Rafael Escarela-Perez

List of Publications by Citations

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	Multiscale entropy analysis of crude oil price dynamics. *Energy Economics*, **2011**, 33, 936-947	8.3	77
99	Reducing losses in distribution transformers. *IEEE Transactions on Power Delivery*, **2003**, 18, 821-826	4.3	41
98	Synchronous machine parameters from frequency-response finite-element simulations and genetic algorithms. *IEEE Transactions on Energy Conversion*, **2001**, 16, 198-203	5.4	32
97	Time-dependent correlations in electricity markets. *Energy Economics*, **2010**, 32, 269-277	8.3	31
96	The application of EMD-based methods for diagnosis of winding faults in a transformer using transient and steady state currents. *Measurement: Journal of the International Measurement Confederation*, **2018**, 117, 371-379	4.6	30
95	Selection of copper against aluminium windings for distribution transformers. *IET Electric Power Applications*, **2010**, 4, 474	1.8	25
94	High-order statistical texture analysisFont recognition applied. *Pattern Recognition Letters*, **2005**, 26, 135-145	4.7	24
93	Validity testing of third-order nonlinear models for synchronous generators. *Electric Power Systems Research*, **2009**, 79, 953-958	3.5	23
92	Evaluation of eddy current losses in the cover plates of distribution transformers. *IET Science, Measurement and Technology*, **2004**, 151, 313-318		23
91	A novel finite-element transient computation of two-axis parameters of solid-rotor generators for use in power systems. *IEEE Transactions on Energy Conversion*, **1998**, 13, 49-54	5.4	20
90	Reduction of Stray Losses in FlangeBolt Regions of Large Power Transformer Tanks. *IEEE Transactions on Industrial Electronics*, **2014**, 61, 4455-4463	8.9	18
89	Improved insert geometry for reducing tank-wall losses in pad-mounted transformers. *IEEE Transactions on Power Delivery*, **2004**, 19, 1120-1126	4.3	18
88	Comparison of two techniques for two-dimensional finite-element inductance computation of electrical machines. *IET Electric Power Applications*, **2005**, 152, 855		17
87	2D finite-element determination of tank wall losses in pad-mounted transformers. *Electric Power Systems Research*, **2004**, 71, 179-185	3.5	16
86	Estimation of synchronous generator parameters using the standstill step-voltage test and a hybrid Genetic Algorithm. *International Journal of Electrical Power and Energy Systems*, **2012**, 35, 105-111	5.1	15
85	Coupling Circuit Systems and Finite Element Models: A 2-D Time-Harmonic Modified Nodal Analysis Framework. *IEEE Transactions on Magnetics*, **2009**, 45, 707-715	2	14
84	Applications of coupled field formulations to electrical machinery. *COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering*, **2007**, 26, 489-523	0.7	14

83	Systematic Coupling of Multiple Magnetic Field Systems and Circuits Using Finite Element and Modified Nodal Analyses. *IEEE Transactions on Magnetics*, **2011**, 47, 207-213	2	12
82	New Analytical Formulas for Electromagnetic Field and Eddy Current Losses in Bushing Regions of Transformers. *IEEE Transactions on Magnetics*, **2015**, 51, 1-10	2	11
81	Optimal design of single-phase shell-type distribution transformers based on a multiple design method validated by measurements. *Electrical Engineering*, **2011**, 93, 237-246	1.5	11
80	Experimental study to reduce the distribution-transformers stray losses using electromagnetic shields. *Electric Power Systems Research*, **2002**, 63, 1-7	3.5	11
79	Hybrid genetic algorithm for the identification of high-order synchronous machine two-axis equivalent circuits. *Computers and Electrical Engineering*, **2003**, 29, 505-522	4.3	11
78	Experimental data-based transient-stationary current model for inter-turn fault diagnostics in a transformer. *Electric Power Systems Research*, **2017**, 152, 306-315	3.5	10
77	Strong Coupling of Electromagnetic Transients and Finite Element Magnetic Field Solvers. *IEEE Transactions on Magnetics*, **2011**, 47, 4574-4581	2	10
76	A comprehensive finite-element model of a turbine-generator infinite-busbar system. *Finite Elements in Analysis and Design*, **2004**, 40, 485-509	2.2	10
75	Calculation of Nonlinear Electromagnetic Fields in the Steel Wall Vicinity of Transformer Bushings. *IEEE Transactions on Magnetics*, **2015**, 51, 1-11	2	9
74	Separation of core losses in distribution transformers using experimental methods. *Canadian Journal of Electrical and Computer Engineering*, **2010**, 35, 33-39	1.4	9
73	Cognitive-operative model of intelligent learning systems behavior. *Interactive Learning Environments*, **2010**, 18, 11-38	3.1	9
72	Dynamics of electricity market correlations. *Physica A: Statistical Mechanics and Its Applications*, **2009**, 388, 2173-2188	3.3	9
71	A suggested generalization for the lacunarity index. *Physica A: Statistical Mechanics and Its Applications*, **2009**, 388, 4305-4314	3.3	9
70	A study of the variation of synchronous machine parameters due to saturation: a numerical approach. *Electric Power Systems Research*, **2004**, 72, 1-11	3.5	9
69	Passivity-based power control of a doubly fed induction generator with unknown parameters. *International Transactions on Electrical Energy Systems*, **2016**, 26, 2402-2424	2.2	9
68	Diagnosis of interturn faults of single-distribution transformers under controlled conditions during energization. *Measurement: Journal of the International Measurement Confederation*, **2019**, 141, 24-36	4.6	8
67	Core lamination selection for distribution transformers based on sensitivity analysis. *Electrical Engineering*, **2013**, 95, 33-42	1.5	8
66	Comparative studies of the stabilities to oxidation and electrical discharge between ester fluids and transformer oils **2011**,		8

65	Techno-economic Evaluation of Reduction of Low-voltage Bushings Diameter in Single-phase Distribution Transformers. *Electric Power Components and Systems*, **2011**, 39, 1388-1402	1	8
64	Multi-Slice Modeling in Circuit-Field Coupled Systems Using Finite-Element and Modified Nodal Analyses. *IEEE Transactions on Magnetics*, **2010**, 46, 67-74	2	8
63	Hot spots mitigation on tank wall of a power transformer using electromagnetic shields **2014**,		7
62	Asymmetry During Load-Loss Measurement of Three-Phase Three-Limb Transformers. *IEEE Transactions on Power Delivery*, **2007**, 22, 1566-1574	4.3	7
61	A two-loop excitation control system for synchronous generators. *International Journal of Electrical Power and Energy Systems*, **2005**, 27, 556-566	5.1	7
60	Loss reduction by combining electrical steels in the core of power transformers. *International Transactions on Electrical Energy Systems*, **2016**, 26, 1737-1751	2.2	7
59	Evaluation of distribution transformer banks in electric power systems. *International Transactions on Electrical Energy Systems*, **2013**, 23, 364-379	2.2	6
58	Determination of Equivalent-circuit Parameters of a Synchronous Generator Based on the Standstill DC Decay Test and a Hybrid Optimization Method. *Electric Power Components and Systems*, **2011**, 39, 645-659	1	6
57	Nonlinear time-harmonic finite-element analysis of coupled circuits and fields in low frequency electromagnetic devices. *Finite Elements in Analysis and Design*, **2010**, 46, 829-837	2.2	6
56	Testing robustness and performance of PSSÂVR schemes for synchronous generators using finite-element models. *International Journal of Electrical Power and Energy Systems*, **2003**, 25, 551-565	5.1	6
55	Calculation of electrical parameters for transient overvoltage studies on electrical machines		6
54	Large amplitude oscillatory shear (LAOS) rheology of nixtamalized corn masa. *Journal of Cereal Science*, **2019**, 88, 31-37	3.8	5
53	New analytical method for estimating mean life of electric power equipment based on complete and right-censored failure data. *Electric Power Systems Research*, **2018**, 154, 311-318	3.5	5
52	Computation of temperature distributions in transformer covers due to high crossing currents in bushing regions. *International Journal of Electrical Power and Energy Systems*, **2019**, 113, 699-712	5.1	5
51	Temperature Reduction in the Clamping Bolt Zone of Shunt Reactors: Design Enhancements. *IEEE Transactions on Power Delivery*, **2014**, 29, 2648-2655	4.3	5
50	Analysis of slots in horizontal plates of T-beams in shell-form power transformers. *Electric Power Systems Research*, **2013**, 101, 88-95	3.5	5
49	**2012**,		5
48	Performance evaluation of energy-shaping approach controllers for synchronous generators using a finite-element model. *International Journal of Robust and Nonlinear Control*, **2004**, 14, 857-877	3.6	5

47	Generalized Primitive Stamps for Nonlinear Circuit-Field Coupling in the Transient Case. *IEEE Transactions on Magnetics*, **2017**, 53, 1-9	2	4
46	Fast computation of hot spots temperature due to high current cable leads in power transformers tank walls. *International Transactions on Electrical Energy Systems*, **2015**, 25, 3374-3383	2.2	4
45	Frequency-dependent equivalent circuit for the representation of synchronous machines. *IET Electric Power Applications*, **2005**, 152, 723		4
44	On-Line Open-Phase Fault Detection Method for Switched Reluctance Motors with Bus Current Measurement. *Actuators*, **2020**, 9, 117	2.4	4
43	Quasi-3-D Finite-Element Modeling of a Power Transformer. *IEEE Transactions on Magnetics*, **2017**, 53, 1-4	2	3
42	An Improved Time-Harmonic 2-D Eddy Current Finite-Element H Formulation. *IEEE Transactions on Magnetics*, **2017**, 53, 1-4	2	3
41	Computation of Stray Losses in Transformer Bushing Regions Considering Harmonics in the Load Current. *Applied Sciences (Switzerland)*, **2020**, 10, 3527	2.6	3
40	Analytical Description of the Load-Loss Asymmetry Phenomenon in Three-Phase Three-Limb Transformers. *IEEE Transactions on Power Delivery*, **2009**, 24, 695-702	4.3	3
39	Convergence improvement in two-dimensional finite element nonlinear magnetic problems fuzzy logic approach. *Finite Elements in Analysis and Design*, **2005**, 41, 583-598	2.2	3
38	Efficient finite-element computation of synchronous machine transfer functions. *IEEE Transactions on Magnetics*, **2002**, 38, 1245-1248	2	3
37	Detection of interturn faults during transformer energization using wavelet transform **2016**,		3
36	New Analytical Formula for Temperature Assessment on Transformer Tanks. *IEEE Transactions on Power Delivery*, **2016**, 31, 1122-1131	4.3	2
35	Thermal analysis of a dry-type distribution power transformer using FEA **2014**,		2
34	Computation of Differential Inductance and Flux Linkage Positional Derivative by a Sensitivity Approach. *IEEE Transactions on Energy Conversion*, **2010**, 25, 237-244	5.4	2
33	Strong coupling of circuit and field solvers for simulation of rotating electrical machines **2010**,		2
32	Multi-port network and 3D finite-element models for accurate transformer calculations: Single-phase load-loss test. *Electric Power Systems Research*, **2008**, 78, 1941-1945	3.5	2
31	Unsupervised Font Clustering Using Stochastic Versio of the EM Algorithm and Global Texture Analysis. *Lecture Notes in Computer Science*, **2004**, 275-286	0.9	2
30	Analytical Analysis of Magnetic Levitation Systems with Harmonic Voltage Input. *Actuators*, **2020**, 9, 82	2.4	2

29	Nonlinear Time-Harmonic Analysis of Multiple Magnetic Field Systems: Cartesian, Axisymmetric, and Coupled Circuits. *IEEE Transactions on Magnetics*, **2016**, 52, 1-10	2	2
28	Analytical solution to the diffusion, sorption and decay chain equation in a saturated porous medium between two reservoirs. *Journal of Environmental Radioactivity*, **2015**, 139, 163-170	2.4	1
27	Secure operating bounds for wind energy conversion systems working as conventional power generation plants. *IET Generation, Transmission and Distribution*, **2019**, 13, 2311-2318	2.5	1
26	Strong Coupling of an Electromagnetic Transients Program and a Finite Element Magnetic Field Solver Including Eddy Currents. *IEEE Transactions on Power Delivery*, **2017**, 32, 1414-1421	4.3	1
25	Diffusion and decay chain of radioisotopes in stagnant water in saturated porous media. *Journal of Environmental Radioactivity*, **2014**, 135, 100-7	2.4	1
24	Evaluation of Stray Losses in Throats of Distribution Transformers Using Finite Element Simulation **2012**,		1
23	Study of parameters influencing the performance of connectors used for load and temperature tests on transformers **2012**,		1
22	Finite-Element Inductance Computation in 2-D Eddy-Current Systems Using Sensitivity Analysis. *IEEE Transactions on Energy Conversion*, **2010**, 25, 690-697	5.4	1
21	Environmental Cost of Transformer Losses for Industrial and Commercial Users of Transformers **2011**,		1
20	Thermal Behavior of Cast Steel Industrially Produced. *Advanced Materials Research*, **2012**, 628, 179-182	0.5	1
19	. *IEEE Transactions on Magnetics*, **2006**, 42, 1055-1058	2	1
18	Transient Analysis of a Synchronous Generator Using a High-Order State Space Representation **2006**,		1
17	Agents control in intelligent learning systems: The case of reactive characteristics. *Interactive Learning Environments*, **2006**, 14, 95-118	3.1	1
16	Parameter Identification of BLDC Motor Using Electromechanical Tests and Recursive Least-Squares Algorithm: Experimental Validation. *Actuators*, **2021**, 10, 143	2.4	1
15	Experimental procedure to obtain electromagnetic properties of A-36 low carbon steel plates utilized in transformers **2016**,		1
14	Mathematical Calculation of Stray Losses in Transformer Tanks with a Stainless Steel Insert. *Mathematics*, **2021**, 9, 184	2.3	1
13	Thermoelectromagnetic Lumped-Parameter Model of High Temperature Superconductor Generators for Transient Stability Analysis. *IEEE Transactions on Applied Superconductivity*, **2021**, 31, 1-5	1.8	1
12	Effective Nonlinear Surface Impedance of Conductive Magnetic Slabs. *IEEE Transactions on Magnetics*, **2017**, 53, 1-12	2	0

11	The geometry of induced electromagnetic fields in moving media. *Annals of Physics*, **2020**, 420, 168270	2.5	0
10	Circuit-Field Coupling Methodology for Incorporation of Power Electronic Devices: A Piecewise-Linear Approach. *IEEE Transactions on Magnetics*, **2019**, 55, 1-4	2	
9	Cost reduction by interchanging the location of the windings in distribution transformers with HV copper winding and LV aluminum winding. *International Transactions on Electrical Energy Systems*, **2015**, 25, 2685-2695	2.2	
8	Putting gravity in control. *Journal of Physics: Conference Series*, **2017**, 831, 012006	0.3	
7	Algorithm for repairing the damaged images of grain structures obtained from the cellular automata and measurement of grain size. *International Journal of Minerals, Metallurgy and Materials*, **2012**, 19, 899-907	3.1	
6	Closure on "Reducing losses in distribution transformers". *IEEE Transactions on Power Delivery*, **2003**, 18, 1594-1596	4.3	
5	Discussion of "Parameter calculation of a turbogenerator during an open-circuit transient excitation". *IEEE Transactions on Energy Conversion*, **2005**, 20, 495-495	5.4	
4	Numerical simulation of a squirrel cage motor including magnetic wedges and radial vents. *Ingenierí Investigación Y Tecnología*, **2021**, 22, 1-10	0.1	
3	Computational Representation of Porous Media Features (Porosity, Permeability, Saturation and Physical Heterogeneous Geometry) **2013**, 373-379		
2	Development of Computer Algorithms for Simulation of Grain Structures in Metallic Samples Using Chaos Theory **2013**, 363-371		
1	Computation of Leakage Inductance of End Coils in Electrical Machines Considering Core Effects. *IEEE Transactions on Magnetics*, **2019**, 55, 1-12	2	