

# Fabio Viola

## List of Publications by Year in descending order

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148  
papers

1,979  
citations

361045

20  
h-index

414034

32  
g-index

148  
all docs

148  
docs citations

148  
times ranked

1033  
citing authors

#	ARTICLE	IF	CITATIONS
1	Modeling, Simulation, and Characterization of a Supercapacitor in Automotive Applications. IEEE Transactions on Industry Applications, 2022, 58, 2421-2429.	3.3	10
2	Switching Frequency Effects on the Efficiency and Harmonic Distortion in a Three-Phase Five-Level CHBMI Prototype with Multicarrier PWM Schemes: Experimental Analysis. Energies, 2022, 15, 586.	1.6	14
3	Electric Vehicles and Psychology. Sustainability, 2021, 13, 719.	1.6	26
4	Simple and Flexible Power Loss Minimizer With Low-Cost MCU Implementation for High-Efficiency Three-Phase Induction Motor Drives. IEEE Transactions on Industry Applications, 2021, 57, 1472-1481.	3.3	10
5	On Psychological Aspects about Electric Vehicles, Part 1. , 2021, , .		0
6	Electric Vehicles and Psychology, Part 2. , 2021, , .		1
7	Effect of Heat Exchange Transient Conditions With Moving Water-Air Interface on Space Charge Accumulation in Undersea HVdc Cables. IEEE Transactions on Industry Applications, 2021, 57, 4528-4536.	3.3	2
8	UAV-Assisted Data Collection in Wireless Sensor Networks: A Comprehensive Survey. Electronics (Switzerland), 2021, 10, 2603.	1.8	32
9	Impact Evaluation of Innovative Selective Harmonic Mitigation Algorithm for Cascaded H-Bridge Inverter on IPMSM Drive Application. IEEE Open Journal of Industry Applications, 2021, 2, 347-365.	4.8	7
10	Implementation on NI-SOM sbRIO-9651 and Experimental Validation of Multi-Carrier PWM Techniques for Three-Phase Five Level Cascaded H-Bridge Inverter. , 2021, , .		2
11	Electric Mobility in Portugal: Current Situation and Forecasts for Fuel Cell Vehicles. Energies, 2021, 14, 7945.	1.6	18
12	A Quasi-Z-Source-Based Inductive Power Transfer System for Constant Current/Constant Voltage Charging Applications. Electronics (Switzerland), 2021, 10, 2900.	1.8	2
13	The Effect of the Axial Heat Transfer on Space Charge Accumulation Phenomena in HVDC Cables. Energies, 2020, 13, 4827.	1.6	6
14	A prototypal PCB board for the EMI characterization of SiC-based innovative switching devices. , 2020, , .		10
15	Modelling, simulation and characterization of a supercapacitor. , 2020, , .		2
16	Energy Management Concepts for the Evolution of Smart Grids. , 2020, , .		25
17	Selective harmonic mitigation with asymmetrical staircase voltage waveform for a three-phase five-level Cascaded H-Bridge Inverter. , 2020, , .		0
18	Performance Comparison of modified modulation Techniques for Quasi-Z-Source Converters. , 2020, , .		1

#	ARTICLE	IF	CITATIONS
19	From electric mobility to hydrogen mobility: current state and possible future expansions. , 2020, , .		4
20	Space charge accumulation in undersea HVDC cables as function of heat exchange conditions at the boundaries “ water-air interface. , 2020, , .		4
21	Experimental Validation of Maximum Constant Boost Control and Switching Frequency Optimal for three-phase Quasi-Z-Source Converters. , 2020, , .		0
22	Battery Models for Battery Powered Applications: A Comparative Study. Energies, 2020, 13, 4085.	1.6	30
23	A Novel Symmetrical Boost Modulation Method for qZS-based CHB Inverters. , 2020, , .		0
24	Modelling, Simulation and Characterization of a Supercapacitor in Automotive Applications. , 2020, , .		11
25	Reliability of PEA Measurement in Presence of an Air Void Defect. Energies, 2020, 13, 5652.	1.6	6
26	Design and Realization of a Bidirectional Full Bridge Converter with Improved Modulation Strategies. Electronics (Switzerland), 2020, 9, 724.	1.8	4
27	Different Scenarios of Electric Mobility: Current Situation and Possible Future Developments of Fuel Cell Vehicles in Italy. Sustainability, 2020, 12, 564.	1.6	24
28	Dynamic Reconfiguration Systems for PV Plant: Technical and Economic Analysis. Energies, 2020, 13, 2004.	1.6	7
29	Energy Harvester Sensing. Sensors, 2020, 20, 1849.	2.1	1
30	Innovative Computational Approach to Harmonic Mitigation for Seven-level Cascaded H-Bridge Inverters. , 2020, , .		2
31	Polarity reversal in HVDC joints - the effect of the axial thermal conduction. , 2020, , .		1
32	Investigation on partial discharges in HVDC cables after polarity reversal events. , 2020, , .		0
33	Effect of Polarity Reversal on the Partial Discharge Phenomena. , 2020, , .		1
34	Experimental Investigation on the Performances of Innovative PV Vertical Structures. Photonics, 2019, 6, 86.	0.9	18
35	A hierarchical architecture for increasing efficiency of large photovoltaic plants under non-homogeneous solar irradiation. Solar Energy, 2019, 188, 1306-1319.	2.9	15
36	The Industrial Applicability of PEA Space Charge Measurements, for Performance Optimization of HVDC Power Cables. Energies, 2019, 12, 4186.	1.6	15

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37	Experimental Validation of a Novel Method for Harmonic Mitigation for a Three-Phase Five-Level Cascaded H-Bridges Inverter. IEEE Transactions on Industry Applications, 2019, 55, 6089-6101.	3.3	25
38	Power Management of a Battery/Supercapacitor System for E-Mobility Applications. , 2019, , .		10
39	Forecasting the Diffusion of Hydrogen EV Refuelling Infrastructures in Italy. , 2019, , .		2
40	Experimental Investigation on the Performances of a Multilevel Inverter Using a Field Programmable Gate Array-Based Control System. Energies, 2019, 12, 1016.	1.6	27
41	Electromagnetic Full-Wave Simulation of Partial Discharge Detection in High Voltage AC Cables. , 2019, , .		2
42	Acoustic Wave Behavior in a Specimen Containing an Air Void Defect. , 2019, , .		2
43	Experimental Study on B-Spline-Based Modulation Schemes Applied in Multilevel Inverters for Electric Drive Applications. Energies, 2019, 12, 4521.	1.6	10
44	Comparative Analysis of Modified Modulation Scheme for Three-phase Voltage fed QZS Inverters. , 2019, , .		4
45	Modelling, simulation and characterization of Li-Ion battery cell. , 2019, , .		5
46	Design of Soft Ferrite filters for EMI reduction in Power Conversion Systems. , 2019, , .		1
47	Experimental Investigation on Magnetic Field Effects of IPT for Electric Bikes. Electric Power Components and Systems, 2018, 46, 125-134.	1.0	19
48	Partial discharges at different voltage waveshapes: Comparison between two different acquisition systems. IEEE Transactions on Dielectrics and Electrical Insulation, 2018, 25, 584-593.	1.8	16
49	Piezoelectric Rainfall Energy Harvester Performance by an Advanced Arduino-Based Measuring System. IEEE Transactions on Industry Applications, 2018, 54, 458-468.	3.3	39
50	Mixed Harmonic Elimination Control for a Single-Phase 9 Level Grid-Connected Inverter. , 2018, , .		4
51	Comparison between Different Dynamic Reconfigurations of Electrical Connections for partially shaded PV Modules. , 2018, , .		2
52	Novel Computational Method for Harmonic Mitigation for Three-phase Five-level Cascaded H-Bridge Inverter. , 2018, , .		3
53	Experimental Evaluation of the Performance of a Three-Phase Five-Level Cascaded H-Bridge Inverter by Means FPGA-Based Control Board for Grid Connected Applications. Energies, 2018, 11, 3298.	1.6	21
54	Modified Modulation Techniques for Quasi-Z-Source Cascaded H-Bridge Inverters. , 2018, , .		12

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55	The Acoustic Wave Behavior Within the PEA Cell for Space Charge Measurement. , 2018, , .		5
56	Interpretation of PEA Output Signal in a Multilayer Specimen. , 2018, , .		5
57	Performance Evaluation of a Three- Phase Five-Level Quasi-Z-Source Cascaded H-Bridge for Grid-Connected Applications. , 2018, , .		8
58	A Novel Computational Approach for Harmonic Mitigation in PV Systems with Single-Phase Five-Level CHBML. Energies, 2018, 11, 2100.	1.6	24
59	A novel method for harmonic mitigation for single-phase five-level cascaded H-Bridge inverter. , 2018, , .		13
60	Experimental investigation on different rainfall energy harvesting structures. , 2018, , .		6
61	Comparison Among Different Rainfall Energy Harvesting Structures. Applied Sciences (Switzerland), 2018, 8, 955.	1.3	36
62	Characterization of the parameters of interior permanent magnet synchronous motors for a loss model algorithm. Measurement: Journal of the International Measurement Confederation, 2017, 106, 196-202.	2.5	37
63	Increasing efficiency of photovoltaic systems under non-homogeneous solar irradiation using improved Dynamic Programming methods. Solar Energy, 2017, 150, 325-334.	2.9	54
64	The strategies for the diffusion of EVs: Focus on Norway and Italy. , 2017, , .		1
65	Simulation of a single-phase five-level cascaded H-Bridge inverter with multicarrier SPWM B-Spline based modulation techniques. , 2017, , .		8
66	Technical and Economical Evaluation on the Use of Reconfiguration Systems in Some EU Countries for PV Plants. IEEE Transactions on Industry Applications, 2017, 53, 1308-1315.	3.3	37
67	Wireless battery charging for electric bicycles. , 2017, , .		4
68	Electrical characterization of CIGSSe photovoltaic modules. , 2017, , .		0
69	Nanostructured lead acid battery for electric vehicles applications. , 2017, , .		14
70	Finite-element performance comparison of IPMSMs with unsymmetrical double-layer windings. , 2017, , .		4
71	New approach for harmonic mitigation in single-phase five-level CHBML with fundamental frequency switching. , 2017, , .		3
72	Cogging torque comparison of Interior Permanent Magnet Synchronous Generators with different stator windings. , 2017, , .		3

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73	Performances of a three-phase five-level cascaded H-bridge inverter with phase shifted B-spline based modulation techniques. , 2017, , .		4
74	Partial discharge behavior under single phase half and full-bridge rectifier. , 2017, , .		7
75	Space charge behavior of different insulating materials employed in AC and DC cable systems. , 2017, , .		12
76	Different Space Charge Behavior of Materials Used in AC and DC Systems. , 2017, , .		8
77	An efficient wireless power transfer prototype for electrical vehicles. , 2017, , .		33
78	Photovoltaic facade: Comparison of actual technologies. , 2017, , .		0
79	Ev charging station at university campus. , 2017, , .		3
80	A new technique for partial discharges measurement under DC periodic stress. , 2017, , .		14
81	Partial discharge detection and localization along medium voltage cables. , 2017, , .		1
82	Low-cost smart energy management based on ATmega 328P-PU microcontroller. , 2017, , .		7
83	Enhanced loss model algorithm for interior permanent magnet synchronous machines. , 2017, , .		1
84	Designing a Sustainable University Recharge Area for Electric Vehicles: Technical and Economic Analysis. Energies, 2017, 10, 1604.	1.6	41
85	Wireless Power Transmission for house appliances: A small-scale resonant coupling prototype. , 2016, , .		2
86	Economic evaluation of PV system for EV charging stations: Comparison between matching maximum orientation and storage system employment. , 2016, , .		17
87	Economic evaluation on the use of reconfiguration systems for increase of energy production in PV plants. , 2016, , .		3
88	Day-ahead forecasting for photovoltaic power using artificial neural networks ensembles. , 2016, , .		13
89	Interior permanent magnet synchronous motors: Impact of the variability of the parameters on their efficiency. , 2016, , .		11
90	Measuring rain energy with the employment of "Arduino", 2016, , .		3

#	ARTICLE	IF	CITATIONS
91	Experimental analysis with FPGA controller-based of MC PWM techniques for three-phase five level cascaded H-bridge for PV applications. , 2016, , .		33
92	Experimental characterization of a wind generator prototype for sustainable small wind farms. , 2016, , .		8
93	Contributed Review: Review of thermal methods for space charge measurement. Review of Scientific Instruments, 2016, 87, 111501.	0.6	28
94	PD characteristics at square shaped voltages applying two different detecting techniques. , 2016, , .		3
95	Remote voltage synchronization for wireless Partial Discharge diagnostics. , 2016, , .		3
96	Leading the way toward fuel parity in photovoltaics: The utility-scale market in Sicily, Italy. , 2016, , .		3
97	Space charges and partial discharges simultaneous measurements under DC stress. , 2016, , .		22
98	Overview and experimental analysis of MC SPWM techniques for single-phase five level cascaded H-bridge FPGA controller-based. , 2016, , .		28
99	Partial discharge of gel insulated high voltage power modules subjected to unconventional voltage waveforms. , 2016, , .		14
100	Review of space charge measurement systems: acoustic, thermal and optical methods. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 3126-3142.	1.8	105
101	CO <sub>2</sub> reduction exploiting RES for EV charging. , 2016, , .		4
102	PV systems in the vertical walls: A comparison of innovative structures. , 2016, , .		4
103	Recharge stations: A review. , 2016, , .		24
104	A cogging torque minimization procedure for IPMSMs based on different laminate geometry. , 2016, , .		8
105	Comparison on the use of PV systems in the vertical walls. , 2015, , .		3
106	Electrical characterization of low power CIGS <sub>Se</sub> photovoltaic modules. , 2015, , .		4
107	Survey on power increase of power by employment of PV reconfigurator. , 2015, , .		17
108	Economic benefits of the use of a PV plants reconfiguration systems. , 2015, , .		14

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109	Novel Energy Modelling and Forecasting Tools for Smart Energy Networks. , 2015, , .		3
110	A low-cost, real-time monitoring system for PV plants based on ATmega 328P-PU microcontroller. , 2015, , .		11
111	Finite-difference time-domain simulation of tower and grounding subjected to lightning. , 2015, , .		1
112	Android tool to evaluate grounding resistance. , 2015, , .		0
113	Local DoS applications with micro wind generation systems. , 2015, , .		0
114	Review of acoustic methods for space charge measurement. , 2015, , .		23
115	How is the spread of the Electric Vehicles?. , 2015, , .		26
116	Design and experimental characterization of a low-cost, real-time, wireless AC monitoring system based on ATmega 328P-PU microcontroller. , 2015, , .		20
117	Finite-Difference Time-Domain Simulation of Towers Cascade Under Lightning Surge Conditions. IEEE Transactions on Industry Applications, 2015, 51, 4917-4923.	3.3	9
118	Electric vehicles impact using renewable energy. , 2015, , .		18
119	Dynamic programming and Munkres algorithm for optimal photovoltaic arrays reconfiguration. Solar Energy, 2015, 122, 347-358.	2.9	82
120	Performance of the glass block in photovoltaic generation. , 2015, , .		3
121	Rainfall Energy Harvester. Advances in Environmental Engineering and Green Technologies Book Series, 2015, , 116-142.	0.3	4
122	Economical evaluation of ecological benefits of the demand side management. , 2014, , .		33
123	Partial discharges on IGBT modules: Are sinusoidal waveforms sufficient to evaluate behavior?. , 2014, , .		18
124	Piezoelectric model of rainfall energy harvester. , 2014, , .		26
125	An economic study about the installation of PV plants reconfiguration systems in Italy. , 2014, , .		32
126	Simplified hybrid PD model in voids: Pattern validation. , 2013, , .		17



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127	Harvesting rainfall energy by means of piezoelectric transducer. , 2013, , .		37
128	On the harvest of rainfall energy by means of piezoelectric transducer. , 2013, , .		10
129	Performance of the shape of Partial Discharge signal wireless probes. , 2013, , .		12
130	EMI Analysis in Electrical Drives Under Lightning Surge Conditions. IEEE Transactions on Electromagnetic Compatibility, 2012, 54, 850-859.	1.4	11
131	Simplified hybrid PD model in voids. , 2011, , .		19
132	A WAVELET OPERATOR ON THE INTERVAL IN SOLVING MAXWELL'S EQUATIONS. Progress in Electromagnetics Research Letters, 2011, 27, 133-140.	0.4	8
133	Detection of Radiated EM Transients by Exploiting Compact Spherical Antenna Features. Recent Patents on Electrical Engineering, 2011, 4, 202-208.	0.4	10
134	SOIL IONIZATION DUE TO HIGH PULSE TRANSIENT CURRENTS LEAKED BY EARTH ELECTRODES. Progress in Electromagnetics Research B, 2009, 14, 1-21.	0.7	24
135	A local linear black-box identification technique for power converters modeling. , 2009, , .		4
136	On the use of a meshless solver for PDEs governing electromagnetic transients. Applied Mathematics and Computation, 2009, 209, 42-51.	1.4	12
137	Finite difference time domain simulation of earth electrodes soil ionisation under lightning surge condition. IET Science, Measurement and Technology, 2008, 2, 134-145.	0.9	55
138	Evaluation of Radiated EMI in 42-V Vehicle Electrical Systems by FDTD Simulation. IEEE Transactions on Vehicular Technology, 2007, 56, 1477-1484.	3.9	27
139	Corrective meshless particle formulations for time domain Maxwell's equations. Journal of Computational and Applied Mathematics, 2007, 210, 34-46.	1.1	20
140	A Mesh-Free Particle Method for Transient Full-Wave Simulation. IEEE Transactions on Magnetics, 2007, 43, 1333-1336.	1.2	9
141	Smoothed Particle ElectroMagnetics: A mesh-free solver for transients. Journal of Computational and Applied Mathematics, 2006, 191, 194-205.	1.1	53
142	A smoothed particle interpolation scheme for transient electromagnetic simulation. IEEE Transactions on Magnetics, 2006, 42, 647-650.	1.2	19
143	Numerical simulation of radiated EMI in 42 V electrical automotive architectures. IEEE Transactions on Magnetics, 2006, 42, 879-882.	1.2	14
144	Wavelet-like bases for thin-wire integral equations in electromagnetics. Journal of Computational and Applied Mathematics, 2005, 175, 77-86.	1.1	8

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145	Finite difference time domain simulation of soil ionization in grounding systems under lightning surge conditions. Applied Numerical Analysis and Computational Mathematics, 2004, 1, 90-103.	0.6	15
146	FDTD Simulation for Electromagnetic Radiated Emissions in 42 V Vehicle Electrical Systems. , 0, , .		1
147	A Mesh-free Particle Method for Transient Full-wave Simulation. , 0, , .		0
148	Building Partial Discharge Signal Wireless Probes. , 0, , .		3