

Federico Delfino

List of Publications by Year in descending order

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112
papers

2,051
citations

201674

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docs citations

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times ranked

1496
citing authors

#	ARTICLE	IF	CITATIONS
1	A dynamic optimization-based architecture for polygeneration microgrids with tri-generation, renewables, storage systems and electrical vehicles. <i>Energy Conversion and Management</i> , 2015, 96, 511-520.	9.2	114
2	Optimal Control and Operation of Grid-Connected Photovoltaic Production Units for Voltage Support in Medium-Voltage Networks. <i>IEEE Transactions on Sustainable Energy</i> , 2014, 5, 254-263.	8.8	105
3	A mathematical model for the optimal operation of the University of Genoa Smart Polygeneration Microgrid: Evaluation of technical, economic and environmental performance indicators. <i>Energy</i> , 2014, 64, 912-922.	8.8	92
4	The University of Genoa smart polygeneration microgrid test-bed facility: The overall system, the technologies and the research challenges. <i>Renewable and Sustainable Energy Reviews</i> , 2013, 18, 442-459.	16.4	91
5	Lightning return stroke current radiation in presence of a conducting ground: 2. Validity assessment of simplified approaches. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	77
6	Lightning return stroke current radiation in presence of a conducting ground: 1. Theory and numerical evaluation of the electromagnetic fields. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	72
7	Cooray's Rubinstein Formula for the Evaluation of Lightning Radial Electric Fields: Derivation and Implementation in the Time Domain. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2008, 50, 194-197.	2.2	70
8	Evaluation of Power System Lightning Performance, Part I: Model and Numerical Solution Using the PSCAD-EMTDC Platform. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2017, 59, 137-145.	2.2	66
9	An Algorithm for the Exact Evaluation of the Underground Lightning Electromagnetic Fields. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2007, 49, 401-411.	2.2	57
10	An Energy Management System for the Savona Campus Smart Polygeneration Microgrid. <i>IEEE Systems Journal</i> , 2017, 11, 1799-1809.	4.6	52
11	Energy planning of sustainable districts: Towards the exploitation of small size intermittent renewables in urban areas. <i>Applied Energy</i> , 2018, 228, 2288-2297.	10.1	49
12	Evaluation of Power System Lightning Performance" Part II: Application to an Overhead Distribution Network. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2017, 59, 146-153.	2.2	47
13	Influence of frequency-dependent soil electrical parameters on the evaluation of lightning electromagnetic fields in air and underground. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	45
14	An Energy Management Platform for the Optimal Control of Active and Reactive Powers in Sustainable Microgrids. <i>IEEE Transactions on Industry Applications</i> , 2019, 55, 7146-7156.	4.9	44
15	A mathematical model for the dynamic simulation of low size cogeneration gas turbines within smart microgrids. <i>Energy</i> , 2017, 119, 710-723.	8.8	42
16	A Feedback Linearization Control Scheme for the Integration of Wind Energy Conversion Systems Into Distribution Grids. <i>IEEE Systems Journal</i> , 2012, 6, 85-93.	4.6	41
17	Lightning electromagnetic radiation over a stratified conducting ground: 2. Validity of simplified approaches. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	39
18	Time-Domain Implementation of Cooray's Rubinstein Formula via Convolution Integral and Rational Approximation. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2011, 53, 755-763.	2.2	38

#	ARTICLE	IF	CITATIONS
19	A real-time Energy Management System for the integration of economical aspects and system operator requirements: Definition and validation. <i>Renewable Energy</i> , 2017, 102, 406-416.	8.9	38
20	Planning & Open-Air Demonstrating Smart City Sustainable Districts. <i>Sustainability</i> , 2018, 10, 4636.	3.2	38
21	Design criteria for the optimal sizing of integrated photovoltaic-storage systems. <i>Energy</i> , 2018, 149, 505-515.	8.8	37
22	Lightning electromagnetic radiation over a stratified conducting ground: Formulation and numerical evaluation of the electromagnetic fields. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	35
23	A pilot facility for analysis and simulation of smart microgrids feeding smart buildings. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 58, 1247-1255.	16.4	35
24	A Feedback Linearization Scheme for the Control of Synchronous Generators. <i>Electric Power Components and Systems</i> , 2012, 40, 1842-1869.	1.8	32
25	Prony Series Representation for the Lightning Channel Base Current. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2012, 54, 308-315.	2.2	32
26	Identification and optimal control of an electrical storage system for microgrids with renewables. <i>Sustainable Energy, Grids and Networks</i> , 2019, 17, 100183.	3.9	32
27	Definition and on-field validation of a microgrid energy management system to manage load and renewables uncertainties and system operator requirements. <i>Electric Power Systems Research</i> , 2017, 146, 349-361.	3.6	28
28	Modeling and Experimental Validation of an Islanded No-Inertia Microgrid Site. <i>IEEE Transactions on Sustainable Energy</i> , 2018, 9, 1812-1821.	8.8	27
29	Data-Driven Photovoltaic Power Production Nowcasting and Forecasting for Polygeneration Microgrids. <i>IEEE Systems Journal</i> , 2018, 12, 2842-2853.	4.6	27
30	Electrical storage systems based on Sodium/Nickel chloride batteries: A mathematical model for the cell electrical parameter evaluation validated on a real smart microgrid application. <i>Journal of Power Sources</i> , 2018, 399, 372-382.	7.8	27
31	Modeling and Maximum Power Point Tracking Control of Wind Generating Units Equipped with Permanent Magnet Synchronous Generators in Presence of Losses. <i>Energies</i> , 2017, 10, 102.	3.1	26
32	An optimization algorithm for the operation planning of the University of Genoa smart polygeneration microgrid. , 2013, , .		23
33	An architecture for the optimal control of tertiary and secondary levels in small-size islanded microgrids. <i>International Journal of Electrical Power and Energy Systems</i> , 2018, 103, 75-88.	5.5	23
34	Economic and environmental performances quantification of the university of Genoa Smart Polygeneration Microgrid. , 2012, , .		22
35	An Effective Approach for High-Frequency Electromagnetic Field-to-Line Coupling Analysis Based on Regularization Techniques. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2012, 54, 1289-1297.	2.2	20
36	A simplified first harmonic model for the Savona Campus Smart Polygeneration Microgrid. , 2017, , .		17

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37	A review on the return stroke engineering models attenuation function: Proposed expressions, validation and identification methods. <i>Electric Power Systems Research</i> , 2019, 172, 230-241.	3.6	17
38	A field-based inverse algorithm for the identification of different height lightning return strokes. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , 2001, 20, 724-731.	0.9	16
39	Key Performance Indicators for an Energy Community Based on Sustainable Technologies. <i>Sustainability</i> , 2021, 13, 8789.	3.2	16
40	Planning and management of sustainable microgrids: The test-bed facilities at the University of Genoa. , 2013, , .		15
41	A system of systems model for the control of the university of Genoa Smart Polygeneration Microgrid. , 2012, , .		14
42	A Building Energy Management System Based on an Equivalent Electric Circuit Model. <i>Energies</i> , 2020, 13, 1689.	3.1	14
43	On the Computation of underground Electromagnetic Fields Generated by Lightning: A Comparison between Different Approaches. , 2007, , .		13
44	Distributed control for polygeneration microgrids: A Dynamic Market Mechanism approach. <i>Control Engineering Practice</i> , 2022, 121, 105052.	5.5	13
45	An identification procedure for lightning return strokes. <i>Journal of Electrostatics</i> , 2001, 51-52, 326-332.	1.9	12
46	The Smart City Energy infrastructures at the Savona Campus of the University of Genoa. , 2016, , .		12
47	Lightning current identification over a conducting ground plane. <i>Radio Science</i> , 2003, 38, n/a-n/a.	1.6	11
48	Numerical calculation of total force upon permanent magnets using equivalent source methods. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , 2001, 20, 431-447.	0.9	10
49	A Dynamic Market Mechanism for Combined Heat and Power Microgrid Energy Management. <i>IFAC-PapersOnLine</i> , 2017, 50, 10033-10039.	0.9	10
50	A flexible test-bed pilot facility for the analysis and simulation of Smart Microgrids. , 2019, , .		10
51	Electric Vehicles and Storage Systems Integrated within a Sustainable Urban District Fed by Solar Energy. <i>Journal of Advanced Transportation</i> , 2019, 2019, 1-19.	1.7	10
52	Simulation and design of a large thermal storage system: Real data analysis of a smart polygeneration micro grid system. <i>Applied Thermal Engineering</i> , 2022, 201, 117789.	6.0	10
53	An approximate methodology to verify the compliance of large photovoltaic power plants to system operator steady-state requirements. <i>Electric Power Systems Research</i> , 2015, 127, 80-92.	3.6	9
54	Smart microgrids in smart campuses with electric vehicles and storage systems: Analysis of possible operating scenarios. , 2016, , .		9

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55	High-Frequency EHV/HV Autotransformer Model Identification From LEMP Test Data. IEEE Transactions on Power Delivery, 2011, 26, 714-724.	4.3	8
56	Smart microgrid monitoring: Evaluation of key performance indicators for a PV plant connected to a LV microgrid. , 2017, , .		8
57	An Optimization Model for Polygeneration Microgrids with Renewables, Electrical and Thermal Storage: Application to the Savona Campus. , 2018, , .		8
58	Electricity Spot Prices Forecasting for MIBEL by using Deep Learning: a comparison between NAR, NARX and LSTM networks. , 2020, , .		8
59	V2G technology to mitigate PV uncertainties. , 2020, , .		8
60	An Equivalent Two-Port Model for a Transmission Line of Finite Length Accounting for High-Frequency Effects. IEEE Transactions on Electromagnetic Compatibility, 2014, 56, 1657-1665.	2.2	7
61	Hydrogen as an energy vector to optimize the energy exploitation of a self-consumption solar photovoltaic facility in a dwelling house. Energy Reports, 2020, 6, 155-166.	5.1	7
62	Analytical Expressions for Lightning Electromagnetic Fields With Arbitrary Channel-Base Current. Part II: Validation and Computational Performance. IEEE Transactions on Electromagnetic Compatibility, 2021, 63, 534-541.	2.2	7
63	A Methodology to Reduce the Computational Effort in the Evaluation of the Lightning Performance of Distribution Networks. Atmosphere, 2016, 7, 147.	2.3	6
64	Photovoltaic Generating Units as Reactive Supply Ancillary Service Providers. International Journal of Emerging Electric Power Systems, 2008, 9, .	0.8	5
65	A new method for the solution of convolution-type dual integral-equation systems occurring in engineering electromagnetics. Journal of Engineering Mathematics, 2009, 63, 51-59.	1.2	5
66	Optimal planning of the energy production mix in smart districts including renewable and cogeneration power plants. , 2016, , .		5
67	Nanogrids with Renewable Sources, Electrical Storage and Vehicle-to-Home Systems in the Household Sector: Analysis for a Single-Family Dwelling. , 2019, , .		5
68	A fullâ€œMaxwell algorithm for the fieldâ€œtoâ€œmulticonductor lineâ€œcoupling problem. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2003, 22, 789-805.	0.9	4
69	Sustainable electric mobility analysis in the Savona Campus of the University of Genoa. , 2016, , .		4
70	Distributed optimal power flow for islanded microgrids: An application to the Smart Polygeneration Microgrid of the Genoa University. , 2016, , .		4
71	A model predictive control approach for the optimization of polygeneration microgrids and demand response strategies. , 2016, , .		4
72	Electric vehicle use in public fleets: The case of the Genoa University. , 2017, , .		4

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73	Evaluating LCOE in sustainable microgrids for smart city applications. E3S Web of Conferences, 2019, 113, 03006.	0.5	4
74	E-Mobility & Microgrid Laboratory at the Savona Campus of Genova University. , 2020, , .		4
75	Supply-side gaming on electricity markets with physical constrained transmission network. , 2008, , .		3
76	A regularization approach for high-frequency electromagnetic field-to-line coupling analysis. Inverse Problems, 2012, 28, 095001.	2.0	3
77	Optimal thermal power production by means of an equivalent electric circuit for a thermal network: The Savona Campus Smart Polygeneration Microgrid case. , 2016, , .		3
78	Flexibility Services Based on OpenADR Protocol for DSO Level. Sensors, 2020, 20, 6266.	3.8	3
79	On the participation of small-scale high performance combined heat and power plants to the Italian ancillary services market within Virtually Aggregated Mixed Units. Energy, 2022, 239, 122275.	8.8	3
80	Assessment of the Lightning Performance of overhead distribution lines based on Lightning Location Systems data. International Journal of Electrical Power and Energy Systems, 2022, 142, 108230.	5.5	3
81	The Use of a Static Series Compensator (SSC) for the Mitigation of Voltage Sags in a Radial Distribution Network. , 2007, , .		2
82	Optimal control of active power flows in Smart Microgrids. , 2014, , .		2
83	An equivalent electric circuit for the thermal Network of the Savona Campus Smart Polygeneration Microgrid. , 2015, , .		2
84	Definition and Experimental Validation of a Simplified Model for a Microgrid Thermal Network and its Integration into Energy Management Systems. Energies, 2016, 9, 914.	3.1	2
85	The University of Genoa Smart City Demo Site. , 2018, , .		2
86	On the integration of solar PV and storage batteries within a microgrid. , 2019, , .		2
87	Smart Charging of Electric Vehicles to Minimize Renewable Power Curtailment in Polygeneration Prosumer Buildings. , 2020, , .		2
88	Lightning-Induced Overvoltage Peaks Considering Soil Parameters Frequency-Dependence: New Approach with Dominant Frequency Associated with Lightning Current Front Time. , 2022, , .		2
89	Performance and control of PhotoVoltaic systems supplying both primary and ancillary services. , 2008, , .		1
90	Rational approximation for the time domain implementation of Cooray-Rubinstein formula. , 2011, , .		1

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91	A Multilevel Approach for the Optimal Control of Energy Systems Distributed over the Territory. , 2013, , .		1
92	Energy management in hybrid systems coupling PV and electrical storage. , 2015, , .		1
93	The role of high efficiency trigeneration plants within sustainable smart microgrids: Performance analysis and experimental tests. , 2015, , .		1
94	A two-step procedure for the energy management in smart microgrids accounting for economical and power quality issues. , 2015, , .		1
95	A multi-objective optimization tool for the daily management of sustainable smart microgrids: Case Study: the savona campus SPM and SEB facilities. , 2016, , .		1
96	Regularization techniques for the high-frequency electromagnetic field coupling problem with terminated lines. Journal of Engineering Mathematics, 2016, 96, 73-93.	1.2	1
97	A Methodological Approach to Assess the Impact of Smarting Action on Electricity Transmission and Distribution Networks Related to Europe 2020 Targets. Energies, 2017, 10, 155.	3.1	1
98	Design of a sustainable polygeneration microgrid for the retrofiting of an industrial site: Ansaldo Energia case study. E3S Web of Conferences, 2019, 113, 03009.	0.5	1
99	A Review of Lightning Location Systems: Part I-Methodologies and Techniques. , 2020, , .		1
100	Short-Term Power Forecasting Framework for Microgrids Using Combined Baseline and Regression Models. Applied Sciences (Switzerland), 2021, 11, 6420.	2.5	1
101	The University of Genoa Savona Campus Sustainability Projects. , 2021, , .		1
102	Application to Real Case Studies. SpringerBriefs in Applied Sciences and Technology, 2022, , 77-120.	0.4	1
103	The use of the regularization theory for the analysis of the field-to-line coupling problem. , 2012, , .		0
104	Planning and Management of Distributed Energy Resources and Loads in a Smart Microgrid. International Journal of Monitoring and Surveillance Technologies Research, 2014, 2, 41-57.	0.3	0
105	A semi-analytical formula for the evaluation of the indirect lightning performance of overhead power lines. , 2014, , .		0
106	Development and assessment of Decentralized Energy Management System in a smart Microgrid. , 2014, , .		0
107	A simple strategy to optimally design and manage a photovoltaic plant integrated with a storage system for different applications. , 2017, , .		0
108	Decentralized generation in urban districts: Optimal planning considering uncertainties. , 2017, , .		0

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109	Electromagnetic Transients on Power Plant Connection Caused by Lightning Event. , 2021, , .		0
110	On the Enhancement of the Flashovers on Overhead Distribution Lines Considering the Corona Discharge. , 2021, , .		0
111	Lightning electromagnetic field calculations in presence of a conducting ground: the numerical treatment of Sommerfeld's integrals. , 2012, , 515-565.		0
112	Lightning-induced Voltages on Overhead Distribution Lines Computed through Analytical Expressions for the Electromagnetic Fields. , 2021, , .		0