

# Roberto Langella

## List of Publications by Year in descending order

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154  
papers

2,528  
citations

331538

21  
h-index

289141

40  
g-index

154  
all docs

154  
docs citations

154  
times ranked

1535  
citing authors

#	ARTICLE	IF	CITATIONS
1	Interharmonics: Theory and Modeling. IEEE Transactions on Power Delivery, 2007, 22, 2335-2348.	2.9	256
2	On the Processing of Harmonics and Interharmonics: Using Hanning Window in Standard Framework. IEEE Transactions on Power Delivery, 2004, 19, 28-34.	2.9	191
3	Markov chain modeling for very-short-term wind power forecasting. Electric Power Systems Research, 2015, 122, 152-158.	2.1	121
4	Desynchronized Processing Technique for Harmonic and Interharmonic Analysis. IEEE Transactions on Power Delivery, 2004, 19, 993-1001.	2.9	105
5	Experimental-Based Evaluation of PV Inverter Harmonic and Interharmonic Distortion Due to Different Operating Conditions. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 2221-2233.	2.4	103
6	Time-varying harmonics. II. Harmonic summation and propagation. IEEE Transactions on Power Delivery, 2002, 17, 279-285.	2.9	95
7	On the Interharmonic Components Generated by Adjustable Speed Drives. IEEE Transactions on Power Delivery, 2005, 20, 2535-2543.	2.9	59
8	Very short-term probabilistic wind power forecasting based on Markov chain models. , 2010, , .		59
9	A Benchmark Test System to Evaluate Methods of Harmonic Contribution Determination. IEEE Transactions on Power Delivery, 2019, 34, 23-31.	2.9	48
10	On the Effects of Unbalances, Harmonics and Interharmonics on PLL Systems. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 2399-2409.	2.4	45
11	Neuropsychiatric and cognitive symptoms and body side of onset of parkinsonism in unmedicated Parkinson's disease patients. Parkinsonism and Related Disorders, 2015, 21, 1096-1100.	1.1	36
12	Analysis and Modelling of Power-Dependent Harmonic Characteristics of Modern PE Devices in LV Networks. IEEE Transactions on Power Delivery, 2017, 32, 1014-1023.	2.9	36
13	Energy management system based on techno-economic optimization for microgrids. Electric Power Systems Research, 2016, 131, 49-59.	2.1	35
14	Compensation of Current Transformersâ€™ Nonlinearities by Tensor Linearization. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 3841-3849.	2.4	35
15	On the Use of the Flickermeter to Limit Low-Frequency Interharmonic Voltages. IEEE Transactions on Power Delivery, 2008, 23, 1720-1727.	2.9	34
16	A New Test Procedure to Measure Power Electronic Devicesâ€™ Frequency Coupling Admittance. IEEE Transactions on Instrumentation and Measurement, 2018, 67, 2401-2409.	2.4	34
17	Unbalance Definition for Electrical Power Systems in the Presence of Harmonics and Interharmonics. IEEE Transactions on Instrumentation and Measurement, 2012, 61, 2622-2631.	2.4	33
18	Light flicker prediction based on voltage spectral analysis. , 0, , .		31

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19	Implementation of a Test System for Advanced Calibration and Performance Analysis of Flickermeters. IEEE Transactions on Instrumentation and Measurement, 2004, 53, 1078-1085.	2.4	31
20	Hybrid wind-diesel stand-alone system sizing accounting for component expected life and fuel price uncertainty. Electric Power Systems Research, 2012, 88, 69-77.	2.1	30
21	A self-tuning harmonic and interharmonic processing technique. European Transactions on Electrical Power, 2002, 12, 25-31.	1.0	29
22	IEC flickerometer response to interharmonic pollution. , 0, , .		29
23	The stimulation of dendritic cells by amyloid beta 1 $\beta$ 42 reduces BDNF production in Alzheimer's disease patients. Brain, Behavior, and Immunity, 2013, 32, 29-32.	2.0	29
24	Modelling of AC/DC/AC conversion systems with PWM inverter. , 0, , .		28
25	A new approach to model AC/DC/AC conversion systems. , 2001, , .		27
26	A New Approach for the Computation of Harmonics and Interharmonics Produced by Line-Commutated AC/DC/AC Converters. IEEE Transactions on Power Delivery, 2005, 20, 2227-2234.	2.9	27
27	Case studies on large PV plants: Harmonic distortion, unbalance and their effects. , 2013, , .		26
28	On the processing of harmonics and interharmonics in electrical power systems. , 0, , .		24
29	Bayesian CNN-BiLSTM and Vine-GMCM Based Probabilistic Forecasting of Hour-Ahead Wind Farm Power Outputs. IEEE Transactions on Sustainable Energy, 2022, 13, 1169-1187.	5.9	24
30	Experimental evaluation and classification of LED lamps for typical residential applications. , 2017, , .		23
31	On the interharmonic emission of PV inverters under different operating conditions. , 2016, , .		22
32	A New Method for Statistical Assessment of the System Harmonic Impedance and of the Background Voltage Distortion. , 2006, , .		21
33	Analysis of the Italian distribution system evolution through reference networks. , 2012, , .		21
34	On the interharmonic components generated by adjustable speed drives. , 0, , .		20
35	Light Flicker and Power Factor Labels for Comparing LED Lamp Performance. IEEE Transactions on Industry Applications, 2019, 55, 7062-7070.	3.3	20
36	Selective Interharmonic Compensation to Improve Statcom Performance for Light Flicker Mitigation. IEEE Transactions on Power Delivery, 2018, 33, 2442-2451.	2.9	19

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37	Experimental evaluation and classification of LED lamps for light flicker sensitivity. , 2018, , .		19
38	Probabilistic modeling of industrial systems for voltage distortion analyses. , 0, , .		18
39	Molecular marker assisted transfer of resistance to TSWV in tomato elite lines. Journal of Horticultural Science and Biotechnology, 2004, 79, 806-810.	0.9	18
40	Power quality in the future grid " Results from CIGRE/CIREC JWG C4.24. , 2016, , .		18
41	Resonant electromagnetic vibration harvesters feeding sensor nodes for real-time diagnostics and monitoring in railway vehicles for goods transportation: A numerical-experimental analysis. , 2016, , .		16
42	Generalized lamp model for light flicker studies. Electric Power Systems Research, 2018, 154, 413-422.	2.1	16
43	Gaussian modeling of harmonic vectors in power systems. , 0, , .		15
44	Harmonic impedance measurement of 25 kV single phase AC supply systems. , 0, , .		15
45	Power quality analysis: a distributed measurement system. , 0, , .		15
46	A New Algorithm for Energy Measurement at Positive Sequence of Fundamental Power Frequency, Under Unbalanced Non-Sinusoidal Conditions. , 2007, , .		15
47	A Tunable Flickermeter to Account for Different Lamp Technologies. IEEE Transactions on Power Delivery, 2017, 32, 872-880.	2.9	15
48	Impact of reference conditions on the frequency coupling matrix of a plug-in electric vehicle charger. , 2018, , .		15
49	Analysis of Approaches for Modeling the Low Frequency Emission of LED Lamps. Energies, 2020, 13, 1571.	1.6	15
50	Compensation of Current Transformers' Non-Linearities by Means of Frequency Coupling Matrices. , 2018, , .		14
51	Accurate Methods for Signal Processing of Distorted Waveforms in Power Systems. Eurasip Journal on Advances in Signal Processing, 2007, 2007, .	1.0	13
52	Unifying Supply Reliability and Voltage Quality in the Representation of an Electrical System Node. IEEE Transactions on Power Delivery, 2010, 25, 1172-1181.	2.9	13
53	On the use of fourier descriptors for the assessment of frequency coupling matrices of power electronic devices. , 2018, , .		13
54	Proposal of a Desynchronized Processing Technique for Assessing High-Frequency Distortion in Power Systems. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 3883-3891.	2.4	13

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55	The Role of Supply Conditions on the Measurement of High-Frequency Emissions. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 6667-6676.	2.4	13
56	A new approach for the computation of harmonics and interharmonics produced by AC/DC/AC conversion systems with PWM inverters. European Transactions on Electrical Power, 2010, 20, 68-82.	1.0	12
57	Waveform distortion caused by high power adjustable speed drives part I: High computational efficiency models. European Transactions on Electrical Power, 2003, 13, 347-354.	1.0	11
58	On the Effects of Subsynchronous Interharmonic Voltages on Power Transformers: Three Phase Units. IEEE Transactions on Power Delivery, 2008, 23, 2461-2471.	2.9	11
59	Active Management of Distribution Networks with the ATLANTIDE models. , 2012, , .		11
60	Power definitions for circuits with nonlinear and unbalanced loads &#x2014; The IEEE standard 1459-2010. , 2012, , .		11
61	A new frequency approach for light flicker evaluation in electric power systems. Eurasip Journal on Advances in Signal Processing, 2015, 2015, .	1.0	11
62	Consequences of smart grids for power quality: Overview of the results from CIGRE joint working group C4.24/CIREDE. , 2017, , .		11
63	On the effects of interharmonic distortion on static converters controlled by means of PLL systems. , 2010, , .		10
64	The Effects of Integration Intervals on Recursive RMS Value and Power Measurement in Nonsinusoidal Conditions. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 3047-3057.	2.4	10
65	A new simplified model of compact fluorescent lamps in the scenario of smart grids. , 2012, , .		10
66	Aggregate harmonic fingerprint models of PV inverters. part 1: Operation at different powers. , 2018, , .		10
67	Waveform distortion caused by high power adjustable speed drives part II: Probabilistic analysis. European Transactions on Electrical Power, 2003, 13, 355-363.	1.0	9
68	On the Effects of Subsynchronous Interharmonic Voltages on Power Transformers: Single Phase Units. IEEE Transactions on Power Delivery, 2008, 23, 2480-2487.	2.9	9
69	On the effects of interharmonic distortion on grid connected three-phase PV inverters. , 2012, , .		9
70	Impact of operating conditions on harmonic and interharmonic emission of PV inverters. , 2015, , .		9
71	Survey of harmonic current unbalance in public low voltage networks. , 2016, , .		9
72	Harmonic Modelling of LED lamps by Means of Admittance Frequency Coupling Matrices. , 2019, , .		9

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73	Evaluation of wind turbine power outputs with and without uncertainties in input wind speed and wind direction data. IET Renewable Power Generation, 2020, 14, 2801-2809.	1.7	9
74	Modeling waveform distortion produced by high speed ac locomotive converters. , 0, , .		8
75	Incorporating regulator requirements in reliability analysis of smart grids. Part 1: Input data and models. , 2014, , .		8
76	On Evaluation of Power Electronic Devicesâ€™ Efficiency for Nonsinusoidal Voltage Supply and Different Operating Powers. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 2216-2224.	2.4	8
77	Predicting voltage stress effects on MV/LV components. , 0, , .		7
78	High speed AC locomotives: harmonic and interharmonic analysis at a vehicle test room. , 0, , .		7
79	Limits for low frequency interharmonic voltages: Can they be based on the Flickermeter use. , 2005, , .		7
80	Limiting low frequency interharmonic distortion and voltage fluctuations. , 2010, , .		7
81	Analysis of the cost of electric energy discharged to the grid by some energy storage systems. , 2012, , .		7
82	Design criteria for AC link reactors in active front end converters for renewable energy applications in smart grids. , 2012, , .		7
83	Harmonic emission of PV inverters under different voltage supply conditions and operating powers. , 2016, , .		7
84	Evaluation of harmonics and interharmonics produced by AC/DC/AC conversion systems. , 0, , .		6
85	On the billing of electrical energy flows at prosumers' busbar. , 2010, , .		6
86	Applications of DMS in the ATLANTIDE project: models and tools. , 2013, , .		6
87	A new model of lead-acid batteries lifetime in smart grid scenario. , 2014, , .		6
88	On the Measurement of Power Electronic Devices' Frequency Coupling Admittance. , 2017, , .		6
89	A real life light flicker case-study with LED lamps. , 2018, , .		6
90	Monte Carlo simulation of AC/DC/AC power converter distortion. , 0, , .		5

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91	Unbalance analysis for electrical power systems in the presence of harmonics and interharmonics. , 2011, , .		5
92	Preliminary analysis of MV cable line models for high frequency harmonic penetration studies. , 2011, , .		5
93	Harmonic distortion during the 2010 FIFA World Cup. , 2011, , .		5
94	On the behavior of three-phase inverters in the new smart grid context. , 2012, , .		5
95	Operating Cycle Performance, Lost Periodicity, and Waveform Distortion of Switch-Mode Power Supplies. IEEE Transactions on Instrumentation and Measurement, 2018, 67, 2434-2443.	2.4	5
96	Assessing Distortion Within the IEC Framework in the Presence of High Frequency Components: Some Considerations on Signal Processing. , 2018, , .		5
97	Network impedance uncertainty in harmonic and interharmonic distortion studies. , 0, , .		4
98	Comparison among techniques for distorted waveforms analysis in power system. , 0, , .		4
99	Switching Power Supplies: Analysis of waveform distortion and absorbed powers. , 2007, , .		4
100	On the Assessment of Light Flicker due to the Interharmonic Distortion Produced by Wind Turbines. , 2007, , .		4
101	Experimental analysis of mechanical vibrations and wind speed for a rail vehicle WSN fed by energy harvesters. , 2015, , .		4
102	Comparison of conventional and meta-heuristic methods for security-constrained OPF analysis. , 2015, , .		4
103	Modelling of wind energy resources and wind farm power outputs using Nested Markov Chain approach. , 2015, , .		4
104	Solar Radiation Forecasting, Accounting for Daily Variability. Energies, 2016, 9, 200.	1.6	4
105	Unbalance characteristics of fundamental and harmonic currents of three-phase electric vehicle battery chargers. IET Generation, Transmission and Distribution, 2020, 14, 6220-6229.	1.4	4
106	Harmonic Pollution in Italian Distribution Networks in Coincidence with Important Sport Events. IEEE Power Engineering Society General Meeting, 2007, , .	0.0	3
107	Hybrid PV-diesel stand-alone system sizing for remote microgrids. , 2012, , .		3
108	On the use of unbalance definition to control compensators for arc furnaces. , 2013, , .		3

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109	Supervision and control of inverters for ancillary services in MV distribution networks. , 2013, , .		3
110	Evaluation of hybrid harmonic modelling techniques: Case study of harmonic interactions of EVs and CFLs. , 2016, , .		3
111	On the impact of operating modes and power supply conditions on the efficiency of power electronic devices. , 2016, , .		3
112	Performance comparison of three main SMPS types under sinusoidal and distorted supply voltage. , 2017, , .		3
113	Aggregate Harmonic Load Models of Residential Customers. Part 2: Frequency-Domain Models. , 2019, , .		3
114	Harmonic Modelling and Experimental Validation of an Inverter-Driven Heat-pump. , 2020, , .		3
115	New Comprehensive Analytical Model of Single-Phase AC/DC Diode Rectifiers in the Presence of Interharmonics in Supply Voltage. , 2022, , .		3
116	Analysis and estimation of truncation errors in modeling complex resonant circuits with the EMTP. International Journal of Electrical Power and Energy Systems, 2002, 24, 295-304.	3.3	2
117	Combined modelling of long, short interruptions and voltage dips: a Markovian solution. , 2005, , .		2
118	The Effects of the Smoothing of the Results on the Measurement Accuracy of RMS and Powers in Systems Under Nonsinusoidal Conditions. , 2008, , .		2
119	Hybrid wind-Diesel stand-alone system sizing accounting for fuel price uncertainty. , 2010, , .		2
120	The effects of integration intervals on recursive rms and powers measurement in the presence of non-sinusoidal conditions. , 2010, , .		2
121	Component modeling for high-frequency harmonic analyses in the scenario of smart grids. , 2012, , .		2
122	On the effects of interharmonic distortion on measurement instruments based on PLL systems. , 2012, , .		2
123	Incorporating regulator requirements in reliability analysis of smart grids. Part 2: Scenarios and results. , 2014, , .		2
124	Supervision of ancillary services for distributed active front-end in a small industrial AC microgrid. , 2016, , .		2
125	Commercial Load Sector Models for Power Flow and Power Quality Analysis. , 2018, , .		2
126	Aggregate harmonic fingerprint models of PV inverters. Part 2: Operation of parallel-connected units. , 2018, , .		2



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127	Power Symmetrical Components as Grid Usage Indicator for Unbalanced Prosumers. , 2022, , .		2
128	The impact of electric disturbances on the performance of induction motors fed by multistage converters: theoretical analysis and experimental verification. , 0, , .		1
129	Some considerations on interharmonic voltage limits and their assessment. , 2008, , .		1
130	On the Use of Flickermeter and DFT Based Techniques for the Assessment of Light Flicker and Interharmonic Distortion Produced by Arc Furnaces. , 2008, , .		1
131	Probabilistic Modeling of Single High-Power Loads. , 0, , 73-92.		1
132	Probabilistic Modeling of Harmonic Impedances. , 0, , 115-128.		1
133	Power quality issues related to new means of distributed generation and loads. , 2011, , .		1
134	Behavior of MV lines from 2.5 to 100 kHz. , 2012, , .		1
135	A statistical model of solar radiation daily variability. , 2014, , .		1
136	On Supply Reliability and Voltage Quality in the presence of feeder automation in MV Smart Grids. , 2015, , .		1
137	On the relationship between side of onset and cognition in Parkinson disease: Response from the authors. Parkinsonism and Related Disorders, 2015, 21, 1481-1482.	1.1	1
138	Supply interruptions and voltage dips in smart distribution systems with feeder automation and reconfiguration. , 2016, , .		1
139	On convergence of conventional and meta-heuristic methods for security-constrained OPF analysis. , 2016, , .		1
140	Impact of Lost Periodicity on Efficiency and Current Waveform Distortion of SMPS'. , 2017, , .		1
141	Temporal Variations of System Operating Conditions and Continuous Assessment of Low-Order Harmonic Emissions from Customer Installations: Voltage Harmonic Vector Approach. , 2019, , .		1
142	Assessment of the High Frequency Emissions of Low-Voltage Electronic Equipment Under Different Supply Conditions. , 2019, , .		1
143	Aggregate Harmonic Load Models of Residential Customers. Part 1: Time-Domain Models. , 2019, , .		1
144	Development of a Power Dependent Frequency Domain Model of an Inverter-driven Heat Pump. , 2022, , .		1

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145	Simplified Markov Chain Models for Generation of Synthetic Time Series of Wind Speed and Direction. , 2022, , .		1
146	On the effects of subsynchronous interharmonic voltages on power transformers: Three phase units. , 2009, , .		0
147	Summation of Random Harmonic Currents. , 0, , 53-71.		0
148	Harmonic and Interharmonic on Adjustable Speed Drives. , 0, , 253-275.		0
149	Markovian Approaches to Model Wind Speed of a Site and Power Availability of a Wind Turbine. , 0, , .		0
150	Hybrid PV-Diesel System Sizing for Telecommunication Stations. , 2012, , .		0
151	NOVEL MARKERS OF THE ANTIOXIDANT RESPONSE IN ORNAMENTAL SPECIES. Acta Horticulturae, 2012, , 91-96.	0.1	0
152	Application of ATLANTIDE models to harmonic penetration studies. , 2013, , .		0
153	Modeling of Equipment Susceptibility in the Presence of Voltage Dip Sequences in Smart Distribution Systems. , 2018, , .		0
154	On the Application of Partial Waveforms Technique to Electric Vehicles Battery Chargers Modeling. , 2018, , .		0