

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

118
times ranked

1496
citing authors

#	ARTICLE	IF	CITATIONS
1	On the participation of small-scale high performance combined heat and power plants to the Italian ancillary services market within Virtually Aggregated Mixed Units. <i>Energy</i> , 2022, 239, 122275.	8.8	3
2	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
3	Distributed control for polygeneration microgrids: A Dynamic Market Mechanism approach. <i>Control Engineering Practice</i> , 2022, 121, 105052.	5.5	13
4	Application to Real Case Studies. <i>SpringerBriefs in Applied Sciences and Technology</i> , 2022, , 77-120.	0.4	1
5	Assessment of the Lightning Performance of overhead distribution lines based on Lightning Location Systems data. <i>International Journal of Electrical Power and Energy Systems</i> , 2022, 142, 108230.	5.5	3
6	Lightning-Induced Overvoltage Peaks Considering Soil Parameters Frequency-Dependence: New Approach with Dominant Frequency Associated with Lightning Current Front Time. , 2022, , .		2
7	Analytical Expressions for Lightning Electromagnetic Fields With Arbitrary Channel-Base Current. Part II: Validation and Computational Performance. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2021, 63, 534-541.	2.2	7
8	Electromagnetic Transients on Power Plant Connection Caused by Lightning Event. , 2021, , .		0
9	On the Enhancement of the Flashovers on Overhead Distribution Lines Considering the Corona Discharge. , 2021, , .		0
10	Short-Term Power Forecasting Framework for Microgrids Using Combined Baseline and Regression Models. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 6420.	2.5	1
11	Key Performance Indicators for an Energy Community Based on Sustainable Technologies. <i>Sustainability</i> , 2021, 13, 8789.	3.2	16
12	The University of Genoa Savona Campus Sustainability Projects. , 2021, , .		1
13	Lightning-induced Voltages on Overhead Distribution Lines Computed through Analytical Expressions for the Electromagnetic Fields. , 2021, , .		0
14	Hydrogen as an energy vector to optimize the energy exploitation of a self-consumption solar photovoltaic facility in a dwelling house. <i>Energy Reports</i> , 2020, 6, 155-166.	5.1	7
15	Flexibility Services Based on OpenADR Protocol for DSO Level. <i>Sensors</i> , 2020, 20, 6266.	3.8	3
16	Electricity Spot Prices Forecasting for MIBEL by using Deep Learning: a comparison between NAR, NARX and LSTM networks. , 2020, , .		8
17	A Review of Lightning Location Systems: Part I-Methodologies and Techniques. , 2020, , .		1
18	A Building Energy Management System Based on an Equivalent Electric Circuit Model. <i>Energies</i> , 2020, 13, 1689.	3.1	14

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19	E-Mobility & Microgrid Laboratory at the Savona Campus of Genova University. , 2020, , .		4
20	Smart Charging of Electric Vehicles to Minimize Renewable Power Curtailment in Polygeneration Prosumer Buildings. , 2020, , .		2
21	V2G technology to mitigate PV uncertainties. , 2020, , .		8
22	On the integration of solar PV and storage batteries within a microgrid. , 2019, , .		2
23	Identification and optimal control of an electrical storage system for microgrids with renewables. Sustainable Energy, Grids and Networks, 2019, 17, 100183.	3.9	32
24	Evaluating LCOE in sustainable microgrids for smart city applications. E3S Web of Conferences, 2019, 113, 03006.	0.5	4
25	Design of a sustainable polygeneration microgrid for the retrofitting of an industrial site: Ansaldo Energia case study. E3S Web of Conferences, 2019, 113, 03009.	0.5	1
26	A flexible test-bed pilot facility for the analysis and simulation of Smart Microgrids. , 2019, , .		10
27	Nanogrids with Renewable Sources, Electrical Storage and Vehicle-to-Home Systems in the Household Sector: Analysis for a Single-Family Dwelling. , 2019, , .		5
28	An Energy Management Platform for the Optimal Control of Active and Reactive Powers in Sustainable Microgrids. IEEE Transactions on Industry Applications, 2019, 55, 7146-7156.	4.9	44
29	A review on the return stroke engineering models attenuation function: Proposed expressions, validation and identification methods. Electric Power Systems Research, 2019, 172, 230-241.	3.6	17
30	Electric Vehicles and Storage Systems Integrated within a Sustainable Urban District Fed by Solar Energy. Journal of Advanced Transportation, 2019, 2019, 1-19.	1.7	10
31	Design criteria for the optimal sizing of integrated photovoltaic-storage systems. Energy, 2018, 149, 505-515.	8.8	37
32	Modeling and Experimental Validation of an Islanded No-Inertia Microgrid Site. IEEE Transactions on Sustainable Energy, 2018, 9, 1812-1821.	8.8	27
33	Data-Driven Photovoltaic Power Production Nowcasting and Forecasting for Polygeneration Microgrids. IEEE Systems Journal, 2018, 12, 2842-2853.	4.6	27
34	Planning & Open-Air Demonstrating Smart City Sustainable Districts. Sustainability, 2018, 10, 4636.	3.2	38
35	The University of Genoa Smart City Demo Site. , 2018, , .		2
36	An Optimization Model for Polygeneration Microgrids with Renewables, Electrical and Thermal Storage: Application to the Savona Campus. , 2018, , .		8

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37	An architecture for the optimal control of tertiary and secondary levels in small-size islanded microgrids. International Journal of Electrical Power and Energy Systems, 2018, 103, 75-88.	5.5	23
38	Energy planning of sustainable districts: Towards the exploitation of small size intermittent renewables in urban areas. Applied Energy, 2018, 228, 2288-2297.	10.1	49
39	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. Journal of Power Sources, 2018, 399, 372-382.	7.8	27
40	An Energy Management System for the Savona Campus Smart Polygeneration Microgrid. IEEE Systems Journal, 2017, 11, 1799-1809.	4.6	52
41	Definition and on-field validation of a microgrid energy management system to manage load and renewables uncertainties and system operator requirements. Electric Power Systems Research, 2017, 146, 349-361.	3.6	28
42	A mathematical model for the dynamic simulation of low size cogeneration gas turbines within smart microgrids. Energy, 2017, 119, 710-723.	8.8	42
43	A Dynamic Market Mechanism for Combined Heat and Power Microgrid Energy Management. IFAC-PapersOnLine, 2017, 50, 10033-10039.	0.9	10
44	A simplified first harmonic model for the Savona Campus Smart Polygeneration Microgrid. , 2017, , .		17
45	A real-time Energy Management System for the integration of economical aspects and system operator requirements: Definition and validation. Renewable Energy, 2017, 102, 406-416.	8.9	38
46	Evaluation of Power System Lightning Performance"Part II: Application to an Overhead Distribution Network. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 146-153.	2.2	47
47	Evaluation of Power System Lightning Performance, Part I: Model and Numerical Solution Using the PSCAD-EMTDC Platform. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 137-145.	2.2	66
48	Electric vehicle use in public fleets: The case of the Genoa University. , 2017, , .		4
49	A simple strategy to optimally design and manage a photovoltaic plant integrated with a storage system for different applications. , 2017, , .		0
50	Decentralized generation in urban districts: Optimal planning considering uncertainties. , 2017, , .		0
51	Smart microgrid monitoring: Evaluation of key performance indicators for a PV plant connected to a LV microgrid. , 2017, , .		8
52	Modeling and Maximum Power Point Tracking Control of Wind Generating Units Equipped with Permanent Magnet Synchronous Generators in Presence of Losses. Energies, 2017, 10, 102.	3.1	26
53	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
54	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

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55	A Methodology to Reduce the Computational Effort in the Evaluation of the Lightning Performance of Distribution Networks. Atmosphere, 2016, 7, 147.	2.3	6
56	The Smart City Energy infrastructures at the Savona Campus of the University of Genoa. , 2016, , .		12
57	Optimal thermal power production by means of an equivalent electric circuit for a thermal network: The Savona Campus Smart Polygeneration Microgrid case. , 2016, , .		3
58	Sustainable electric mobility analysis in the Savona Campus of the University of Genoa. , 2016, , .		4
59	A multi-objective optimization tool for the daily management of sustainable smart microgrids: Case Study: the savona campus SPM and SEB facilities. , 2016, , .		1
60	Distributed optimal power flow for islanded microgrids: An application to the Smart Polygeneration Microgrid of the Genoa University. , 2016, , .		4
61	Optimal planning of the energy production mix in smart districts including renewable and cogeneration power plants. , 2016, , .		5
62	Smart microgrids in smart campuses with electric vehicles and storage systems: Analysis of possible operating scenarios. , 2016, , .		9
63	A model predictive control approach for the optimization of polygeneration microgrids and demand response strategies. , 2016, , .		4
64	A pilot facility for analysis and simulation of smart microgrids feeding smart buildings. Renewable and Sustainable Energy Reviews, 2016, 58, 1247-1255.	16.4	35
65	Regularization techniques for the high-frequency electromagnetic field coupling problem with terminated lines. Journal of Engineering Mathematics, 2016, 96, 73-93.	1.2	1
66	An equivalent electric circuit for the thermal Network of the Savona Campus Smart Polygeneration Microgrid. , 2015, , .		2
67	Energy management in hybrid systems coupling PV and electrical storage. , 2015, , .		1
68	The role of high efficiency trigeneration plants within sustainable smart microgrids: Performance analysis and experimental tests. , 2015, , .		1
69	An approximate methodology to verify the compliance of large photovoltaic power plants to system operator steady-state requirements. Electric Power Systems Research, 2015, 127, 80-92.	3.6	9
70	A dynamic optimization-based architecture for polygeneration microgrids with tri-generation, renewables, storage systems and electrical vehicles. Energy Conversion and Management, 2015, 96, 511-520.	9.2	114
71	A two-step procedure for the energy management in smart microgrids accounting for economical and power quality issues. , 2015, , .		1
72	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

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73	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
74	A semi-analytical formula for the evaluation of the indirect lightning performance of overhead power lines. , 2014, , .		0
75	A mathematical model for the optimal operation of the University of Genoa Smart Polygeneration Microgrid: Evaluation of technical, economic and environmental performance indicators. Energy, 2014, 64, 912-922.	8.8	92
76	Optimal Control and Operation of Grid-Connected Photovoltaic Production Units for Voltage Support in Medium-Voltage Networks. IEEE Transactions on Sustainable Energy, 2014, 5, 254-263.	8.8	105
77	Optimal control of active power flows in Smart Microgrids. , 2014, , .		2
78	Development and assessment of Decentralized Energy Management System in a smart Microgrid. , 2014, , .		0
79	An optimization algorithm for the operation planning of the University of Genoa smart polygeneration microgrid. , 2013, , .		23
80	A Multilevel Approach for the Optimal Control of Energy Systems Distributed over the Territory. , 2013, , .		1
81	The University of Genoa smart polygeneration microgrid test-bed facility: The overall system, the technologies and the research challenges. Renewable and Sustainable Energy Reviews, 2013, 18, 442-459.	16.4	91
82	Planning and management of sustainable microgrids: The test-bed facilities at the University of Genoa. , 2013, , .		15
83	A regularization approach for high-frequency electromagnetic field-to-line coupling analysis. Inverse Problems, 2012, 28, 095001.	2.0	3
84	A Feedback Linearization Scheme for the Control of Synchronous Generators. Electric Power Components and Systems, 2012, 40, 1842-1869.	1.8	32
85	An Effective Approach for High-Frequency Electromagnetic Field-to-Line Coupling Analysis Based on Regularization Techniques. IEEE Transactions on Electromagnetic Compatibility, 2012, 54, 1289-1297.	2.2	20
86	A system of systems model for the control of the university of Genoa Smart Polygeneration Microgrid. , 2012, , .		14
87	Economic and environmental performances quantification of the university of Genoa Smart Polygeneration Microgrid. , 2012, , .		22
88	The use of the regularization theory for the analysis of the field-to-line coupling problem. , 2012, , .		0
89	A Feedback Linearization Control Scheme for the Integration of Wind Energy Conversion Systems Into Distribution Grids. IEEE Systems Journal, 2012, 6, 85-93.	4.6	41
90	Prony Series Representation for the Lightning Channel Base Current. IEEE Transactions on Electromagnetic Compatibility, 2012, 54, 308-315.	2.2	32

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91	Lightning electromagnetic field calculations in presence of a conducting ground: the numerical treatment of Sommerfeld's integrals. , 2012, , 515-565.		0
92	Lightning electromagnetic radiation over a stratified conducting ground: Formulation and numerical evaluation of the electromagnetic fields. Journal of Geophysical Research, 2011, 116, .	3.3	35
93	Lightning electromagnetic radiation over a stratified conducting ground: 2. Validity of simplified approaches. Journal of Geophysical Research, 2011, 116, .	3.3	39
94	Time-Domain Implementation of Coorayâ€“Rubinstein Formula via Convolution Integral and Rational Approximation. IEEE Transactions on Electromagnetic Compatibility, 2011, 53, 755-763.	2.2	38
95	High-Frequency EHV/HV Autotransformer Model Identification From LEMP Test Data. IEEE Transactions on Power Delivery, 2011, 26, 714-724.	4.3	8
96	Rational approximation for the time domain implementation of Cooray-Rubinstein formula. , 2011, , .		1
97	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
98	Influence of frequencyâ€“dependent soil electrical parameters on the evaluation of lightning electromagnetic fields in air and underground. Journal of Geophysical Research, 2009, 114, .	3.3	45
99	Coorayâ€“Rubinstein Formula for the Evaluation of Lightning Radial Electric Fields: Derivation and Implementation in the Time Domain. IEEE Transactions on Electromagnetic Compatibility, 2008, 50, 194-197.	2.2	70
100	Lightning return stroke current radiation in presence of a conducting ground: 1. Theory and numerical evaluation of the electromagnetic fields. Journal of Geophysical Research, 2008, 113, .	3.3	72
101	Lightning return stroke current radiation in presence of a conducting ground: 2. Validity assessment of simplified approaches. Journal of Geophysical Research, 2008, 113, .	3.3	77
102	Performance and control of PhotoVoltaic systems supplying both primary and ancillary services. , 2008, , .		1
103	Photovoltaic Generating Units as Reactive Supply Ancillary Service Providers. International Journal of Emerging Electric Power Systems, 2008, 9, .	0.8	5
104	Supply-side gaming on electricity markets with physical constrained transmission network. , 2008, , .		3
105	The Use of a Static Series Compensator (SSC) for the Mitigation of Voltage Sags in a Radial Distribution Network. , 2007, , .		2
106	On the Computation of underground Electromagnetic Fields Generated by Lightning: A Comparison between Different Approaches. , 2007, , .		13
107	An Algorithm for the Exact Evaluation of the Underground Lightning Electromagnetic Fields. IEEE Transactions on Electromagnetic Compatibility, 2007, 49, 401-411.	2.2	57
108	Lightning current identification over a conducting ground plane. Radio Science, 2003, 38, n/a-n/a.	1.6	11

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109	A fullâ€Maxwell algorithm for the fieldâ€toâ€multiconductor lineâ€coupling problem. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2003, 22, 789-805.	0.9	4
110	Numerical calculation of total force upon permanent magnets using equivalent source methods. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2001, 20, 431-447.	0.9	10
111	A fieldâ€based inverse algorithm for the identification of different height lightning return strokes. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2001, 20, 724-731.	0.9	16
112	An identification procedure for lightning return strokes. Journal of Electrostatics, 2001, 51-52, 326-332.	1.9	12