Nelson J Batistela

List of Publications by Year
in descending order

72	1,023	516710 16	454955 30
papers	citations	h-index	g-index

72	72	72	849
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An inverse Jiles-Atherton model to take into account hysteresis in time-stepping finite-element calculations. IEEE Transactions on Magnetics, 2002, 38, 797-800.	2.1	121
2	Inverse Jilesâ€“Atherton Vector Hysteresis Model. IEEE Transactions on Magnetics, 2004, 40, 1769-1775.	2.1	110
3	Real Coded Genetic Algorithm for Jilesâ€“Atherton Model Parameters Identification. IEEE Transactions on Magnetics, 2004, 40, 888-891.	2.1	86
4	Synthesis and characterization of the iron oxide magnetic particles coated with chitosan biopolymer. Materials Science and Engineering C, 2008, 28, 509-514.	7.3	76
5	The inverse jiles-atherton model parameters identification. IEEE Transactions on Magnetics, 2003, 39, 1397-1400.	2.1	41
6	Multiobjective Cuckoo Search Algorithm Based on Duffing's Oscillator Applied to Jiles-Atherton Vector Hysteresis Parameters Estimation. IEEE Transactions on Magnetics, 2013, 49, 1745-1748.	2.1	41
7	Evaluation of Hysteresis Losses in Iron Sheets Under DC-biased Inductions. IEEE Transactions on Magnetics, 2009, 45, 1158-1161.	2.1	38
8	A modified Jiles method for hysteresis computation including minor loops. Physica B: Condensed Matter, 2000, 275, 233-237.	2.7	37
9	A general method for coupling static converters with electromagnetic structures. IEEE Transactions on Magnetics, 1997, 33, 2004-2009.	2.1	32
10	Estimation of Three-Phase Induction Motor Equivalent Circuit Parameters from Manufacturer Catalog Data. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2017, 16, 90-107.	0.7	30
11	A new approach for iron losses calculation in voltage fed time stepping finite elements. IEEE Transactions on Magnetics, 2001, 37, 3353-3356.	2.1	29
12	Modeling Ferroresonance Phenomena With a Flux-Current Jiles-Atherton Hysteresis Approach. IEEE Transactions on Magnetics, 2013, 49, 1797-1800.	2.1	26
13	Coupled field and circuit analysis considering the electromagnetic device motion. IEEE Transactions on Magnetics, 2000, 36, 1458-1461.	2.1	22
14	Vector Hysteresis Model Associated to FEM in a Hysteresis Motor Modeling. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	20
15	Rogowski coil current meters. IEEE Potentials, 2008, 27, 40-45.	0.3	16
16	Detection and analysis of rotor faults in induction motors by the measurement of the stray magnetic flux. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2012, 11, 68-80.	0.7	16
17	Multiscale approaches for magneto-elasticity in device simulation. Journal of Magnetism and Magnetic Materials, 2019, 487, 165241.	2.3	15
18	An optimization-oriented sizing model for brushless doubly fed reluctance machines: Development and experimental validation. Electric Power Systems Research, 2016, 132, 125-131.	3.6	14

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19	Nonlinear magnetic field model by FEM taking into account hysteresis characteristics with M-B variables. IEEE Transactions on Magnetics, 2002, 38, 897-900.	2.1	13
20	A Differential Permeability 3-D Formulation for Anisotropic Vector Hysteresis Analysis. IEEE Transactions on Magnetics, 2014, 50, 341-344.	2.1	13
21	Restriction in the determination of the Jiles-Atherton hysteresis model parameters. Journal of Magnetism and Magnetic Materials, 2017, 442, 8-14.	2.3	13
22	Outlier Detection in Buildingsâ€™ Power Consumption Data Using Forecast Error. Energies, 2021, 14, 8325.	3.1	12
23	Synchronous Generator Fault Investigation by Experimental and Finite-Element Procedures. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	11
24	Magnetic Hysteresis Under Compressive Stress: A Multiscale-Jilesâ€“Atherton Approach. IEEE Transactions on Magnetics, 2020, 56, 1-4.	2.1	11
25	Vector Hysteresis Model Associated With FEM in a Self-Excited Induction Generator Modeling. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	10
26	Modeling Magnetic Vector Hysteresis With Play Hysterons. IEEE Transactions on Magnetics, 2007, 43, 1401-1404.	2.1	9
27	Vector Hysteresis Under Nonsinusoidal Induction Waveforms: Modeling and Experimentation. IEEE Transactions on Magnetics, 2008, 44, 906-909.	2.1	9
28	A Method to Detect the Microshock Risk During a Surgical Procedure. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 2335-2342.	4.7	9
29	Influence of rotor design and geometric parameter variation on global performance of Brushless Doubly-Fed Reluctance Machines. , 2014, , .		9
30	Magnetic Aging Effect Losses on Electrical Steels. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	9
31	Induction motor parameter estimation from manufacturer data using genetic algorithms and heuristic relationships. , 2017, , .		9
32	Developments on soft magnetic composites with double layer insulating coating: Synergy between ZnO and B2O3. Journal of Magnetism and Magnetic Materials, 2020, 497, 166023.	2.3	9
33	Coupling static converter with control loop and non-linear electromagnetic devices. IEEE Transactions on Magnetics, 2001, 37, 3514-3517.	2.1	8
34	Comparison of iron losses evaluations by different testing procedures. , 2010, , .		8
35	Core Tester Iron Losses Segregation by Finite Element Modeling. IEEE Transactions on Magnetics, 2012, 48, 715-718.	2.1	8
36	Three-Phase Electromagnetic Device for the Evaluation of the Magnetic Losses in Electric Motorsâ€™ Stators. IEEE Transactions on Energy Conversion, 2015, 30, 515-521.	5.2	7

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37	Study of soft magnetic composites of iron coated with nanoparticles dispersion in liquid glass. Journal of Magnetism and Magnetic Materials, 2019, 487, 165351.	2.3	7
38	Modified-SST for Uniaxial Characterization of Electrical Steel Sheets Under Controlled Induced Voltage and Constant Stress. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 9756-9765.	4.7	7
39	Analysis of Magnetic Hysteresis Loops under Sinusoidal and PWM Voltage Waveforms. , 2005, , .		6
40	Testing strategies to evaluate non-oriented electrical steels losses. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2012, 11, 304-315.	0.7	6
41	An Improved Method for Acquisition of the Parameters of Jiles-Atherton Hysteresis Scalar Model Using Integral Calculus. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2017, 16, 165-179.	0.7	5
42	A general method for coupling electronic circuits with 3D electromagnetic fields. IEEE Transactions on Magnetics, 1998, 34, 3166-3169.	2.1	4
43	Analysis of a rotational single sheet tester using 3D finite element model taking into account hysteresis effect. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2007, 26, 1037-1048.	0.9	4
44	Influence of Shielding on the Magnetic Field Measurement by Direct H-Coil Method in a Double-Yoked SST. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	4
45	Non-invasive monitoring system of synchronous generator using external field. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2017, 16, 70-89.	0.7	4
46	Simplified models for magnetic hysteresis losses evaluation in electromagnetic devices. , 2009, , .		3
47	Hysteresis parameters estimation using a modified harmony search. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2013, 32, 1974-1985.	0.9	3
48	Modelling of the impedance frequency response of transformers at no load and under nominal conditions. IET Electric Power Applications, 2015, 9, 412-419.	1.8	3
49	Comparison and Combination of Techniques for Determining the Parameters of a Magnetic Hysteresis Model. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2019, 18, 408-426.	0.7	3
50	The influence of different voltage waveforms and grain sizes in electrical steels losses. Journal of Magnetism and Magnetic Materials, 2008, 320, e381-e384.	2.3	2
51	RL frequency response modeling of air-cored reactor. , 2014, , .		2
52	Performance comparison between Jiles-Atherton and play vector hysteresis models on field calculation. , 2016, , .		2
53	Vector hysteresis model associated to FEM in a hysteresis motor modeling. , 2016, , .		2
54	CaracterizaÃ§Ã£o magnÃ©tica de lÃ¢minas de aÃ§o silÃ¢cio e avaliaÃ§Ã£o das perdas no ferro sob vÃ¡rios regimes de induÃ§Ã£o. Controle and Automacao, 2002, 13, 156-164.	0.2	2

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55	Acoplamento de conversores estÃ¡ticos com malha de controle e dispositivos eletromagnÃ©ticos nÃ£o-lineares. Controle and Automacao, 2002, 13, 77-83.	0.2	1
56	Bat-inspired optimization approach applied to jiles-atherton hysteresis parameters tuning. , 2014, , .		1
57	A System for Harvesting Energy from Stray Magnetic Fields. Sensing and Imaging, 2015, 16, 1.	1.5	1
58	Multiobjective lightining search applied to Jiles-Atherton hysteresis model parameter estimation. , 2018, , .		1
59	Analysis Of Hysteresis Losses In Iron Sheets Under Arbitrary Voltage Waveforms. EletrÃ´nica De PotÃªncia, 2024, 13, 285-289.	0.1	1
60	Implementation of the Magnetic Anisotropy in 2D Finite Element Method Using the Theory of Orientation Distribution Functions. , 2020, , .		1
61	Quantifying Compressed Air Leakage through Non-Intrusive Load Monitoring Techniques in the Context of Energy Audits. Energies, 2022, 15, 3213.	3.1	1
62	Electrokinetic Model Refinement Via a Perturbation Finite-Element Methodâ€”From 2-D to 3-D. IEEE Transactions on Magnetics, 2010, 46, 2839-2842.	2.1	0
63	Modeling a Rogowski coil in an EMC chamber taking into account the displacement current. , 2010, , .		0
64	Calculation and experimental analysis of induction motor eccentricity. , 2010, , .		0
65	A methodology for quality analysis on stator cores. , 2012, , .		0
66	A new method for parameters obtaining of Jiles-Atherton hysteresis scalar model. , 2016, , .		0
67	A simplified method for acquisition of the parameters of Jiles-Atherton hysteresis scalar model without use of derivatives. , 2016, , .		0
68	Insertion of a sixth parameter in Jiles-Atherton hysteresis scalar model and the method for parameters identification. , 2016, , .		0
69	Modeling and sizing by optimization of a Brushless Doubly-Fed Reluctance Machine. International Journal of Applied Electromagnetics and Mechanics, 2017, 53, S261-S277.	0.6	0
70	Efficiency Determination of Compressor Embedded Induction Motors. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2021, 20, 658-674.	0.7	0
71	A New Method for Iron Loss Separation. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2021, 20, 763-776.	0.7	0
72	An Analysis of Minor Hysteresis Loops Behavior under PWM Voltage - Electromagnetic Device at No-Load and Loaded Conditions. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2021, 20, 745-762.	0.7	0