

Federico Silvestro

List of Publications by Year in descending order

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153
papers

2,023
citations

411340

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h-index

388640

36
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155
all docs

155
docs citations

155
times ranked

2238
citing authors

#	ARTICLE	IF	CITATIONS
1	Fault Detection and Localization in Active Distribution Networks Using Optimally Placed Phasor Measurements Units. IEEE Transactions on Power Systems, 2023, 38, 714-727.	4.6	11
2	Equivalent dynamic modeling of active distribution networks for TSO-DSO interactions. , 2022, , 227-275.		0
3	Siting and Sizing of Energy Storage Systems: Towards a Unified Approach for Transmission and Distribution System Operators for Reserve Provision and Grid Support. Electric Power Systems Research, 2021, 190, 106660.	2.1	12
4	Electrical consumption forecasting in hospital facilities. , 2021, , 195-211.		0
5	Experimental Validation of a Dynamic Equivalent Model for Microgrids. IEEE Transactions on Industry Applications, 2021, 57, 2202-2211.	3.3	8
6	VIRTUS Project: A Scalable Aggregation Platform for the Intelligent Virtual Management of Distributed Energy Resources. Energies, 2021, 14, 3663.	1.6	4
7	Flexibility Evaluation of Domestic Electric Water Heater Aggregates. , 2021, , .		3
8	A method for optimal integration of energy storage in distribution networks: a business case. , 2021, , .		0
9	Performance analysis of frequency regulation services provided by aggregates of domestic thermostatically controlled loads. International Journal of Electrical Power and Energy Systems, 2021, 131, 107050.	3.3	13
10	Small-Signal Stability Analysis of a DC Shipboard Microgrid With Droop-Controlled Batteries and Constant Power Resources. , 2021, , .		1
11	Assessment of the Potential Shore to Ship Load Demand: the Italian Scenario. , 2021, , .		6
12	Day-Ahead and Intra-Day Planning of Integrated BESS-PV Systems Providing Frequency Regulation. IEEE Transactions on Sustainable Energy, 2020, 11, 1797-1806.	5.9	54
13	Performance Comparative Assessment of Grid Connected Power Converters Control Strategies. , 2020, , .		2
14	Frequency stability assessment of modern power systems: Models definition and parameters identification. Sustainable Energy, Grids and Networks, 2020, 23, 100384.	2.3	9
15	An Instantaneous Growing Stream Clustering Algorithm for Probabilistic Load Modeling/Profiling. , 2020, , .		4
16	Development of a Multiphysics Real-Time Simulator for Model-Based Design of a DC Shipboard Microgrid. Energies, 2020, 13, 3580.	1.6	12
17	Frequency Fluctuations in Marine Microgrids: Origins and Identification Tools. IEEE Electrification Magazine, 2020, 8, 40-46.	1.8	9
18	Experimental Validation of a Dynamic Equivalent Model for Microgrids. , 2020, , .		1

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19	Control Strategy and Architecture for Integrating Distributed Fuel Cells on board Large Cruise Ships. , 2020, , .		4
20	A quasi-optimal energy resources management technique for low voltage microgrids. International Journal of Electrical Power and Energy Systems, 2020, 121, 106080.	3.3	3
21	Probabilistic Planning for Distribution Networks including Optimal DER Regulation and Storage Allocation. , 2020, , .		2
22	The ShIL Project: a new laboratory infrastructure for co-simulation of multi-domain marine applications. , 2020, , .		2
23	A Markov Chain Load Modeling Approach through a Stream Clustering Algorithm. , 2020, , .		2
24	Distribution Level Aggregator Platform for DSO Supportâ€”Integration of Storage, Demand Response, and Renewables. Frontiers in Energy Research, 2019, 7, .	1.2	5
25	Frequency Regulation Services by a BESS-Generator System using Predictive Control. , 2019, , .		3
26	The Podcast Project: An Application of Volt/Var Optimization to the Electric Distribution Network of Sanremo (Italy). , 2019, , .		3
27	Synthetic Inertia and Primary Frequency Regulation Services by Domestic Thermal Loads. , 2019, , .		6
28	Optimal DER Regulation and Storage Allocation in Distribution Networks: Volt/Var optimization and Congestion Relief. , 2019, , .		5
29	Modeling of harmonic propagation of fast DC EV charging station in a Low Voltage network. , 2019, , .		7
30	Aggregation Strategy for Reactive Power Compensation Techniquesâ€”Validation. Energies, 2019, 12, 2047.	1.6	1
31	A Hybrid Technique for Day-Ahead PV Generation Forecasting Using Clear-Sky Models or Ensemble of Artificial Neural Networks According to a Decision Tree Approach. Energies, 2019, 12, 1298.	1.6	32
32	Shipboard distributed energy resources: Motivations, challenges and possible solutions in the cruise ship arena. International Shipbuilding Progress, 2019, 66, 181-199.	0.3	6
33	DC Shipboard Microgrid Modeling for Fuel Cell Integration Study. , 2019, , .		6
34	Simplified State Space Building Energy Model and Transfer Learning Based Occupancy Estimation for HVAC Optimal Control. , 2019, , .		4
35	Algorithm for Optimal Microgrid Operation and Control with Adaptable Constraints and Flexible Objective Function. , 2019, , .		1
36	Integration of Shipboard Microgrids Within Land Distribution Networks: Employing a Ship Microgrid to Meet Critical Needs. IEEE Electrification Magazine, 2019, 7, 69-80.	1.8	12

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37	Modeling and Real-Time Simulation of a DC Shipboard Microgrid. , 2019, , .		1
38	Implementation of advanced functionalities for Distribution Management Systems: Load forecasting and modeling through Artificial Neural Networks ensembles. Electric Power Systems Research, 2019, 167, 230-239.	2.1	55
39	Optimal Sizing of Energy Storage Systems for Shipboard Applications. IEEE Transactions on Energy Conversion, 2019, 34, 801-811.	3.7	66
40	Operational constrained nonlinear modeling and identification of active distribution networks. Electric Power Systems Research, 2019, 168, 92-104.	2.1	35
41	Mixed-Integer Algorithm for Optimal Dispatch of Integrated PV-Storage Systems. IEEE Transactions on Industry Applications, 2019, 55, 238-247.	3.3	30
42	A Stochastic Optimization Method for Planning and Real-Time Control of Integrated PV-Storage Systems: Design and Experimental Validation. IEEE Transactions on Sustainable Energy, 2018, 9, 1188-1197.	5.9	42
43	A Stochastic Approach to Shipboard Electric Loads Power Modeling and Simulation. , 2018, , .		3
44	Mitigation of Voltage Deviations in DC Shipboard Microgrids Through the Active Utilization of Battery Energy Storage Systems. , 2018, , .		0
45	Frequency Regulation by Thermostatically Controlled Loads: a Technical and Economic Analysis. , 2018, , .		4
46	Participation of Customers to Virtual Power Plants for Reactive Power Provision. , 2018, , .		6
47	A Collaborative Laboratory for Shipboard Microgrid: Research and Training. , 2018, , .		2
48	Performance Analysis of Distributed Control Strategies for Frequency Regulation Support by Domestic Thermal Loads. , 2018, , .		0
49	Design and Validation of a Detailed Building Thermal Model Considering Occupancy and Temperature Sensors. , 2018, , .		4
50	Virtual Power Plant for Improving Power System Protection Issues: Solution to the Problem of Power System Reliability under Distributed Energy Resources. , 2018, , .		0
51	Efficiency Improvement of a Natural Gas Marine Engine Using a Hybrid Turbocharger. Energies, 2018, 11, 1924.	1.6	17
52	Optimal Sizing of a Storage System Coupled with Grid Connected Renewable Generation Respecting Day-Ahead Dispatch Profile. , 2018, , .		0
53	A Risk-Based Methodology and Tool Combining Threat Analysis and Power System Security Assessment. Energies, 2018, 11, 83.	1.6	10
54	An Efficient Method to Take into Account Forecast Uncertainties in Large Scale Probabilistic Power Flow. , 2018, , .		1

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55	Stochastic modelling of aggregated thermal loads for impact analysis of demand side frequency regulation in the case of Sardinia in 2020. International Journal of Electrical Power and Energy Systems, 2017, 93, 291-307.	3.3	20
56	Equivalent modelling of reciprocating engines generators for microgrid frequency response analysis. , 2017, , .		6
57	Mixed-integer algorithm for optimal dispatch of integrated PV-storage systems. , 2017, , .		4
58	Low voltage microgrid islanding through adaptive load shedding. , 2017, , .		3
59	Mixed-Integer Linear optimization algorithm for Volt/Var Control on a distribution grid with renewable penetration. , 2017, , .		0
60	Day-Ahead Planning and Real-Time Control of Integrated PV-Storage Systems by Stochastic Optimization. IFAC-PapersOnLine, 2017, 50, 7717-7723.	0.5	10
61	Real time control of a low voltage microgrid through a Distribution Management System. , 2017, , .		2
62	Dynamic equivalent modelling of active distribution networks for TSO-DSO interactions. , 2017, , .		15
63	A load management algorithm for PCC interface breaker. , 2017, , .		1
64	Stochastic approach for power generation optimal design and scheduling on ships. , 2017, , .		9
65	Wind farm contribution to frequency regulation by distributed adaptive kinetic energy control. , 2017, , .		2
66	Risk-Based Dynamic Security Assessment for Power System Operation and Operational Planning. Energies, 2017, 10, 475.	1.6	21
67	Energy efficient policy and real time energy monitoring in a large hospital facility: A case study. International Journal of Heat and Technology, 2017, 35, S221-S227.	0.3	8
68	Multi facility energy monitoring in medical structures: Defining KPIs for energy saving and exporting best practices. International Journal of Heat and Technology, 2017, 35, S214-S220.	0.3	2
69	Implementation of a distribution state estimation algorithm on a low voltage test facility with distributed energy resources. , 2016, , .		9
70	Analysis of the impact of AFE active front end on the THD on a shipboard power system: A comparison study using different simulation approaches. , 2016, , .		2
71	Ship electrical load analysis and power generation optimisation to reduce operational costs. , 2016, , .		9
72	Net transfer capacity assessment using point estimate method for probabilistic power flow. , 2016, , .		0

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73	Reliability assessment of distribution systems incorporating feeder restoration actions. , 2016, , .		5
74	Frequency control services by a building cooling system aggregate. Electric Power Systems Research, 2016, 141, 137-146.	2.1	17
75	Performance evaluation of algorithms for the State of Charge estimation of storage devices in microgrid operation. , 2016, , .		10
76	Probabilistic assessment of Net Transfer Capacity considering forecast uncertainties. , 2016, , .		0
77	Intentional islanding of Microgrid by frequency support with building HVAC system. , 2016, , .		1
78	Dynamic Modeling of a Supply Vessel Power System for DP3 Protection System. IEEE Transactions on Transportation Electrification, 2016, 2, 570-579.	5.3	21
79	Advanced operational functionalities for a low voltage Microgrid test site. , 2015, , .		13
80	Dynamic models for Distributed Energy Resources in a Microgrid environment. , 2015, , .		1
81	Dynamic modeling of a supply vessel electrical grid for DP3 protection system. , 2015, , .		2
82	Stochastic Volt-Var optimization function for planning of MV distribution networks. , 2015, , .		2
83	Smart management of demand in naval application: Prospects and technologies for distributed control of loads. , 2015, , .		2
84	A Two-Stage Margin-Based Algorithm for Optimal Plug-in Electric Vehicles Scheduling. IEEE Transactions on Smart Grid, 2015, 6, 759-766.	6.2	24
85	Distributed Energy Resources Management in a Low-Voltage Test Facility. IEEE Transactions on Industrial Electronics, 2015, 62, 2593-2603.	5.2	27
86	Electrical consumption forecasting in hospital facilities: An application case. Energy and Buildings, 2015, 103, 261-270.	3.1	89
87	An innovative probabilistic methodology for net transfer capacity evaluation. , 2015, , .		2
88	Coordinated closed-loop voltage control by using a real-time Volt/VAR Optimization function for MV distribution Networks. , 2015, , .		3
89	Volt/VAR Optimization function with load uncertainty for planning of MV distribution networks. , 2015, , .		1
90	An optimal model-based control technique to improve wind farm participation to frequency regulation. , 2015, , .		1

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91	Demand side response for frequency control in a regional power system. , 2015, , .		7
92	An Optimal Model-Based Control Technique to Improve Wind Farm Participation to Frequency Regulation. IEEE Transactions on Sustainable Energy, 2015, 6, 993-1003.	5.9	58
93	Applying full MILP model to volt-var optimization problem for MV distribution networks. , 2014, , .		10
94	An aggregator for demand side management at domestic level including PEVs. , 2014, , .		1
95	Optimal charging strategy algorithm for PEVs: A Monte Carlo validation. , 2014, , .		1
96	A novel approach to account for uncertainty and correlations in probabilistic power flow. , 2014, , .		8
97	Pseudo-measurements modeling using neural network and Fourier decomposition for distribution state estimation. , 2014, , .		17
98	Hierarchical Voltage Regulation of Transmission Systems with Renewable Power Plants: an overview of the Italian case. , 2014, , .		10
99	Management strategy for unbalanced LV distribution network with electric vehicles, heat pumps and domestic photovoltaic penetration. , 2014, , .		6
100	Artificial neural network application to load forecasting in a large hospital facility. , 2014, , .		12
101	Using the advanced DMS functions to handle the impact of plug-in Electric vehicles on distribution networks. , 2014, , .		1
102	Frequency regulation by management of building cooling systems through Model Predictive Control. , 2014, , .		16
103	Impact analysis of load control for frequency regulation: The case of Sardinia in 2020. , 2014, , .		2
104	Experimental testing procedures and dynamic model validation for vanadium redox flow battery storage system. Journal of Power Sources, 2014, 254, 277-286.	4.0	25
105	Coordinated contribution of wind turbines to frequency regulation by model predictive control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 3645-3650.	0.4	1
106	An Integrated Platform for Power System Security Assessment Implementing Probabilistic and Deterministic Methodologies. IEEE Systems Journal, 2013, 7, 845-853.	2.9	24
107	An architecture for implementing state estimation application in Distribution Management System (DMS). , 2013, , .		11
108	Demand side integration aspects in active distribution planning. , 2013, , .		10

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109	Integration of renewable energy sources, energy storage systems, and electrical vehicles with smart power distribution networks. Journal of Ambient Intelligence and Humanized Computing, 2013, 4, 663-671.	3.3	43
110	Intelligent load management for a shopping mall model in a smartgrid enviroment. , 2013, , .		6
111	Low Voltage Microgrid under Islanded Operation: Control Strategies and Experimental Tests. , 2012, , .		3
112	An innovative platform integrating deterministic and probabilistic tools for power system security assessment within a unified approach. , 2012, , .		1
113	Load management by advanced protection systems in low voltage microgrids. , 2012, , .		3
114	Optimal Management Strategy of a Battery-Based Storage System to Improve Renewable Energy Integration in Distribution Networks. IEEE Transactions on Smart Grid, 2012, 3, 950-958.	6.2	134
115	An analytical method for probabilistic load flow applied to multi-terminal HVDC networks for offshore wind farm integration. , 2012, , .		3
116	Evaluation of requirements for Volt/Var control and optimization function in distribution management systems. , 2012, , .		39
117	Model of a real medium voltage distribution network for analysis of distributed generation penetration in a SmartGrid scenario. , 2012, , .		9
118	Planning and optimisation of active distribution systems - an overview of CIGRE Working Group C6.19 activities. , 2012, , .		13
119	Power and energy control strategies for a Vanadium Redox Flow Battery and wind farm combined system. , 2011, , .		16
120	An innovative risk control strategy in power systems involving advanced HVDC networks. , 2011, , .		0
121	A Gas Turbine Model for Studies on Distributed Generation Penetration Into Distribution Networks. IEEE Transactions on Power Systems, 2011, 26, 992-999.	4.6	39
122	A gas turbine model for studies on distributed generation penetration into distribution networks. , 2011, , .		2
123	Short-Term Scheduling and Control of Active Distribution Systems With High Penetration of Renewable Resources. IEEE Systems Journal, 2010, 4, 313-322.	2.9	209
124	Microturbine Control Modeling to Investigate the Effects of Distributed Generation in Electric Energy Networks. IEEE Systems Journal, 2010, 4, 303-312.	2.9	44
125	Operational Risk Assessment and control: A probabilistic approach. , 2010, , .		12
126	Impact evaluation of plug-in electric vehicles (PEV) on electric distribution networks. , 2010, , .		22

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127	Indices-based voltage stability monitoring of the Italian HV Transmission System. , 2010, , .		1
128	Modeling of DFIG Wind Turbine and Lithium Ion Energy Storage System. , 2010, , .		1
129	Indices for fast contingency ranking in large electric power systems. , 2010, , .		7
130	Coordinated micro-generation and load management for energy saving policies. , 2010, , .		5
131	Short-term scheduling of active distribution systems. , 2009, , .		15
132	A Probabilistic Risk Assessment approach to support the operation of large electric power systems. , 2009, , .		7
133	Influence of feasibility constrains on the bidding strategy selection in a day-ahead electricity market session. Electric Power Systems Research, 2009, 79, 1727-1737.	2.1	12
134	Evaluation of some indices for voltage stability assessment. , 2009, , .		14
135	A Solid Oxide Fuel Cell model to investigate load following and stability issues in distribution networks. , 2009, , .		5
136	A procedure for the automatic scheduling of distributed energy resources in medium voltage networks. , 2009, , .		5
137	Bifurcation analysis and Chaos detection in power systems. , 2008, , .		8
138	Modeling of doubly fed induction generator (DFIG) equipped wind turbine for dynamic studies. , 2008, , .		8
139	Impact of distributed generation on network security: Effects on loss-of-main protection reliability. , 2008, , .		8
140	An extensive Dynamic Security Assessment analysis on a large realistic electric power system. , 2007, , .		3
141	On - line generation of synthetic information on voltage stability margins. , 2007, , .		1
142	A Two-Stage Scheduler of Distributed Energy Resources. , 2007, , .		14
143	An Energy Resource Scheduler Implemented in the Automatic Management System of a Microgrid Test Facility. , 2007, , .		18
144	ANN Application For On-Line Power System Security Assessment. , 2006, , .		2

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145	An innovative pluralistic Load-Frequency Control scheme for the power flow control along corridors on the Italian border. , 2006, , .		3
146	Bidding strategy selection in a day-ahead electricity auction system. , 2005, , .		1
147	Implementation and comparison of different under frequency load-shedding schemes. , 2001, , .		125
148	Model validation and coordinated operation of a photovoltaic array and a diesel power plant for distributed generation. , 2001, , .		24
149	Operation and management of the electric system for industrial plants: an expert system prototype for load-shedding operator assistance. IEEE Transactions on Industry Applications, 2001, 37, 701-708.	3.3	14
150	Operation and management of the electric system for industrial plants: an expert system prototype for load-shedding operator assistance. , 0, , .		8
151	Load control for improving system security and economics. , 0, , .		9
152	Advanced load-shedding methodology and architecture for normal and emergency operation of the Italian power system. , 0, , .		7
153	Wind Turbines Integration with Storage Devices: Modelling and Control Strategies. , 0, , .		3