Sonia Leva

List of Publications by Year
in descending order

124 papers	4,601 citations	117571 34 h-index	118793 62 g-index
125 all docs	125 docs citations	125 times ranked	3377 citing authors

#	Article	IF	Citations
1	Modeling Guidelines and a Benchmark for Power System Simulation Studies of Three-Phase Single-Stage Photovoltaic Systems. IEEE Transactions on Power Delivery, 2011, 26, 1247-1264.	2.9	301
2	Comparison of different physical models for PV power output prediction. Solar Energy, 2015, 119, 83-99.	2.9	268
3	Forecasting: theory and practice. International Journal of Forecasting, 2022, 38, 705-871.	3.9	256
4	MPPT techniques for PV Systems: Energetic and cost comparison. , 2008, , .		189
5	Light Unmanned Aerial Vehicles (UAVs) for Cooperative Inspection of PV Plants. IEEE Journal of Photovoltaics, 2014, 4, 1107-1113.	1.5	188
6	Experimental investigation of partial shading scenarios on PV (photovoltaic) modules. Energy, 2013, 55, 466-475.	4.5	184
7	Advanced Methods for Photovoltaic Output Power Forecasting: A Review. Applied Sciences (Switzerland), 2020, 10, 487.	1.3	158
8	A Physical Hybrid Artificial Neural Network for Short Term Forecasting of PV Plant Power Output. Energies, 2015, 8, 1138-1153.	1.6	152
9	Physical and hybrid methods comparison for the day ahead PV output power forecast. Renewable Energy, 2017, 113, 11-21.	4.3	150
10	Day-Ahead Photovoltaic Forecasting: A Comparison of the Most Effective Techniques. Energies, 2019, 12, 1621.	1.6	131
11	Innovative Automated Control System for PV Fields Inspection and Remote Control. IEEE Transactions on Industrial Electronics, 2015, 62, 7287-7296.	5.2	118
12	Pitch angle control using hybrid controller for all operating regions of SCIG wind turbine system. Renewable Energy, 2014, 70, 197-203.	4.3	116
13	Urban Scale Photovoltaic Charging Stations for Electric Vehicles. IEEE Transactions on Sustainable Energy, 2014, 5, 1234-1241.	5.9	98
14	Hybrid Predictive Models for Accurate Forecasting in PV Systems. Energies, 2013, 6, 1918-1929.	1.6	83
15	Planning for PV plant performance monitoring by means of unmanned aerial systems (UAS). International Journal of Energy and Environmental Engineering, 2015, 6, 47-54.	1.3	83
16	Survey on PV Modules' Common Faults After an O&M Flight Extensive Campaign Over Different Plants in Italy. IEEE Journal of Photovoltaics, 2017, 7, 810-816.	1.5	78
17	Snail Trails and Cell Microcrack Impact on PV Module Maximum Power and Energy Production. IEEE Journal of Photovoltaics, 2016, 6, 1269-1277.	1.5	72
18	PV plant digital mapping for modules' defects detection by unmanned aerial vehicles. IET Renewable Power Generation, 2017, 11, 1221-1228.	1.7	68

#	ARTICLE	IF	CITATIONS
19	Investigation on Performance Decay on Photovoltaic Modules: Snail Trails and Cell Microcracks. IEEE Journal of Photovoltaics, 2014, 4, 1204-1211.	1.5	67
20	Performance Analysis of a Single-Axis Tracking PV System. IEEE Journal of Photovoltaics, 2012, 2, 524-531.	1.5	66
21	Impact of High-Voltage Primary Supply Lines in the 2 $\times$ 25 kVâ€"50 Hz Railway System on the Equivalent Impedance at Pantograph Terminals. IEEE Transactions on Power Delivery, 2012, 27, 164-175.	2.9	61
22	Stray Current Effects Mitigation in Subway Tunnels. IEEE Transactions on Power Delivery, 2012, 27, 2304-2311.	2.9	59
23	Power Quality and Harmonic Analysis of End User Devices. Energies, 2012, 5, 5453-5466.	1.6	58
24	The Optimum PV Plant for a Given Solar DC/AC Converter. Energies, 2015, 8, 4853-4870.	1.6	56
25	Hybrid renewable energy-fuel cell system: Design and performance evaluation. Electric Power Systems Research, 2009, 79, 316-324.	2.1	55
26	Experimental test of seven widely-adopted MPPT algorithms. , 2009, , .		55
27	Aerial infrared thermography for low-cost and fast fault detection in utility-scale PV power plants. Solar Energy, 2020, 211, 712-724.	2.9	55
28	Fault Detection and Classification for Photovoltaic Systems Based on Hierarchical Classification and Machine Learning Technique. IEEE Transactions on Industrial Electronics, 2021, 68, 12750-12759.	5.2	52
29	Analysis of long-term performance and reliability of PV modules under tropical climatic conditions in sub-Saharan. Renewable Energy, 2020, 162, 285-295.	4.3	50
30	Improving Transient Stability in a Grid-Connected Squirrel-Cage Induction Generator Wind Turbine System Using a Fuzzy Logic Controller. Energies, 2015, 8, 6328-6349.	1.6	48
31	A Comparative Study on Controllers for Improving Transient Stability of DFIG Wind Turbines During Large Disturbances. Energies, 2018, 11, 480.	1.6	48
32	Comparison of Training Approaches for Photovoltaic Forecasts by Means of Machine Learning. Applied Sciences (Switzerland), 2018, 8, 228.	1.3	46
33	ANN Sizing Procedure for the Day-Ahead Output Power Forecast of a PV Plant. Applied Sciences (Switzerland), 2017, 7, 622.	1.3	45
34	Comparison of echo state network and feed-forward neural networks in electrical load forecasting for demand response programs. Mathematics and Computers in Simulation, 2021, 184, 282-293.	2.4	45
35	PV Module Fault Diagnosis Based on Microconverters and Day-Ahead Forecast. IEEE Transactions on Industrial Electronics, 2019, 66, 3928-3937.	5.2	40
36	Thermal and electric performances of roll-bond flat plate applied to conventional PV modules for heat recovery. Applied Thermal Engineering, 2016, 105, 304-313.	3.0	35

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37	An Evolutionary-Based MPPT Algorithm for Photovoltaic Systems under Dynamic Partial Shading. Applied Sciences (Switzerland), 2018, 8, 558.	1.3	35
38	Computational Intelligence Techniques Applied to the Day Ahead PV Output Power Forecast: PHANN, SNO and Mixed. Energies, 2018, 11, 1487.	1.6	32
39	Experimental validation of a model for PV systems under partial shading for building integrated applications. Solar Energy, 2019, 183, 356-370.	2.9	31
40	A deep convolutional encoder-decoder architecture for autonomous fault detection of PV plants using multi-copters. Solar Energy, 2021, 223, 217-228.	2.9	31
41	Dynamic Analysis of a High-Speed Train. IEEE Transactions on Vehicular Technology, 2008, 57, 107-119.	3.9	29
42	Hybrid model for hourly forecast of photovoltaic and wind power. , 2013, , .		29
43	PV power plant inspection by image mosaicing techniques for IR real-time images. , 2016, , .		28
44	Multiple Site Intraday Solar Irradiance Forecasting by Machine Learning Algorithms: MGGP and MLP Neural Networks. Energies, 2020, 13, 3005.	1.6	27
45	Development and experimental validation of hierarchical energy management system based on stochastic model predictive control for Off-grid Microgrids. Advances in Applied Energy, 2021, 2, 100028.	6.6	27
46	Automatic Boundary Extraction of Large-Scale Photovoltaic Plants Using a Fully Convolutional Network on Aerial Imagery. IEEE Journal of Photovoltaics, 2020, 10, 1061-1067.	1.5	27
47	Refrigerating liquid prototype for LED's thermal management. Applied Thermal Engineering, 2012, 48, 155-163.	3.0	26
48	Review of technology specific degradation in crystalline silicon, cadmium telluride, copper indium gallium selenide, dye sensitised, organic and perovskite solar cells in photovoltaic modules: Understanding how reliability improvements in mature technologies can enhance emerging technologies. Progress in Photovoltaics: Research and Applications, 2022, 30, 1365-1392.	4.4	26
49	Comparison of active crowbar protection schemes for DFIGs wind turbines. , 2014, , .		25
50	Advanced Asset Management Tools in Photovoltaic Plant Monitoring: UAV-Based Digital Mapping. Energies, 2019, 12, 4736.	1.6	24
51	Cloud Computing and IoT Based Intelligent Monitoring System for Photovoltaic Plants Using Machine Learning Techniques. Energies, 2022, 15, 3014.	1.6	24
52	Dynamic analysis of a new network topology for high power grid connected PV systems. , 2010, , .		23
53	Automatic Inspection of Photovoltaic Power Plants Using Aerial Infrared Thermography: A Review. Energies, 2022, 15, 2055.	1.6	22
54	Robust 24 Hours ahead Forecast in a Microgrid: A Real Case Study. Electronics (Switzerland), 2019, 8, 1434.	1.8	20

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55	Topological considerations on the symmetrical components transformation. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2000, 47, 1202-1211.	0.1	19
56	Solar PV systems design and monitoring. , 2020, , 117-145.		19
57	A Selective Ensemble Approach for Accuracy Improvement and Computational Load Reduction in ANN-Based PV Power Forecasting. IEEE Access, 2022, 10, 32900-32911.	2.6	18
58	New network topologies for large scale photovoltaic Systems. , 2009, , .		17
59	Transient Analysis of Large Scale PV Systems with Floating DC Section. Energies, 2012, 5, 3736-3752.	1.6	17
60	PV Plant Power Nowcasting: A Real Case Comparative Study With an Open Access Dataset. IEEE Access, 2020, 8, 194428-194440.	2.6	17
61	Dynamic Stability of Isolated System in the Presence of PQ Disturbances. IEEE Transactions on Power Delivery, 2008, 23, 831-840.	2.9	16
62	Improving LVRT characteristics in variable-speed wind power generation by means of fuzzy logic. , 2014, , .		16
63	Implementation of Different PV Forecast Approaches in a MultiGood MicroGrid: Modeling and Experimental Results. Processes, 2021, 9, 323.	1.3	16
64	Evaluation of line voltage drop in presence of unbalance, harmonics, and interharmonics: Theory and applications. IEEE Transactions on Power Delivery, 2005, 20, 390-396.	2.9	13
65	Calculation of Rail Internal Impedance by Using Finite Elements Methods and Complex Magnetic Permeability. International Journal of Vehicular Technology, 2009, 2009, 1-10.	1.1	13
66	Improved LVRT based on coordination control of active crowbar and reactive power for doubly fed induction generators. , 2015, , .		13
67	Energetic sustainable development of railway stations. IEEE Power Engineering Society General Meeting, 2007, , .	0.0	12
68	Coordination control of active crowbar for doubly fed induction generators. , 2014, , .		12
69	Validation of ANN Training Approaches for Day-Ahead Photovoltaic Forecasts. , 2018, , .		12
70	Analysis of Physically Symmetrical Lossy Three-Phase Transmission Lines in Terms of Space Vectors. IEEE Transactions on Power Delivery, 2006, 21, 873-882.	2.9	11
71	Aerial Infrared Thermography of a Utility-Scale PV Plant After a Meteorological Tsunami in Brazil. , 2018, , .		11
72	An approach to the nonâ€active power concept in terms of the poyntingâ€park vector. European Transactions on Electrical Power, 2001, 11, 291-299.	1.0	10

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73	Effects of the DC stray currents on subway tunnel structures evaluated by FEM analysis. , 2010, , .		9
74	Overview on Photovoltaic Inspections Procedure by means of Unmanned Aerial Vehicles. , 2019, , .		9
75	Comparison of Data-Driven Techniques for Nowcasting Applied to an Industrial-Scale Photovoltaic Plant. Energies, 2019, 12, 4520.	1.6	9
76	Park equations for distributed constants line. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2001, 20, 1015-1031.	0.5	8
77	Performance analysis of a 310Wp photovoltaic module based on single and double diode model. , 2016, , .		8
78	PV power forecasting improvement by means of a selective ensemble approach. , 2019, , .		8
79	Outdoor Assessment and Performance Evaluation of OPV Modules. IEEE Journal of Photovoltaics, 2021, 11, 391-399.	1.5	8
80	An Innovative Tunable Rule-Based Strategy for the Predictive Management of Hybrid Microgrids. Electronics (Switzerland), 2021, 10, 1162.	1.8	8
81	Simulations of Luminescent Solar Concentrator Bifacial Photovoltaic Mosaic Devices Containing Four Different Organic Luminophores. IEEE Journal of Photovoltaics, 2022, 12, 771-777.	1.5	8
82	A Physical Decomposition of Three-Phase Variables into Common and Differential Mode Quantities. , 2007, , .		7
83	Threeâ€phase distributed constants model of induction machines for EMC and surge propagation studies. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2008, 27, 770-779.	0.5	7
84	Analysis of a Fresnel lenses concentrator. , 2012, , .		7
85	Thermal and luminous investigations of a pcLED based refrigerating liquid prototype. Applied Thermal Engineering, 2014, 70, 884-891.	3.0	7
86	Hybrid controller for transient stability in wind generators. , 2015, , .		7
87	Outdoor Performance of Organic Photovoltaics: Comparative Analysis. Energies, 2022, 15, 1620.	1.6	7
88	Symmetrical Components and Space-Vector Transformations for Four-Phase Networks. IEEE Transactions on Power Delivery, 2008, 23, 2191-2200.	2.9	6
89	Modeling and Performance Evaluation of a Fuzzy Logic Controller for Buck-Boost DC/DC Converters. , 2018, , .		6
90	Intelligent Approach to Improve Genetic Programming Based Intra-Day Solar Forecasting Models. , 2018, , .		6

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91	Waves and complex power in transmission lines. IEEE Transactions on Power Delivery, 2003, 18, 1320-1327.	2.9	5
92	Study of propagation phenomena in three-phase form wound machines operating at medium and high frequency. Electric Power Systems Research, 2011, 81, 193-201.	2.1	5
93	Day-ahead PV Power Forecast by Hybrid ANN Compared to the Five Parameters Model Estimated by Particle Filter Algorithm. Lecture Notes in Computer Science, 2016, , 291-298.	1.0	5
94	Intra-day forecasting of building-integrated PV systems for power systems operation using ANN ensemble. , 2019, , .		5
95	Economics of Vehicle-to-Grid Application for Providing Ancillary Services in Italy. , 2019, , .		5
96	A hybrid Fuzzy-PI cascade controller for transient stability improvement in DFIG wind generators. , 2016, , .		4
97	Feasibility analysis of storage systems in wind plants â€" an Italian application. , 2017, , .		4
98	Seamless Grid: an off-chain model proposal for scalable P2P electricity markets and grids management. , 2019, , .		4
99	Irradiance Nowcasting by Means of Deep-Learning Analysis of Infrared Images. Forecasting, 2022, 4, 338-348.	1.6	4
100	Autonomous Monitoring and Analysis of Photovoltaic Systems. Energies, 2022, 15, 5011.	1.6	4
101	Power electronic converters for PV systems in extreme environmental conditions. , 2013, , .		3
102	Productivity comparison and performance improvement of a concentrated photovoltaic. , 2015, , .		3
103	Computational Intelligence in Photovoltaic Systems. Applied Sciences (Switzerland), 2019, 9, 1826.	1.3	3
104	Design of a Resonant Converter for a Regenerative Braking System Based on Ultracap Storage for Application in a Formula SAE Single-Seater Electric Racing Car. Electronics (Switzerland), 2021, 10, 161.	1.8	3
105	Editorial for Special Issue: â€œFeature Papers of Forecastingâ€. Forecasting, 2021, 3, 135-137.	1.6	3
106	Performance Assessment of Mismatch Mitigation Methodologies Using Field Data in Solar Photovoltaic Systems. Electronics (Switzerland), 2022, 11, 1938.	1.8	3
107	Symmetrical and Clarkeâ€Park transformations for fourâ€phase systems. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2008, 27, 1370-1386.	0.5	2
108	Faults analysis theory and schemes of four-phase power systems. , 2009, , .		2

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109	Power quality analysis of LED lighting system for railway applications. , 2014, , .		2
110	Optimizing DISCOs planning for networks with distributed energy resources. , 2017, , .		2
111	Hybrid Power System Optimization in Mission-Critical Communication. Electronics (Switzerland), 2020, 9, 1971.	1.8	2
112	New concepts and applications of solar PV systems. , 2020, , 349-390.		2
113	Hybrid Renewable Power System for Radio Networks in Mission Critical Applications. , 2020, , .		2
114	Photovoltaic Plant Inspection by means of UAV: current practices and future perspectives. , 2021, , .		2
115	Lossy three‐phase transmission line transient analysis by Park approach. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2005, 24, 1041-1060.	0.5	1
116	On board multimachine network: PQ effects on stability studies. IEEE Power Engineering Society General Meeting, 2007, , .	0.0	1
117	Assessment of Exogenous Variables on Intra-Day Solar Irradiance Forecasting Models. , 2018, , .		1
118	Solar PV power plants. , 2020, , 313-348.		1
119	Oxidation Impact of CIGS Photovoltaic Modules Performance after 10 Years of Operation. , 2021, , .		1
120	A Distributed-Constants Model of Three-Phase Induction Drives for Conducted Emission Studies. , 2009, , .		0
121	Case Studies on Possible Failures in PV Power Plants. , 2018, , .		0
122	Battery Energy Storage System and Improved Communication Topology for Enhancing Power Quality of Microgrid. , 2019, , .		0
123	Editorial for Special Issue: â€œFeature Papers of Forecasting 2021â€• Forecasting, 2022, 4, 335-337.	1.6	0
124	On the Use of the Current and Flux State Variables in the Dynamic Analysis of Magnetoelectric Networks. , 2005, , 119-124.		0