Paavo Rasilo

List of Publications by Year
in descending order

107	1,112	471509 17	526287 27
papers	citations	h-index	g-index

107	107	107	771
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Small-signal modeling and optimal operating condition of magnetostrictive energy harvester. Journal of Magnetism and Magnetic Materials, 2022, 547, 168819.	2.3	7
2	Experimental characterization of the effect of uniaxial stress on magnetization and iron losses of electrical steel sheets cut by punching process. Journal of Magnetism and Magnetic Materials, 2022, 549, 168983.	2.3	6
3	2-D Analytical Model for Computing Eddy-Current Loss in Nonlinear Thick Steel Laminations. IEEE Transactions on Magnetics, 2022, 58, 1-4.	2.1	3
4	1-D FEM-Based Approach for Extracting Dimension-Independent Material Properties of Mn-Zn Toroidal Ferrite Cores. IEEE Transactions on Magnetics, 2022, 58, 1-4.	2.1	2
5	Real-Time Control of an IPMSM Using Model Order Reduction. IEEE Transactions on Industrial Electronics, 2021, 68, 2005-2014.	7.9	14
6	3-D Magneto-Mechanical Finite Element Analysis of Galfenol-Based Energy Harvester Using an Equivalent Stress Model. IEEE Transactions on Magnetics, 2021, 57, 1-5.	2.1	7
7	Analysis of Electromagnetic Force Ripple in a Bearingless Synchronous Reluctance Motor. IEEE Transactions on Magnetics, 2021, 57, 1-8.	2.1	3
8	Permeability and resistivity estimations of SMC material particles from eddy current simulations. Journal of Magnetism and Magnetic Materials, 2021, 524, 167663.	2.3	6
9	Alternating and rotational loss prediction accuracy of vector Jiles-Atherton model. Journal of Magnetism and Magnetic Materials, 2021, 527, 167690.	2.3	6
10	Comparison of 3-D and 2-D models of a soft magnetic composite material. Journal of Magnetism and Magnetic Materials, 2021, 536, 168067.	2.3	2
11	Finite-Element Modeling and Characterization of Iron Losses in 12 mm Thick Steel Laminations Including the Effect of Cutting. IEEE Access, 2021, 9, 115710-115718.	4.2	4
12	Efficient finite element modelling of litz wires in toroidal inductors. IET Power Electronics, 2021, 14, 2610-2619.	2.1	5
13	Analysis of the Magneto-Mechanical Anisotropy of Steel Sheets in Electrical Applications. IEEE Transactions on Magnetics, 2020, 56, 1-4.	2.1	5
14	Multi-Axial Sliced Finite-Element Model for Toroidal Inductors. IEEE Transactions on Magnetics, 2020, 56, 1-6.	2.1	3
15	Modeling a Fe-Ga energy harvester fitted with magnetic closure using 3D magneto-mechanical finite element model. Journal of Magnetism and Magnetic Materials, 2020, 500, 166390.	2.3	8
16	Representation of anisotropic magnetic characteristic observed in a non-oriented silicon steel sheet. AIP Advances, 2020, 10, .	1.3	7
17	Hysteresis and <scp>eddyâ€current</scp> losses in electrical steel utilising edge degradation due to cutting effects. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2020, 33, e2781.	1.9	5
18	Domain Decomposition Technique With Subdomain Pre-Processing in 2-D Simulations of Wireless Power Transfer. IEEE Transactions on Magnetics, 2020, 56, 1-4.	2.1	4

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19	Permeability Estimations of SMC Material Particles. IEEE Transactions on Magnetics, 2020, 56, 1-7.	2.1	13
20	Recursive Domain Decomposition Approach in 2-D Time-Harmonic Wireless Power Transfer Simulations Considering Litz Wires. IEEE Transactions on Magnetics, 2020, 56, 1-10.	2.1	1
21	Electromagnetic Modeling of Ferrites Using Shell Elements and Random Grain Structures. IEEE Transactions on Magnetics, 2020, 56, 1-4.	2.1	2
22	Finite Element Method Based Estimation of Critical Current Density of NbTi. IEEE Transactions on Applied Superconductivity, 2020, 30, 1-7.	1.7	1
23	Comparison of Anisotropic Energy-Based and Jilesâ€“Atherton Models of Ferromagnetic Hysteresis. IEEE Transactions on Magnetics, 2020, 56, 1-7.	2.1	8
24	Modeling of multi-axial stress dependent iron losses in electrical steel sheets. Journal of Magnetism and Magnetic Materials, 2020, 504, 166612.	2.3	7
25	Simulink Model for PWM-Supplied Laminated Magnetic Cores Including Hysteresis, Eddy-Current, and Excess Losses. IEEE Transactions on Power Electronics, 2019, 34, 1683-1695.	7.9	24
26	Effect of multi-axial stress on iron losses of electrical steel sheets. Journal of Magnetism and Magnetic Materials, 2019, 469, 19-27.	2.3	41
27	Producing 3-D Imitations of Soft Magnetic Composite Material Geometries. IEEE Transactions on Magnetics, 2019, 55, 1-10.	2.1	7
28	Dynamic modelling of gridâ€connected permanent magnet synchronous generator wind turbine: rectifier dynamics and control design. Journal of Engineering, 2019, 2019, 5202-5207.	1.1	5
29	Finite element analysis of magnetostrictive energy harvesting concept device utilizing thermodynamic magneto-mechanical model. Journal of Magnetism and Magnetic Materials, 2019, 486, 165275.	2.3	16
30	Flexible identification procedure for thermodynamic constitutive models for magnetostrictive materials. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20180280.	2.1	3
31	Rotational Single Sheet Tester for Multiaxial Magneto-Mechanical Effects in Steel Sheets. IEEE Transactions on Magnetics, 2019, 55, 1-10.	2.1	18
32	Equivalent Strain and Stress Models for the Effect of Mechanical Loading on the Permeability of Ferromagnetic Materials. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	11
33	Effect of Magnetic Forces and Magnetostriction on the Stator Vibrations of a Bearingless Synchronous Reluctance Motor. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	11
34	Mimicking soft magnetic composite geometries algorithmically. International Journal of Applied Electromagnetics and Mechanics, 2019, 59, 201-208.	0.6	2
35	Experimental investigation on a Fe-Ga close yoke vibrational harvester by matching magnetic and mechanical biases. Journal of Magnetism and Magnetic Materials, 2019, 469, 354-363.	2.3	22
36	A Simple and Efficient Quasi-3D Magnetic Equivalent Circuit for Surface Axial Flux Permanent Magnet Synchronous Machines. IEEE Transactions on Industrial Electronics, 2019, 66, 8318-8333.	7.9	49

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37	Effect of Punching the Electrical Sheets on Optimal Design of a Permanent Magnet Synchronous Motor. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	15
38	Stable Adaptive Method to Solve FEM Coupled With Jilesâ€“Atherton Hysteresis Model. IEEE Transactions on Magnetics, 2018, 54, 1-8.	2.1	7
39	Prospects and Limitations of Power Balance Approach for Studying Forces and Electromagnetic Damping in Electrical Machines. IEEE Transactions on Magnetics, 2018, 54, 1-8.	2.1	3
40	Efficient finite element method to estimate eddy current loss due to random interlaminar contacts in electrical sheets. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2018, 31, e2254.	1.9	1
41	Computation of Hysteresis Torque and Losses in a Bearingless Synchronous Reluctance Machine. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	7
42	Evaluation of Dead-Time Effect of Grid-Connected Inverters Using Broadband Methods. IFAC-PapersOnLine, 2018, 51, 449-454.	0.9	6
43	Model Order Reduction of Bearingless Reluctance Motor Including Eccentricity. , 2018, , .		2
44	Flux-Weakening Control for IPMSM Employing Model Order Reduction. , 2018, , .		3
45	Sensitivity Analysis of Inverse Thermal Modeling to Determine Power Losses in Electrical Machines. IEEE Transactions on Magnetics, 2018, 54, 1-5.	2.1	10
46	Thermographic Measurement and Simulation of Power Losses Due to Interlaminar Contacts in Electrical Sheets. IEEE Transactions on Instrumentation and Measurement, 2018, 67, 2628-2634.	4.7	8
47	Identification of Magnetic Properties for Cutting Edge of Electrical Steel Sheets. IEEE Transactions on Industry Applications, 2017, 53, 1049-1053.	4.9	29
48	Modeling the Effect of Multiaxial Stress on Magnetic Hysteresis of Electrical Steel Sheets: A Comparison. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	14
49	Model for Stress-Dependent Hysteresis in Electrical Steel Sheets Including Orthotropic Anisotropy. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	7
50	Magneto-mechanical modeling of electrical steel sheets. Journal of Magnetism and Magnetic Materials, 2017, 439, 82-90.	2.3	30
51	Modelling anisotropy in non-oriented electrical steel sheet using vector Jilesâ€“Atherton model. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2017, 36, 764-773.	0.9	7
52	Model Order Reduction of Electrical Machines With Multiple Inputs. IEEE Transactions on Industry Applications, 2017, 53, 3355-3360.	4.9	14
53	Influence of the rotor eccentricity on the torque of a cage induction machine. Archives of Electrical Engineering, 2017, 66, 383-396.	1.0	6
54	Coupling dynamic electromagnetic finite element models to circuit simulators by using model order reduction. , 2017, , .		2

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55	Experimental and theoretical study of interlaminar eddy current loss in laminated cores. , 2017, , .		4
56	Model order reduction of electrical machines with multiple inputs. , 2016, , .		1
57	Magneto-mechanical analysis of an axially laminated synchronous reluctance machine. , 2016, , .		2
58	Identification of magnetic properties for cutting edge of electrical steel sheets. , 2016, , .		4
59	Modelling the effect of multiaxial stress on magnetic hysteresis of electrical steel sheets: A comparison. , 2016, , .		1
60	Analysis of iron losses on the cutting edges of induction motor core laminations. , 2016, , .		10
61	Eddy current loss calculation in burred laminated cores. , 2016, , .		1
62	Demagnetization field in a uniformly magnetized ellipsoid embedded in an infinite anisotropic media. , 2016, , .		0
63	Analysis of 37-kW Converter-Fed Induction Motor Losses. IEEE Transactions on Industrial Electronics, 2016, 63, 5357-5365.	7.9	28
64	Magnetomechanical Model for Hysteresis in Electrical Steel Sheet. IEEE Transactions on Magnetics, 2016, 52, 1-9.	2.1	25
65	Multiaxial magneto-mechanical modelling of electrical machines with hysteresis. , 2016, , .		5
66	Coupled field and space-vector equations of bearingless synchronous reluctance machine. , 2016, , .		7
67	Anisotropic model for Villari effect in non-oriented electrical steel sheets. , 2016, , .		1
68	Power balance approach to study electromagnetic damping in rotor dynamics. , 2016, , .		1
69	Modeling of Hysteresis Losses in Ferromagnetic Laminations Under Mechanical Stress. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	35
70	Numerical Analysis of the Power Balance of an Electrical Machine With Rotor Eccentricity. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	12
71	Coupled Magneto-Mechanical Analysis of Iron Sheets Under Biaxial Stress. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	17
72	Energy-Preserving Methods and Torque Computation From Energy Balance in Electrical Machine Simulations. IEEE Transactions on Magnetics, 2016, 52, 1-8.	2.1	1

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73	Model of Magnetic Anisotropy of Non-Oriented Steel Sheets for Finite-Element Method. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	9
74	Estimation of additional losses due to random contacts at the edges of stator of an electrical machine. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2015, 34, 1501-1510.	0.9	6
75	Proper orthogonal decomposition for order reduction of permanent magnet machine model. , 2015, , .		5
76	Measurement of torque harmonics of a cage induction machine under rotor eccentricity. , 2015, , .		1
77	Analytical model for magnetic anisotropy of non-oriented steel sheets. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2015, 34, 1475-1488.	0.9	14
78	Anisotropic and Strain-Dependent Model of Magnetostriction in Electrical Steel Sheets. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	18
79	Effect of Mechanical Stress on Excess Loss of Electrical Steel Sheets. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	37
80	Closure to Discussion on â€œEffect of Multilevel Inverter Supply on Core Losses in Magnetic Materials and Electrical Machinesâ€• IEEE Transactions on Energy Conversion, 2015, 30, 1605-1605.	5.2	4
81	The effect of common-mode voltage elimination on the iron loss in machine core laminations of multilevel drives. , 2015, , .		2
82	Effect of stress on excess loss of electrical steel sheets. , 2015, , .		0
83	Identification of Synchronous Machine Magnetization Characteristics From Calorimetric Core-Loss and No-Load Curve Measurements. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	8
84	The Effect of Common-Mode Voltage Elimination on the Iron Loss in Machine Core Laminations of Multilevel Drives. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	10
85	Uncertainty propagation of iron loss from characterization measurements to computation of electrical machines. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2015, 34, 624-636.	0.9	1
86	Effect of Multilevel Inverter Supply on Core Losses in Magnetic Materials and Electrical Machines. IEEE Transactions on Energy Conversion, 2015, 30, 736-744.	5.2	27
87	Homogenization Technique for Axially Laminated Rotors of Synchronous Reluctance Machines. IEEE Transactions on Magnetics, 2015, 51, 1-6.	2.1	14
88	Computation of Torque of an Electrical Machine With Different Types of Finite Element Mesh in the Air Gap. IEEE Transactions on Magnetics, 2014, 50, 1-9.	2.1	14
89	Computation of the Inverse Magnetostriction and its Application in Mechanical Stress Sensing. , 2014, , .		1
90	Comparison of Finite-Element-Based State-Space Models for PM Synchronous Machines. IEEE Transactions on Energy Conversion, 2014, 29, 535-543.	5.2	12

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91	Instantaneous Power Balance in Finite-Element Simulation of Electrical Machines. IEEE Transactions on Magnetics, 2014, 50, 1-7.	2.1	3
92	Effect of Rotor Pole-Shoe Construction on Losses of Inverter-Fed Synchronous Motors. IEEE Transactions on Industry Applications, 2014, 50, 208-217.	4.9	7
93	Segregation of Iron Losses From Rotational Field Measurements and Application to Electrical Machine. IEEE Transactions on Magnetics, 2014, 50, 893-896.	2.1	34
94	Iron Losses, Magnetoelasticity and Magnetostriction in Ferromagnetic Steel Laminations. IEEE Transactions on Magnetics, 2013, 49, 2041-2044.	2.1	11
95	Evaluation and comparison of different numerical computation methods for the electromagnetic torque in electrical machines. , 2013, , .		2
96	Experimental determination and numerical evaluation of core losses in a 150â€kVA woundâ€field synchronous machine. IET Electric Power Applications, 2013, 7, 97-105.	1.8	13
97	Magnetomechanical coupled FE simulations of rotating electrical machines. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2013, 32, 1484-1499.	0.9	4
98	Modeling of Losses Due to Inter-Laminar Short-Circuit Currents in Lamination Stacks. Electrical, Control and Communication Engineering, 2013, 3, 31-36.	0.8	5
99	Calorimetric system for measurement of synchronous machine losses. IET Electric Power Applications, 2012, 6, 286.	1.8	13
100	Importance of Iron-Loss Modeling in Simulation of Wound-Field Synchronous Machines. IEEE Transactions on Magnetics, 2012, 48, 2495-2504.	2.1	31
101	Effect of rotor pole-shoe construction on losses of inverter-fed synchronous motors. , 2012, , .		2
102	Contribution of Maxwell Stress in Air on the Deformations of Induction Machines. Journal of Electrical Engineering and Technology, 2012, 7, 336-341.	2.0	6
103	Model of laminated ferromagnetic cores for loss prediction in electrical machines. IET Electric Power Applications, 2011, 5, 580.	1.8	47
104	FEM for Directly Coupled Magneto-Mechanical Phenomena in Electrical Machines. IEEE Transactions on Magnetics, 2010, 46, 2923-2926.	2.1	59
105	Modeling the effect of inverter supply on eddy-current losses in synchronous machines. , 2010, , .		10
106	Identification of Electromagnetic Torque Model for Induction Machines With Numerical Magnetic Field Solution. IEEE Transactions on Magnetics, 2008, 44, 1586-1589.	2.1	7
107	Dynamic electromagnetic torque model and parameter estimation for a deep-bar induction machine. IET Electric Power Applications, 2008, 2, 183-192.	1.8	11