118-1121.	2.1	3
69	Efficient Numerical Solver for Simulation of Pulsed Eddy-Current Testing Signals. IEEE Transactions on Magnetics, 2011, 47, 4582-4591.	2.1	59
70	Electromagnetic Nondestructive Evaluation of Graphite Structures in Flake Graphite Cast Iron. Materials Transactions, 2010, 51, 1114-1119.	1.2	6
71	Application of EMAT/EC dual probe to monitoring of wall thinning in high temperature environment. International Journal of Applied Electromagnetics and Mechanics, 2010, 33, 1317-1327.	0.6	21
72	Application of EMAT/EC Dual Probe to Monitoring of Wall Thinning in High Temperature Environment. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2010, 76, 587-593.	0.2	2

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73	Material Characterization of Cast Irons with an EMAT/EC Dual Probe. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2010, 76, 968-975.	0.2	0
74	Extraction of Crack Indications from Detection Signals based on Signal Phase Characteristics in Eddy Current Testing. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2010, 76, 117-125.	0.2	1
75	Temperature Dependence of Magnetic Descriptors of Magnetic Adaptive Testing. IEEE Transactions on Magnetics, 2010, 46, 509-512.	2.1	8
76	Nondestructive characterization of ductile cast iron by magnetic adaptive testing. Journal of Magnetism and Magnetic Materials, 2010, 322, 3117-3121.	2.3	14
77	Alternative magnetic parameters for characterization of plastic tension. NDT and E International, 2010, 43, 671-676.	3.7	18
78	Evaluation of susceptibility to stress corrosion cracking based on non-linear eddy current method. International Journal of Applied Electromagnetics and Mechanics, 2010, 33, 1303-1308.	0.6	5
79	Extraction of crack indications from ECT signals using signal phase characteristics of a multi-coil probe. International Journal of Applied Electromagnetics and Mechanics, 2010, 33, 1179-1184.	0.6	2
80	Material characterization of cast irons with an EMAT/EC dual probe. International Journal of Applied Electromagnetics and Mechanics, 2010, 33, 1135-1141.	0.6	3
81	Nondestructive Inspection of Ductile Cast Iron by Measurement of Minor Magnetic Hysteresis Loops. Materials Science Forum, 2010, 659, 355-360.	0.3	1
82	Magnetic anisotropy of plastically deformed low-carbon steel. Journal Physics D: Applied Physics, 2010, 43, 195003.	2.8	33
83	Governing conditions of repeatable Barkhausen noise response. Journal of Magnetism and Magnetic Materials, 2009, 321, 2956-2962.	2.3	43
84	Evaluation of Sensitization of Ni Base Alloys Using Electromagnetic Nondestructive Evaluation Method. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2009, 75, 1777-1783.	0.2	2
85	Evaluation of Local Wall Thinning by the Use of RFECT for Flat Plates(Maintenance Inspection and) Tj ETQq1 1 0.784314 rgBT /Overlo Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2009, 75, 431-433.	0.2	1
86	Quantitative Evaluation of CVD Diamond Coating Layer Using Rayleigh-like Waves. Journal of Intelligent Material Systems and Structures, 2008, 19, 367-371.	2.5	1
87	Development of Eddy Current Testing System for Complicated-Shaped Components. Transactions of the Atomic Energy Society of Japan, 2008, 7, 142-151.	0.3	8
88	Hot filament CVD diamond coating of TiC sliders. Diamond and Related Materials, 2007, 16, 609-615.	3.9	6
89	Evaluation of CVD Diamond Coating Using Back-Reflected Rayleigh Surface Wave. Solid State Phenomena, 2006, 110, 117-122.	0.3	5
90	Minor hysteresis loops measurements for characterization of cast iron. Physica B: Condensed Matter, 2006, 372, 156-159.	2.7	10

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91	Characterization of ductile cast iron by eddy current method. NDT and E International, 2005, 38, 623-626.	3.7	44
92	Synthesis of Ti ₃ SiC ₂ /TiC composites from TiH ₂ /SiC/TiC powders. Materials Letters, 2005, 59, 2342-2346.	2.6	37
93	Investigation of numerical precision of 3-D RFECT signal simulations. IEEE Transactions on Magnetics, 2005, 41, 1968-1971.	2.1	10
94	In-situ eddy current monitoring of structural components in nuclear power plants. Journal of Advanced Science, 2005, 17, 68-69.	0.1	1
95	Three-dimensional inversion of volumetric defects profiles from electromagnetic nondestructive testing signals by means of stochastic methods with the aid of parallel computation. Inverse Problems in Science and Engineering, 2005, 13, 47-63.	1.2	7
96	Direct simulation of Monte Carlo analysis of nano-floating effect on diamond-coated surface. Diamond and Related Materials, 2005, 14, 2122-2126.	3.9	9
97	Tribological properties of partly polished diamond coatings. Diamond and Related Materials, 2005, 14, 2118-2121.	3.9	24
98	In-situ eddy current monitoring under high temperature environment. International Journal of Applied Electromagnetics and Mechanics, 2004, 20, 163-170.	0.6	4
99	Identification of Multiple Cracks from Eddy-Current Testing Signals With Noise Sources by Image Processing and Inverse Analysis. IEEE Transactions on Magnetics, 2004, 40, 1112-1115.	2.1	21
100	Machinable ceramic substrate for CVD diamond coating. Diamond and Related Materials, 2004, 13, 819-822.	3.9	23
101	Crack Shape Reconstruction in Ferromagnetic Materials Using a Novel Fast Numerical Simulation Method. IEEE Transactions on Magnetics, 2004, 40, 1374-1377.	2.1	19
102	Crack Sizing of Deep Cracks in Eddy Current Testing Using 3D Electromagnetic Field Analysis. , 2004, , .		1
103	Design of an eddy-current array probe for crack sizing in steam generator tubes. NDT and E International, 2003, 36, 515-522.	3.7	53
104	Large-scale parallel computation for the reconstruction of natural stress corrosion cracks from eddy current testing signals. NDT and E International, 2003, 36, 449-459.	3.7	47
105	Fast numerical calculation for crack modeling in eddy current testing of ferromagnetic materials. Journal of Applied Physics, 2003, 94, 5866-5872.	2.5	11
106	Development of Eddy Current Testing Probe for Thick-Walled Metal Plate and Quantitative Evaluation of Crackes.. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2003, 69, 455-462.	0.2	4
107	Characterization of Multiple Cracks from Eddy Current Testing Signals by a Template Matching Method and Inverse Analysis. , 2003, , 185-194.		1
108	Magnetic force microscopy observation of sensitized Inconel 600. Journal of Applied Physics, 2002, 91, 7011.	2.5	6

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109	Profile reconstruction of simulated natural cracks from eddy current signals. NDT and E International, 2002, 35, 9-18.	3.7	21
110	Probabilistic Approach to Rationalization of Plants Maintenance.. Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 2001, 67, 2381-2386.	0.2	0
111	Experimental and numerical evaluation of rotation speed degradation of radial type superconducting magnetic bearing. Physica C: Superconductivity and Its Applications, 2001, 357-360, 882-885.	1.2	10
112	Application of High-Temperature Superconductors to Enhance Nuclear Fusion Reactors. Fusion Science and Technology, 1999, 36, 92-103.	0.6	2
113	Evaluation of flux flow resistivity of high Tc superconducting cable for application to fusion reactors. Fusion Engineering and Design, 1998, 42, 409-415.	1.9	0
114	Applicability of High Tc Superconducting Plasma Stabilizer to Tokamak Reactor.. Nippon Genshiryoku Gakkaishi/Journal of the Atomic Energy Society of Japan, 1998, 40, 387-396.	0.0	0
115	Reduction of toroidal ripple by using high Tc superconductors. Fusion Engineering and Design, 1995, 27, 528-535.	1.9	2
116	Particle Simulation of Relativistic Charged Beams Using Integral Kernel Method. Japanese Journal of Applied Physics, 1995, 34, 661-669.	1.5	0
117	Evaluation of CVD Diamond Coating Using Back-Reflected Rayleigh Surface Wave. Solid State Phenomena, 0, , 117-122.	0.3	1
118	EMAR monitoring system applied to the thickness reduction of carbon steel in a corrosive environment. Materials and Corrosion - Werkstoffe Und Korrosion, 0, , .	1.5	4