

# Tetsuji Matsuo

## List of Publications by Citations

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93  
papers

773  
citations

14  
h-index

23  
g-index

108  
ext. papers

900  
ext. citations

1.7  
avg, IF

4.42  
L-index

#	Paper	IF	Citations
93	Generalization of the Classical Method for Calculating Dynamic Hysteresis Loops in Grain-Oriented Electrical Steels. <i>IEEE Transactions on Magnetics</i> , <b>2008</b> , 44, 2113-2126	2	63
92	Optimization of Inductors Using Evolutionary Algorithms and Its Experimental Validation. <i>IEEE Transactions on Magnetics</i> , <b>2010</b> , 46, 3393-3396	2	48
91	An identification method of play model with input-dependent shape function. <i>IEEE Transactions on Magnetics</i> , <b>2005</b> , 41, 3112-3114	2	46
90	Anisotropic Vector Hysteresis Model Using an Isotropic Vector Play Model. <i>IEEE Transactions on Magnetics</i> , <b>2010</b> , 46, 3041-3044	2	40
89	Cauer Ladder Network Representation of Eddy-Current Fields for Model Order Reduction Using Finite-Element Method. <i>IEEE Transactions on Magnetics</i> , <b>2018</b> , 54, 1-4	2	29
88	Iron Loss Estimation Method for Rotating Machines Taking Account of Hysteretic Property. <i>IEEE Transactions on Magnetics</i> , <b>2015</b> , 51, 1-4	2	29
87	Dynamic and Anisotropic Vector Hysteresis Model Based on Isotropic Vector Play Model for Nonoriented Silicon Steel Sheet. <i>IEEE Transactions on Magnetics</i> , <b>2012</b> , 48, 215-218	2	27
86	Eddy-current analysis using vector hysteresis models with play and stop hysterons. <i>IEEE Transactions on Magnetics</i> , <b>2000</b> , 36, 1172-1177	2	27
85	Cauer Circuit Representation of the Homogenized Eddy-Current Field Based on the Legendre Expansion for a Magnetic Sheet. <i>IEEE Transactions on Magnetics</i> , <b>2016</b> , 52, 1-4	2	26
84	Application of stop and play models to the representation of magnetic characteristics of silicon steel sheet. <i>IEEE Transactions on Magnetics</i> , <b>2003</b> , 39, 1361-1364	2	24
83	Two Types of Isotropic Vector Play Models and Their Rotational Hysteresis Losses. <i>IEEE Transactions on Magnetics</i> , <b>2008</b> , 44, 898-901	2	23
82	Isotropic vector hysteresis represented by superposition of stop hysteron models. <i>IEEE Transactions on Magnetics</i> , <b>2001</b> , 37, 3357-3361	2	22
81	Stop model with input-dependent shape function and its identification methods. <i>IEEE Transactions on Magnetics</i> , <b>2004</b> , 40, 1776-1783	2	18
80	Representation Theorems for stop and play models with input-dependent shape functions. <i>IEEE Transactions on Magnetics</i> , <b>2005</b> , 41, 1548-1551	2	18
79	Macroscopic magnetization modeling of silicon steel sheets using an assembly of six-domain particles. <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 17D126	2.5	14
78	Rotational Saturation Properties of Isotropic Vector Hysteresis Models Using Vectorized Stop and Play Hysterons. <i>IEEE Transactions on Magnetics</i> , <b>2008</b> , 44, 3185-3188	2	13
77	Space-Time Finite Integration Method for Electromagnetic Field Computation. <i>IEEE Transactions on Magnetics</i> , <b>2011</b> , 47, 1530-1533	2	12

76	Loss Calculation Method Considering Hysteretic Property With Play Model in Finite Element Magnetic Field Analysis. <i>IEEE Transactions on Magnetics</i> , <b>2014</b> , 50, 381-384	2	11
75	Magnetic Field Analysis of Ring Core Taking Account of Hysteretic Property Using Play Model. <i>IEEE Transactions on Magnetics</i> , <b>2012</b> , 48, 3375-3378	2	11
74	A Vector Play Model for Finite-Element Eddy-Current Analysis Using the Newton-Raphson Method. <i>IEEE Transactions on Magnetics</i> , <b>2013</b> , 49, 1689-1692	2	10
73	Simple modeling of the AC hysteretic property of a grain-oriented silicon steel sheet. <i>IEEE Transactions on Magnetics</i> , <b>2006</b> , 42, 919-922	2	10
72	High Frequency Nonlinear Modeling of Magnetic Sheets using Polynomial Expansions for Eddy-current Field. <i>IEEJ Transactions on Power and Energy</i> , <b>2017</b> , 137, 162-172	0.2	10
71	Three dimensional ray tracing of whistler mode waves in a non-dipolar magnetosphere.. <i>Journal of Geomagnetism and Geoelectricity</i> , <b>1985</b> , 37, 945-956		10
70	Matrix Formulation of the Cauer Ladder Network Method for Efficient Eddy-Current Analysis. <i>IEEE Transactions on Magnetics</i> , <b>2018</b> , 54, 1-5	2	9
69	Comparison of Rotational Hysteretic Properties of Isotropic Vector Stop Models. <i>IEEE Transactions on Magnetics</i> , <b>2009</b> , 45, 1194-1197	2	9
68	Electromagnetic Field Computation Using Space-Time Grid and Finite Integration Method. <i>IEEE Transactions on Magnetics</i> , <b>2010</b> , 46, 3241-3244	2	8
67	A Study of Representation of Hysteretic Characteristics by Stop and Play Models. <i>IEEJ Transactions on Electronics, Information and Systems</i> , <b>2003</b> , 123, 1958-1963	0.1	8
66	Representation of AC hysteretic Characteristics of silicon steel sheet using simple excess eddy-current loss approximation. <i>IEEE Transactions on Magnetics</i> , <b>2005</b> , 41, 1544-1547	2	8
65	Cauer Ladder Network Representation of a Nonlinear Eddy-Current Field Using a First-Order Approximation. <i>IEEE Transactions on Magnetics</i> , <b>2020</b> , 56, 1-4	2	7
64	Multi-Port Model Order Reduction Using a Matrix Cauer Ladder Network. <i>IEEE Transactions on Magnetics</i> , <b>2020</b> , 56, 1-5	2	7
63	Cauer Ladder Network With Multiple Expansion Points for Efficient Model Order Reduction of Eddy-Current Field. <i>IEEE Transactions on Magnetics</i> , <b>2019</b> , 55, 1-4	2	7
62	Experimental and Simulation Modeling Studies of Magnetic Properties of Ni-Zn Ferrite Cores under DC Bias. <i>Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy</i> , <b>2014</b> , 61, S238-S241	0.2	7
61	Generalization of an Isotropic Vector Hysteresis Model Represented by the Superposition of Stop Models Identification and Rotational Hysteresis Loss. <i>IEEE Transactions on Magnetics</i> , <b>2007</b> , 43, 1389-1392	2	7
60	Time-periodic finite-element method for hysteretic eddy-current analysis. <i>IEEE Transactions on Magnetics</i> , <b>2002</b> , 38, 549-552	2	7
59	A Simplified Domain Structure Model Exhibiting the Pinning Field. <i>IEEE Transactions on Magnetics</i> , <b>2013</b> , 49, 1829-1832	2	6

58	A Simple Sub-Grid Scheme Using Space-Time Finite Integration Method. <i>IEEE Transactions on Magnetics</i> , <b>2015</b> , 51, 1-4	2	6
57	Efficient Linear Solvers for Mortar Finite-Element Method. <i>IEEE Transactions on Magnetics</i> , <b>2007</b> , 43, 1469-1472	2	6
56	Dynamical Model of an Electromagnet using Cauer Ladder Network Representation of Eddy-current Fields. <i>IEEJ Journal of Industry Applications</i> , <b>2018</b> , 7, 305-313	0.7	6
55	Model Order Reduction of an Induction Motor Using a Cauer Ladder Network. <i>IEEE Transactions on Magnetics</i> , <b>2020</b> , 56, 1-4	2	5
54	Modal Decomposition of 3-D Quasi-Static Maxwell Equations by Cauer Ladder Network Representation. <i>IEEE Transactions on Magnetics</i> , <b>2020</b> , 56, 1-4	2	5
53	Anisotropic Vector Play Model Incorporating Decomposed Shape Functions. <i>IEEE Transactions on Magnetics</i> , <b>2016</b> , 52, 1-4	2	5
52	Geometrical Formulation of 3-D Space-Time Finite Integration Method. <i>IEEE Transactions on Magnetics</i> , <b>2013</b> , 49, 1693-1696	2	5
51	A Method for Optimal Identification of a Stop Model With Input-Dependent Shape Function. <i>IEEE Transactions on Magnetics</i> , <b>2006</b> , 42, 3818-3824	2	5
50	Simulation of the stress dependence of hysteresis loss using an energy-based domain model. <i>AIP Advances</i> , <b>2018</b> , 8, 047501	1.5	5
49	Ladder Circuit Modeling of Dynamic Hysteretic Property Representing Excess Eddy-Current Loss. <i>IEEE Transactions on Magnetics</i> , <b>2018</b> , 54, 1-4	2	5
48	Hysteresis Loss Analysis of Laminated Iron Core by Using Homogenization Method Taking Account of Hysteretic Property. <i>IEEE Transactions on Magnetics</i> , <b>2017</b> , 53, 1-4	2	4
47	A Basic Theory of Induction Heating for a Wind-Powered Thermal Energy System. <i>IEEE Transactions on Magnetics</i> , <b>2017</b> , 53, 1-5	2	4
46	Finite-Element Analysis of Unbounded Eddy-Current Problems Using Cauer Ladder Network Method. <i>IEEE Transactions on Magnetics</i> , <b>2018</b> , 54, 1-4	2	4
45	Equivalent Circuit Modeling of DC and AC Ferrite Magnetic Properties Using H-Input and B-Input Play Models. <i>IEEE Transactions on Magnetics</i> , <b>2013</b> , 49, 1985-1988	2	4
44	Identification of a Generalized 3-D Vector Hysteresis Model Through the Superposition of Stop- and Play-Based Scalar Models. <i>IEEE Transactions on Magnetics</i> , <b>2007</b> , 43, 2965-2967	2	4
43	3-D magnetohydrodynamic field computation of supersonic duct flow of weakly ionized plasma. <i>IEEE Transactions on Magnetics</i> , <b>2003</b> , 39, 1444-1447	2	4
42	Pinning field representation using play hysterons for stress-dependent domain-structure model. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2020</b> , 499, 166303	2.8	4
41	Magnetization analysis of stepped giant magneto impedance sensor using assembled domain structure model. <i>International Journal of Applied Electromagnetics and Mechanics</i> , <b>2016</b> , 52, 541-546	0.4	4

40	Dynamic hysteresis modeling of silicon steel sheet considering excess eddy-current loss. <i>International Journal of Applied Electromagnetics and Mechanics</i> , <b>2019</b> , 59, 217-226	0.4	3
39	Physical Cauer circuits in nonlinear eddy-current modeling. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2020</b> , 508, 166850	2.8	3
38	Input and Output Power in Finite-Element Analysis of Electric Machines Taking Account of Hysteretic Property. <i>IEEE Transactions on Magnetics</i> , <b>2018</b> , 54, 1-4	2	3
37	Efficient circuit representation of eddy-current fields. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , <b>2017</b> , 36, 1457-1473	0.7	3
36	Demagnetizing Field in Micromagnetic Simulation Under Periodic Boundary Conditions. <i>IEEE Transactions on Magnetics</i> , <b>2011</b> , 47, 902-905	2	3
35	Numerical analysis of bifurcations in Duffing's equation with hysteretic functions. <i>Electronics and Communications in Japan, Part III: Fundamental Electronic Science (English Translation of Denshi Tsushin Gakkai Ronbunshi)</i> , <b>1992</b> , 75, 61-72		3
34	Steady-State Analysis of Hysteretic Magnetic Field Problems Using a Parallel Time-Periodic Explicit-Error Correction Method. <i>IEEE Transactions on Magnetics</i> , <b>2017</b> , 53, 1-4	2	2
33	Postcorrection of Current/Voltage and Electromagnetic Force for Efficient Hysteretic Magnetic Field Analysis. <i>IEEE Transactions on Magnetics</i> , <b>2017</b> , 53, 1-4	2	2
32	Optimal Subgrid Connection for Space-Time Finite Integration Technique. <i>IEEE Transactions on Magnetics</i> , <b>2017</b> , 53, 1-4	2	2
31	Space-Time PML and Subgrid Connections for Finite Integration Method. <i>IEEE Transactions on Magnetics</i> , <b>2016</b> , 52, 1-4	2	2
30	Reduction of Unphysical Wave Reflection Arising From Space-Time Finite Integration Method. <i>IEEE Transactions on Magnetics</i> , <b>2014</b> , 50, 177-180	2	2
29	DC Bias Effect on the Magnetic Properties in NiZn Ferrite. <i>Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy</i> , <b>2014</b> , 61, S245-S247	0.2	2
28	Equivalent Circuit in Cauer Form for Eddy Current Field Including a Translational Mover. <i>IEEE Transactions on Magnetics</i> , <b>2020</b> , 56, 1-7	2	2
27	Comparison Study of First-Order Approximations of Nonlinear Eddy-Current Field Using Cauer Ladder Network Method. <i>IEEE Transactions on Magnetics</i> , <b>2021</b> , 57, 1-4	2	2
26	The domain structure model including pinning effect based on the statistical distribution function <b>2016</b> ,		2
25	Pinning Field Modeling Using Stop Hysterons for Multi-domain Particle Model <b>2019</b> ,		2
24	Efficient multiscale magnetic-domain analysis of iron-core material under mechanical stress. <i>AIP Advances</i> , <b>2018</b> , 8, 056617	1.5	2
23	Partially Implicit Method for Fast Magnetization Analysis Using Assembled Domain Structure Model. <i>IEEE Transactions on Magnetics</i> , <b>2017</b> , 53, 1-4	2	1

22	Optimal subgrid connection for space-time finite integration technique <b>2016</b> ,		1
21	Preliminary Study of SpaceTime Finite-Element Eddy-Current Analysis. <i>IEEE Transactions on Magnetics</i> , <b>2016</b> , 52, 1-4	2	1
20	Automatic mapping operator construction for subspace correction method to solve a series of linear systems. <i>JSIAM Letters</i> , <b>2017</b> , 9, 25-28	0.2	1
19	Dynamical model of an electromagnet by cauer ladder network representation of eddy-current fields <b>2017</b> ,		1
18	Finite element analysis of a ferrite-core inductor with direct current bias current using an equivalent-circuit model of dynamic hysteretic properties. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 17A330 <sup>2.5</sup>		1
17	CFL Conditions for Finite Integration Methods on Triangular Meshes. <i>IEEE Transactions on Magnetics</i> , <b>2009</b> , 45, 1348-1351	2	1
16	3D and 4D space-time grids for electromagnetic wave computation using finite integration method <b>2012</b> ,		1
15	Parallel computation for high speed duct flow of weakly ionized plasma <b>2000</b> ,		1
14	A method for numerical analysis of bifurcation of periodic solutions in nonautonomous systems with hysteretic elements. <i>Electronics and Communications in Japan, Part III: Fundamental Electronic Science (English Translation of Denshi Tsushin Gakkai Ronbunshi)</i> , <b>1991</b> , 74, 33-42		1
13	Improvement of alternating magnetic characteristics represented by play model. <i>International Journal of Applied Electromagnetics and Mechanics</i> , <b>2016</b> , 52, 1425-1432	0.4	1
12	Eddy-Current Field Analysis in Laminated Iron Cores Using Multi-Scale Model Order Reduction. <i>IEEE Transactions on Magnetics</i> , <b>2021</b> , 57, 1-4	2	1
11	Nonlinear Multi-Scale Model Order Reduction of Eddy-Current Problems. <i>IEEE Transactions on Magnetics</i> , <b>2021</b> , 1-1	2	1
10	Nonlinear Model Order Reduction of Induction Motors Using Parameterized Cauer Ladder Network Method. <i>IEEE Transactions on Magnetics</i> , <b>2022</b> , 1-1	2	1
9	Reduced Order Modeling Based on Multiport Cauer Ladder Network for Space Harmonics of Air-gap Flux Density in Cage Induction Motor. <i>IEEE Transactions on Magnetics</i> , <b>2022</b> , 1-1	2	0
8	Acceleration of Transient Non-Linear Electromagnetic Field Analyses Using an Automated Subspace Correction Method. <i>IEEE Transactions on Magnetics</i> , <b>2019</b> , 55, 1-4	2	
7	CFL Conditions for Finite Integration Methods Using Parallelogram and Parallelepiped Grids. <i>IEEE Transactions on Magnetics</i> , <b>2010</b> , 46, 3014-3017	2	
6	Stability analysis of periodic solutions in nonautonomous systems with hysteretic elements. <i>Electronics and Communications in Japan, Part III: Fundamental Electronic Science (English Translation of Denshi Tsushin Gakkai Ronbunshi)</i> , <b>1993</b> , 76, 1-13		
5	Finite Element Magnetic Field Analysis of Permanent Magnet Synchronous Motor Taking Account of Hysteretic Property. <i>IEEJ Transactions on Industry Applications</i> , <b>2019</b> , 139, 513-522	0.2	

4	Improvement of Representation of Rotational Hysteresis Loss by Isotropic Vector Play Model. <i>IEEJ Transactions on Power and Energy</i> , <b>2017</b> , 137, 216-222	0.2
3	Several Modeling Methods for Representation of AC Magnetic Properties of Electrical Steel Sheets Taking Account of Skin Effect. <i>IEEJ Transactions on Power and Energy</i> , <b>2009</b> , 129, 421-427	0.2
2	Multiport Model Order Reduction With Multiple Expansion Points. <i>IEEE Transactions on Magnetics</i> , <b>2021</b> , 57, 1-5	2
1	Numerical Stability Analysis of Space-Time Finite Integration Method Based on the Dependent Domain Concept. <i>IEEE Transactions on Magnetics</i> , <b>2022</b> , 1-1	2