

# Paavo Rasilo

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

97  
papers

732  
citations

13  
h-index

21  
g-index

107  
ext. papers

915  
ext. citations

2.4  
avg, IF

4.48  
L-index

#	Paper	IF	Citations
97	Experimental characterization of the effect of uniaxial stress on magnetization and iron losses of electrical steel sheets cut by punching process. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2022</b> , 549, 168983	2.8	1
96	2D Analytical Model for Computing Eddy-Current Loss in Nonlinear Thick Steel Laminations. <i>IEEE Transactions on Magnetics</i> , <b>2022</b> , 1-1	2	
95	Efficient finite element modelling of litz wires in toroidal inductors. <i>IET Power Electronics</i> , <b>2021</b> , 14, 2610-2	2	3
94	Small-signal modeling and optimal operating condition of magnetostrictive energy harvester. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2021</b> , 168819	2.8	0
93	Permeability and resistivity estimations of SMC material particles from eddy current simulations. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2021</b> , 524, 167663	2.8	3
92	Alternating and rotational loss prediction accuracy of vector Jiles-Atherton model. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2021</b> , 527, 167690	2.8	2
91	Real-Time Control of an IPMSM Using Model Order Reduction. <i>IEEE Transactions on Industrial Electronics</i> , <b>2021</b> , 68, 2005-2014	8.9	7
90	3-D Magneto-Mechanical Finite Element Analysis of Galfenol-Based Energy Harvester Using an Equivalent Stress Model. <i>IEEE Transactions on Magnetics</i> , <b>2021</b> , 57, 1-5	2	1
89	Analysis of Electromagnetic Force Ripple in a Bearingless Synchronous Reluctance Motor. <i>IEEE Transactions on Magnetics</i> , <b>2021</b> , 57, 1-8	2	0
88	Comparison of 3-D and 2-D models of a soft magnetic composite material. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2021</b> , 536, 168067	2.8	
87	Finite-Element Modeling and Characterization of Iron Losses in 12 mm Thick Steel Laminations Including the Effect of Cutting. <i>IEEE Access</i> , <b>2021</b> , 9, 115710-115718	3.5	1
86	Electromagnetic Modeling of Ferrites Using Shell Elements and Random Grain Structures. <i>IEEE Transactions on Magnetics</i> , <b>2020</b> , 56, 1-4	2	2
85	Finite Element Method Based Estimation of Critical Current Density of NbTi. <i>IEEE Transactions on Applied Superconductivity</i> , <b>2020</b> , 30, 1-7	1.8	0
84	Comparison of Anisotropic Energy-Based and Jiles-Atherton Models of Ferromagnetic Hysteresis. <i>IEEE Transactions on Magnetics</i> , <b>2020</b> , 56, 1-7	2	3
83	Modeling of multi-axial stress dependent iron losses in electrical steel sheets. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2020</b> , 504, 166612	2.8	1
82	Analysis of the Magneto-Mechanical Anisotropy of Steel Sheets in Electrical Applications. <i>IEEE Transactions on Magnetics</i> , <b>2020</b> , 56, 1-4	2	3
81	Multi-Axial Sliced Finite-Element Model for Toroidal Inductors. <i>IEEE Transactions on Magnetics</i> , <b>2020</b> , 56, 1-6	2	1

80	Modeling a Fe-Ga energy harvester fitted with magnetic closure using 3D magneto-mechanical finite element model. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2020</b> , 500, 166390	2.8	3
79	Representation of anisotropic magnetic characteristic observed in a non-oriented silicon steel sheet. <i>AIP Advances</i> , <b>2020</b> , 10, 065222	1.5	2
78	Hysteresis and eddy-current losses in electrical steel utilising edge degradation due to cutting effects. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , <b>2020</b> , 33, e2781	1	2
77	Domain Decomposition Technique With Subdomain Pre-Processing in 2-D Simulations of Wireless Power Transfer. <i>IEEE Transactions on Magnetics</i> , <b>2020</b> , 56, 1-4	2	2
76	Permeability Estimations of SMC Material Particles. <i>IEEE Transactions on Magnetics</i> , <b>2020</b> , 56, 1-7	2	8
75	Recursive Domain Decomposition Approach in 2-D Time-Harmonic Wireless Power Transfer Simulations Considering Litz Wires. <i>IEEE Transactions on Magnetics</i> , <b>2020</b> , 56, 1-10	2	
74	Dynamic modelling of grid-connected permanent magnet synchronous generator wind turbine: rectifier dynamics and control design. <i>Journal of Engineering</i> , <b>2019</b> , 2019, 5202-5207	0.7	4
73	Finite element analysis of magnetostrictive energy harvesting concept device utilizing thermodynamic magneto-mechanical model. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2019</b> , 486, 165275	2.8	12
72	Flexible identification procedure for thermodynamic constitutive models for magnetostrictive materials. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2019</b> , 475, 20180280	2.4	2
71	Rotational Single Sheet Tester for Multiaxial Magneto-Mechanical Effects in Steel Sheets. <i>IEEE Transactions on Magnetics</i> , <b>2019</b> , 55, 1-10	2	11
70	Simulink Model for PWM-Supplied Laminated Magnetic Cores Including Hysteresis, Eddy-Current, and Excess Losses. <i>IEEE Transactions on Power Electronics</i> , <b>2019</b> , 34, 1683-1695	7.2	15
69	Effect of multi-axial stress on iron losses of electrical steel sheets. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2019</b> , 469, 19-27	2.8	26
68	Producing 3-D Imitations of Soft Magnetic Composite Material Geometries. <i>IEEE Transactions on Magnetics</i> , <b>2019</b> , 55, 1-10	2	6
67	Equivalent Strain and Stress Models for the Effect of Mechanical Loading on the Permeability of Ferromagnetic Materials. <i>IEEE Transactions on Magnetics</i> , <b>2019</b> , 55, 1-4	2	4
66	Effect of Magnetic Forces and Magnetostriction on the Stator Vibrations of a Bearingless Synchronous Reluctance Motor. <i>IEEE Transactions on Magnetics</i> , <b>2019</b> , 55, 1-4	2	6
65	Mimicking soft magnetic composite geometries algorithmically. <i>International Journal of Applied Electromagnetics and Mechanics</i> , <b>2019</b> , 59, 201-208	0.4	2
64	Experimental investigation on a Fe-Ga close yoke vibrational harvester by matching magnetic and mechanical biases. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2019</b> , 469, 354-363	2.8	11
63	A Simple and Efficient Quasi-3D Magnetic Equivalent Circuit for Surface Axial Flux Permanent Magnet Synchronous Machines. <i>IEEE Transactions on Industrial Electronics</i> , <b>2019</b> , 66, 8318-8333	8.9	27

62	Effect of Punching the Electrical Sheets on Optimal Design of a Permanent Magnet Synchronous Motor. <i>IEEE Transactions on Magnetics</i> , <b>2018</b> , 54, 1-4	2	9
61	Stable Adaptive Method to Solve FEM Coupled With Jiles-Atherton Hysteresis Model. <i>IEEE Transactions on Magnetics</i> , <b>2018</b> , 54, 1-8	2	5
60	Prospects and Limitations of Power Balance Approach for Studying Forces and Electromagnetic Damping in Electrical Machines. <i>IEEE Transactions on Magnetics</i> , <b>2018</b> , 54, 1-8	2	1
59	Efficient finite element method to estimate eddy current loss due to random interlaminar contacts in electrical sheets. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , <b>2018</b> , 31, e2254	1	
58	Sensitivity Analysis of Inverse Thermal Modeling to Determine Power Losses in Electrical Machines. <i>IEEE Transactions on Magnetics</i> , <b>2018</b> , 54, 1-5	2	7
57	Thermographic Measurement and Simulation of Power Losses Due to Interlaminar Contacts in Electrical Sheets. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2018</b> , 67, 2628-2634	5.2	5
56	Computation of Hysteresis Torque and Losses in a Bearingless Synchronous Reluctance Machine. <i>IEEE Transactions on Magnetics</i> , <b>2018</b> , 54, 1-4	2	6
55	Evaluation of Dead-Time Effect of Grid-Connected Inverters Using Broadband Methods. <i>IFAC-PapersOnLine</i> , <b>2018</b> , 51, 449-454	0.7	0
54	Flux-Weakening Control for IPMSM Employing Model Order Reduction <b>2018</b> ,		2
53	Identification of Magnetic Properties for Cutting Edge of Electrical Steel Sheets. <i>IEEE Transactions on Industry Applications</i> , <b>2017</b> , 53, 1049-1053	4.3	25
52	Modeling the Effect of Multiaxial Stress on Magnetic Hysteresis of Electrical Steel Sheets: A Comparison. <i>IEEE Transactions on Magnetics</i> , <b>2017</b> , 53, 1-4	2	11
51	Model for Stress-Dependent Hysteresis in Electrical Steel Sheets Including Orthotropic Anisotropy. <i>IEEE Transactions on Magnetics</i> , <b>2017</b> , 53, 1-4	2	5
50	Magneto-mechanical modeling of electrical steel sheets. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2017</b> , 439, 82-90	2.8	24
49	Modelling anisotropy in non-oriented electrical steel sheet using vector Jiles-Atherton model. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , <b>2017</b> , 36, 764-773	0.7	4
48	Model Order Reduction of Electrical Machines With Multiple Inputs. <i>IEEE Transactions on Industry Applications</i> , <b>2017</b> , 53, 3355-3360	4.3	8
47	Influence of the rotor eccentricity on the torque of a cage induction machine. <i>Archives of Electrical Engineering</i> , <b>2017</b> , 66, 383-396		3
46	Experimental and theoretical study of interlaminar eddy current loss in laminated cores <b>2017</b> ,		0
45	Model of Magnetic Anisotropy of Non-Oriented Steel Sheets for Finite-Element Method. <i>IEEE Transactions on Magnetics</i> , <b>2016</b> , 52, 1-4	2	5

44	Multiaxial magneto-mechanical modelling of electrical machines with hysteresis <b>2016,</b>		3
43	Coupled field and space-vector equations of bearingless synchronous reluctance machine <b>2016,</b>		4
42	Anisotropic model for Villari effect in non-oriented electrical steel sheets <b>2016,</b>		1
41	Modeling of Hysteresis Losses in Ferromagnetic Laminations Under Mechanical Stress. <i>IEEE Transactions on Magnetics, 2016, 52, 1-4</i>	2	26
40	Numerical Analysis of the Power Balance of an Electrical Machine With Rotor Eccentricity. <i>IEEE Transactions on Magnetics, 2016, 52, 1-4</i>	2	9
39	Coupled Magneto-Mechanical Analysis of Iron Sheets Under Biaxial Stress. <i>IEEE Transactions on Magnetics, 2016, 52, 1-4</i>	2	11
38	Energy-Preserving Methods and Torque Computation From Energy Balance in Electrical Machine Simulations. <i>IEEE Transactions on Magnetics, 2016, 52, 1-8</i>	2	1
37	Identification of magnetic properties for cutting edge of electrical steel sheets <b>2016,</b>		3
36	Modelling the effect of multiaxial stress on magnetic hysteresis of electrical steel sheets: A comparison <b>2016,</b>		1
35	Analysis of iron losses on the cutting edges of induction motor core laminations <b>2016,</b>		6
34	Eddy current loss calculation in burred laminated cores <b>2016,</b>		1
33	Analysis of 37-kW Converter-Fed Induction Motor Losses. <i>IEEE Transactions on Industrial Electronics, 2016, 63, 5357-5365</i>	8.9	13
32	Magnetomechanical Model for Hysteresis in Electrical Steel Sheet. <i>IEEE Transactions on Magnetics, 2016, 52, 1-9</i>	2	19
31	Identification of Synchronous Machine Magnetization Characteristics From Calorimetric Core-Loss and No-Load Curve Measurements. <i>IEEE Transactions on Magnetics, 2015, 51, 1-4</i>	2	6
30	The Effect of Common-Mode Voltage Elimination on the Iron Loss in Machine Core Laminations of Multilevel Drives. <i>IEEE Transactions on Magnetics, 2015, 51, 1-4</i>	2	8
29	Uncertainty propagation of iron loss from characterization measurements to computation of electrical machines. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2015, 34, 624-636</i>	0.7	1
28	Effect of Multilevel Inverter Supply on Core Losses in Magnetic Materials and Electrical Machines. <i>IEEE Transactions on Energy Conversion, 2015, 30, 736-744</i>	5.4	12
27	Homogenization Technique for Axially Laminated Rotors of Synchronous Reluctance Machines. <i>IEEE Transactions on Magnetics, 2015, 51, 1-6</i>	2	12

26	Estimation of additional losses due to random contacts at the edges of stator of an electrical machine. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , <b>2015</b> , 34, 1501-1510	0.7	6
25	Proper orthogonal decomposition for order reduction of permanent magnet machine model <b>2015</b> ,		3
24	Analytical model for magnetic anisotropy of non-oriented steel sheets. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , <b>2015</b> , 34, 1475-1488	0.7	5
23	Anisotropic and Strain-Dependent Model of Magnetostriction in Electrical Steel Sheets. <i>IEEE Transactions on Magnetics</i> , <b>2015</b> , 51, 1-4	2	14
22	Effect of Mechanical Stress on Excess Loss of Electrical Steel Sheets. <i>IEEE Transactions on Magnetics</i> , <b>2015</b> , 51, 1-4	2	25
21	Closure to Discussion on Effect of Multilevel Inverter Supply on Core Losses in Magnetic Materials and Electrical Machines. <i>IEEE Transactions on Energy Conversion</i> , <b>2015</b> , 30, 1605-1605	5.4	3
20	The effect of common-mode voltage elimination on the iron loss in machine core laminations of multilevel drives <b>2015</b> ,		1
19	Comparison of Finite-Element-Based State-Space Models for PM Synchronous Machines. <i>IEEE Transactions on Energy Conversion</i> , <b>2014</b> , 29, 535-543	5.4	10
18	Instantaneous Power Balance in Finite-Element Simulation of Electrical Machines. <i>IEEE Transactions on Magnetics</i> , <b>2014</b> , 50, 1-7	2	3
17	Effect of Rotor Pole-Shoe Construction on Losses of Inverter-Fed Synchronous Motors. <i>IEEE Transactions on Industry Applications</i> , <b>2014</b> , 50, 208-217	4.3	4
16	Segregation of Iron Losses From Rotational Field Measurements and Application to Electrical Machine. <i>IEEE Transactions on Magnetics</i> , <b>2014</b> , 50, 893-896	2	25
15	Computation of Torque of an Electrical Machine With Different Types of Finite Element Mesh in the Air Gap. <i>IEEE Transactions on Magnetics</i> , <b>2014</b> , 50, 1-9	2	8
14	Iron Losses, Magnetoelasticity and Magnetostriction in Ferromagnetic Steel Laminations. <i>IEEE Transactions on Magnetics</i> , <b>2013</b> , 49, 2041-2044	2	9
13	Evaluation and comparison of different numerical computation methods for the electromagnetic torque in electrical machines <b>2013</b> ,		2
12	Experimental determination and numerical evaluation of core losses in a 150-kVA wound-field synchronous machine. <i>IET Electric Power Applications</i> , <b>2013</b> , 7, 97-105	1.8	13
11	Magnetomechanical coupled FE simulations of rotating electrical machines. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , <b>2013</b> , 32, 1484-1499	0.7	4
10	Modeling of Losses Due to Inter-Laminar Short-Circuit Currents in Lamination Stacks. <i>Electrical, Control and Communication Engineering</i> , <b>2013</b> , 3, 31-36	0.7	5
9	Calorimetric system for measurement of synchronous machine losses. <i>IET Electric Power Applications</i> , <b>2012</b> , 6, 286	1.8	10

8	Importance of Iron-Loss Modeling in Simulation of Wound-Field Synchronous Machines. <i>IEEE Transactions on Magnetics</i> , <b>2012</b> , 48, 2495-2504	2	30
7	Effect of rotor pole-shoe construction on losses of inverter-fed synchronous motors <b>2012</b> ,		2
6	Contribution of Maxwell Stress in Air on the Deformations of Induction Machines. <i>Journal of Electrical Engineering and Technology</i> , <b>2012</b> , 7, 336-341	1.4	6
5	Model of laminated ferromagnetic cores for loss prediction in electrical machines. <i>IET Electric Power Applications</i> , <b>2011</b> , 5, 580	1.8	39
4	Modeling the effect of inverter supply on eddy-current losses in synchronous machines <b>2010</b> ,		10
3	FEM for Directly Coupled Magneto-Mechanical Phenomena in Electrical Machines. <i>IEEE Transactions on Magnetics</i> , <b>2010</b> , 46, 2923-2926	2	51
2	Identification of Electromagnetic Torque Model for Induction Machines With Numerical Magnetic Field Solution. <i>IEEE Transactions on Magnetics</i> , <b>2008</b> , 44, 1586-1589	2	5
1	Dynamic electromagnetic torque model and parameter estimation for a deep-bar induction machine. <i>IET Electric Power Applications</i> , <b>2008</b> , 2, 183-192	1.8	7