

# Rafael Escarela-Perez

## 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.

100  
papers

793  
citations

15  
h-index

22  
g-index

119  
ext. papers

1,029  
ext. citations

2.9  
avg, IF

3.96  
L-index

#	Paper	IF	Citations
100	Numerical simulation of a squirrel cage motor including magnetic wedges and radial vents. <i>Ingeniería Investigación Y Tecnología</i> , <b>2021</b> , 22, 1-10	0.1	
99	Parameter Identification of BLDC Motor Using Electromechanical Tests and Recursive Least-Squares Algorithm: Experimental Validation. <i>Actuators</i> , <b>2021</b> , 10, 143	2.4	1
98	Mathematical Calculation of Stray Losses in Transformer Tanks with a Stainless Steel Insert. <i>Mathematics</i> , <b>2021</b> , 9, 184	2.3	1
97	Thermoelectromagnetic Lumped-Parameter Model of High Temperature Superconductor Generators for Transient Stability Analysis. <i>IEEE Transactions on Applied Superconductivity</i> , <b>2021</b> , 31, 1-5	1.8	1
96	Computation of Stray Losses in Transformer Bushing Regions Considering Harmonics in the Load Current. <i>Applied Sciences (Switzerland)</i> , <b>2020</b> , 10, 3527	2.6	3
95	On-Line Open-Phase Fault Detection Method for Switched Reluctance Motors with Bus Current Measurement. <i>Actuators</i> , <b>2020</b> , 9, 117	2.4	4
94	The geometry of induced electromagnetic fields in moving media. <i>Annals of Physics</i> , <b>2020</b> , 420, 168270	2.5	0
93	Analytical Analysis of Magnetic Levitation Systems with Harmonic Voltage Input. <i>Actuators</i> , <b>2020</b> , 9, 82	2.4	2
92	Large amplitude oscillatory shear (LAOS) rheology of nixtamalized corn masa. <i>Journal of Cereal Science</i> , <b>2019</b> , 88, 31-37	3.8	5
91	Diagnosis of interturn faults of single-distribution transformers under controlled conditions during energization. <i>Measurement: Journal of the International Measurement Confederation</i> , <b>2019</b> , 141, 24-36	4.6	8
90	Circuit-Field Coupling Methodology for Incorporation of Power Electronic Devices: A Piecewise-Linear Approach. <i>IEEE Transactions on Magnetics</i> , <b>2019</b> , 55, 1-4	2	
89	Secure operating bounds for wind energy conversion systems working as conventional power generation plants. <i>IET Generation, Transmission and Distribution</i> , <b>2019</b> , 13, 2311-2318	2.5	1
88	Computation of temperature distributions in transformer covers due to high crossing currents in bushing regions. <i>International Journal of Electrical Power and Energy Systems</i> , <b>2019</b> , 113, 699-712	5.1	5
87	Computation of Leakage Inductance of End Coils in Electrical Machines Considering Core Effects. <i>IEEE Transactions on Magnetics</i> , <b>2019</b> , 55, 1-12	2	
86	New analytical method for estimating mean life of electric power equipment based on complete and right-censored failure data. <i>Electric Power Systems Research</i> , <b>2018</b> , 154, 311-318	3.5	5
85	The application of EMD-based methods for diagnosis of winding faults in a transformer using transient and steady state currents. <i>Measurement: Journal of the International Measurement Confederation</i> , <b>2018</b> , 117, 371-379	4.6	30
84	Quasi-3-D Finite-Element Modeling of a Power Transformer. <i>IEEE Transactions on Magnetics</i> , <b>2017</b> , 53, 1-4	2	3

83	An Improved Time-Harmonic 2-D Eddy Current Finite-Element H Formulation. <i>IEEE Transactions on Magnetics</i> , <b>2017</b> , 53, 1-4	2	3
82	Effective Nonlinear Surface Impedance of Conductive Magnetic Slabs. <i>IEEE Transactions on Magnetics</i> , <b>2017</b> , 53, 1-12	2	0
81	Generalized Primitive Stamps for Nonlinear Circuit-Field Coupling in the Transient Case. <i>IEEE Transactions on Magnetics</i> , <b>2017</b> , 53, 1-9	2	4
80	Experimental data-based transient-stationary current model for inter-turn fault diagnostics in a transformer. <i>Electric Power Systems Research</i> , <b>2017</b> , 152, 306-315	3.5	10
79	Strong Coupling of an Electromagnetic Transients Program and a Finite Element Magnetic Field Solver Including Eddy Currents. <i>IEEE Transactions on Power Delivery</i> , <b>2017</b> , 32, 1414-1421	4.3	1
78	Putting gravity in control. <i>Journal of Physics: Conference Series</i> , <b>2017</b> , 831, 012006	0.3	
77	New Analytical Formula for Temperature Assessment on Transformer Tanks. <i>IEEE Transactions on Power Delivery</i> , <b>2016</b> , 31, 1122-1131	4.3	2
76	Passivity-based power control of a doubly fed induction generator with unknown parameters. <i>International Transactions on Electrical Energy Systems</i> , <b>2016</b> , 26, 2402-2424	2.2	9
75	Loss reduction by combining electrical steels in the core of power transformers. <i>International Transactions on Electrical Energy Systems</i> , <b>2016</b> , 26, 1737-1751	2.2	7
74	Nonlinear Time-Harmonic Analysis of Multiple Magnetic Field Systems: Cartesian, Axisymmetric, and Coupled Circuits. <i>IEEE Transactions on Magnetics</i> , <b>2016</b> , 52, 1-10	2	2
73	Experimental procedure to obtain electromagnetic properties of A-36 low carbon steel plates utilized in transformers <b>2016</b> ,		1
72	Detection of interturn faults during transformer energization using wavelet transform <b>2016</b> ,		3
71	Cost reduction by interchanging the location of the windings in distribution transformers with HV copper winding and LV aluminum winding. <i>International Transactions on Electrical Energy Systems</i> , <b>2015</b> , 25, 2685-2695	2.2	
70	Calculation of Nonlinear Electromagnetic Fields in the Steel Wall Vicinity of Transformer Bushings. <i>IEEE Transactions on Magnetics</i> , <b>2015</b> , 51, 1-11	2	9
69	Analytical solution to the diffusion, sorption and decay chain equation in a saturated porous medium between two reservoirs. <i>Journal of Environmental Radioactivity</i> , <b>2015</b> , 139, 163-170	2.4	1
68	New Analytical Formulas for Electromagnetic Field and Eddy Current Losses in Bushing Regions of Transformers. <i>IEEE Transactions on Magnetics</i> , <b>2015</b> , 51, 1-10	2	11
67	Fast computation of hot spots temperature due to high current cable leads in power transformers tank walls. <i>International Transactions on Electrical Energy Systems</i> , <b>2015</b> , 25, 3374-3383	2.2	4
66	Reduction of Stray Losses in Flange Bolt Regions of Large Power Transformer Tanks. <i>IEEE Transactions on Industrial Electronics</i> , <b>2014</b> , 61, 4455-4463	8.9	18

65	Temperature Reduction in the Clamping Bolt Zone of Shunt Reactors: Design Enhancements. <i>IEEE Transactions on Power Delivery</i> , <b>2014</b> , 29, 2648-2655	4.3	5
64	Thermal analysis of a dry-type distribution power transformer using FEA <b>2014</b> ,		2
63	Hot spots mitigation on tank wall of a power transformer using electromagnetic shields <b>2014</b> ,		7
62	Diffusion and decay chain of radioisotopes in stagnant water in saturated porous media. <i>Journal of Environmental Radioactivity</i> , <b>2014</b> , 135, 100-7	2.4	1
61	Evaluation of distribution transformer banks in electric power systems. <i>International Transactions on Electrical Energy Systems</i> , <b>2013</b> , 23, 364-379	2.2	6
60	Core lamination selection for distribution transformers based on sensitivity analysis. <i>Electrical Engineering</i> , <b>2013</b> , 95, 33-42	1.5	8
59	Analysis of slots in horizontal plates of T-beams in shell-form power transformers. <i>Electric Power Systems Research</i> , <b>2013</b> , 101, 88-95	3.5	5
58	Computational Representation of Porous Media Features (Porosity, Permeability, Saturation and Physical Heterogeneous Geometry) <b>2013</b> , 373-379		
57	Development of Computer Algorithms for Simulation of Grain Structures in Metallic Samples Using Chaos Theory <b>2013</b> , 363-371		
56	Evaluation of Stray Losses in Throats of Distribution Transformers Using Finite Element Simulation <b>2012</b> ,		1
55	Study of parameters influencing the performance of connectors used for load and temperature tests on transformers <b>2012</b> ,		1
54	Algorithm for repairing the damaged images of grain structures obtained from the cellular automata and measurement of grain size. <i>International Journal of Minerals, Metallurgy and Materials</i> , <b>2012</b> , 19, 899-907	3.1	
53	<b>2012</b> ,		5
52	Estimation of synchronous generator parameters using the standstill step-voltage test and a hybrid Genetic Algorithm. <i>International Journal of Electrical Power and Energy Systems</i> , <b>2012</b> , 35, 105-111	5.1	15
51	Thermal Behavior of Cast Steel Industrially Produced. <i>Advanced Materials Research</i> , <b>2012</b> , 628, 179-182	0.5	1
50	Determination of Equivalent-circuit Parameters of a Synchronous Generator Based on the Standstill DC Decay Test and a Hybrid Optimization Method. <i>Electric Power Components and Systems</i> , <b>2011</b> , 39, 645-659	1	6
49	Strong Coupling of Electromagnetic Transients and Finite Element Magnetic Field Solvers. <i>IEEE Transactions on Magnetics</i> , <b>2011</b> , 47, 4574-4581	2	10
48	Multiscale entropy analysis of crude oil price dynamics. <i>Energy Economics</i> , <b>2011</b> , 33, 936-947	8.3	77

47	Optimal design of single-phase shell-type distribution transformers based on a multiple design method validated by measurements. <i>Electrical Engineering</i> , <b>2011</b> , 93, 237-246	1.5	11
46	Environmental Cost of Transformer Losses for Industrial and Commercial Users of Transformers <b>2011</b> ,		1
45	Systematic Coupling of Multiple Magnetic Field Systems and Circuits Using Finite Element and Modified Nodal Analyses. <i>IEEE Transactions on Magnetics</i> , <b>2011</b> , 47, 207-213	2	12
44	Comparative studies of the stabilities to oxidation and electrical discharge between ester fluids and transformer oils <b>2011</b> ,		8
43	Techno-economic Evaluation of Reduction of Low-voltage Bushings Diameter in Single-phase Distribution Transformers. <i>Electric Power Components and Systems</i> , <b>2011</b> , 39, 1388-1402	1	8
42	Computation of Differential Inductance and Flux Linkage Positional Derivative by a Sensitivity Approach. <i>IEEE Transactions on Energy Conversion</i> , <b>2010</b> , 25, 237-244	5.4	2
41	Strong coupling of circuit and field solvers for simulation of rotating electrical machines <b>2010</b> ,		2
40	Separation of core losses in distribution transformers using experimental methods. <i>Canadian Journal of Electrical and Computer Engineering</i> , <b>2010</b> , 35, 33-39	1.4	9
39	Cognitive-operative model of intelligent learning systems behavior. <i>Interactive Learning Environments</i> , <b>2010</b> , 18, 11-38	3.1	9
38	Finite-Element Inductance Computation in 2-D Eddy-Current Systems Using Sensitivity Analysis. <i>IEEE Transactions on Energy Conversion</i> , <b>2010</b> , 25, 690-697	5.4	1
37	Time-dependent correlations in electricity markets. <i>Energy Economics</i> , <b>2010</b> , 32, 269-277	8.3	31
36	Selection of copper against aluminium windings for distribution transformers. <i>IET Electric Power Applications</i> , <b>2010</b> , 4, 474	1.8	25
35	Multi-Slice Modeling in Circuit-Field Coupled Systems Using Finite-Element and Modified Nodal Analyses. <i>IEEE Transactions on Magnetics</i> , <b>2010</b> , 46, 67-74	2	8
34	Nonlinear time-harmonic finite-element analysis of coupled circuits and fields in low frequency electromagnetic devices. <i>Finite Elements in Analysis and Design</i> , <b>2010</b> , 46, 829-837	2.2	6
33	Dynamics of electricity market correlations. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2009</b> , 388, 2173-2188	3.3	9
32	Validity testing of third-order nonlinear models for synchronous generators. <i>Electric Power Systems Research</i> , <b>2009</b> , 79, 953-958	3.5	23
31	A suggested generalization for the lacunarity index. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2009</b> , 388, 4305-4314	3.3	9
30	Analytical Description of the Load-Loss Asymmetry Phenomenon in Three-Phase Three-Limb Transformers. <i>IEEE Transactions on Power Delivery</i> , <b>2009</b> , 24, 695-702	4.3	3

29	Coupling Circuit Systems and Finite Element Models: A 2-D Time-Harmonic Modified Nodal Analysis Framework. <i>IEEE Transactions on Magnetics</i> , <b>2009</b> , 45, 707-715	2	14
28	Multi-port network and 3D finite-element models for accurate transformer calculations: Single-phase load-loss test. <i>Electric Power Systems Research</i> , <b>2008</b> , 78, 1941-1945	3.5	2
27	Applications of coupled field formulations to electrical machinery. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , <b>2007</b> , 26, 489-523	0.7	14
26	Asymmetry During Load-Loss Measurement of Three-Phase Three-Limb Transformers. <i>IEEE Transactions on Power Delivery</i> , <b>2007</b> , 22, 1566-1574	4.3	7
25	. <i>IEEE Transactions on Magnetics</i> , <b>2006</b> , 42, 1055-1058	2	1
24	Transient Analysis of a Synchronous Generator Using a High-Order State Space Representation <b>2006</b> ,		1
23	Agents control in intelligent learning systems: The case of reactive characteristics. <i>Interactive Learning Environments</i> , <b>2006</b> , 14, 95-118	3.1	1
22	A two-loop excitation control system for synchronous generators. <i>International Journal of Electrical Power and Energy Systems</i> , <b>2005</b> , 27, 556-566	5.1	7
21	High-order statistical texture analysis for font recognition applied. <i>Pattern Recognition Letters</i> , <b>2005</b> , 26, 135-145	4.7	24
20	Frequency-dependent equivalent circuit for the representation of synchronous machines. <i>IET Electric Power Applications</i> , <b>2005</b> , 152, 723		4
19	Comparison of two techniques for two-dimensional finite-element inductance computation of electrical machines. <i>IET Electric Power Applications</i> , <b>2005</b> , 152, 855		17
18	Convergence improvement in two-dimensional finite element nonlinear magnetic problems by fuzzy logic approach. <i>Finite Elements in Analysis and Design</i> , <b>2005</b> , 41, 583-598	2.2	3
17	Discussion of "Parameter calculation of a turbogenerator during an open-circuit transient excitation". <i>IEEE Transactions on Energy Conversion</i> , <b>2005</b> , 20, 495-495	5.4	
16	Evaluation of eddy current losses in the cover plates of distribution transformers. <i>IET Science, Measurement and Technology</i> , <b>2004</b> , 151, 313-318		23
15	A comprehensive finite-element model of a turbine-generator infinite-busbar system. <i>Finite Elements in Analysis and Design</i> , <b>2004</b> , 40, 485-509	2.2	10
14	Performance evaluation of energy-shaping approach controllers for synchronous generators using a finite-element model. <i>International Journal of Robust and Nonlinear Control</i> , <b>2004</b> , 14, 857-877	3.6	5
13	2D finite-element determination of tank wall losses in pad-mounted transformers. <i>Electric Power Systems Research</i> , <b>2004</b> , 71, 179-185	3.5	16
12	A study of the variation of synchronous machine parameters due to saturation: a numerical approach. <i>Electric Power Systems Research</i> , <b>2004</b> , 72, 1-11	3.5	9

11	Improved insert geometry for reducing tank-wall losses in pad-mounted transformers. <i>IEEE Transactions on Power Delivery</i> , <b>2004</b> , 19, 1120-1126	4.3	18
10	Unsupervised Font Clustering Using Stochastic Versio of the EM Algorithm and Global Texture Analysis. <i>Lecture Notes in Computer Science</i> , <b>2004</b> , 275-286	0.9	2
9	Testing robustness and performance of PSSAVR schemes for synchronous generators using finite-element models. <i>International Journal of Electrical Power and Energy Systems</i> , <b>2003</b> , 25, 551-565	5.1	6
8	Hybrid genetic algorithm for the identification of high-order synchronous machine two-axis equivalent circuits. <i>Computers and Electrical Engineering</i> , <b>2003</b> , 29, 505-522	4.3	11
7	Reducing losses in distribution transformers. <i>IEEE Transactions on Power Delivery</i> , <b>2003</b> , 18, 821-826	4.3	41
6	Closure on "Reducing losses in distribution transformers". <i>IEEE Transactions on Power Delivery</i> , <b>2003</b> , 18, 1594-1596	4.3	
5	Experimental study to reduce the distribution-transformers stray losses using electromagnetic shields. <i>Electric Power Systems Research</i> , <b>2002</b> , 63, 1-7	3.5	11
4	Efficient finite-element computation of synchronous machine transfer functions. <i>IEEE Transactions on Magnetics</i> , <b>2002</b> , 38, 1245-1248	2	3
3	Synchronous machine parameters from frequency-response finite-element simulations and genetic algorithms. <i>IEEE Transactions on Energy Conversion</i> , <b>2001</b> , 16, 198-203	5.4	32
2	A novel finite-element transient computation of two-axis parameters of solid-rotor generators for use in power systems. <i>IEEE Transactions on Energy Conversion</i> , <b>1998</b> , 13, 49-54	5.4	20
1	Calculation of electrical parameters for transient overvoltage studies on electrical machines		6