

# Sonia Leva

## List of Publications by Year in descending order

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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	Forecasting: theory and practice. International Journal of Forecasting, 2022, 38, 705-871.	3.9	256
2	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
3	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
4	Outdoor Performance of Organic Photovoltaics: Comparative Analysis. Energies, 2022, 15, 1620.	1.6	7
5	Automatic Inspection of Photovoltaic Power Plants Using Aerial Infrared Thermography: A Review. Energies, 2022, 15, 2055.	1.6	22
6	Editorial for Special Issue: "Feature Papers of Forecasting 2021". Forecasting, 2022, 4, 335-337.	1.6	0
7	Irradiance Nowcasting by Means of Deep-Learning Analysis of Infrared Images. Forecasting, 2022, 4, 338-348.	1.6	4
8	Cloud Computing and IoT Based Intelligent Monitoring System for Photovoltaic Plants Using Machine Learning Techniques. Energies, 2022, 15, 3014.	1.6	24
9	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
10	Performance Assessment of Mismatch Mitigation Methodologies Using Field Data in Solar Photovoltaic Systems. Electronics (Switzerland), 2022, 11, 1938.	1.8	3
11	Autonomous Monitoring and Analysis of Photovoltaic Systems. Energies, 2022, 15, 5011.	1.6	4
12	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
13	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
14	Implementation of Different PV Forecast Approaches in a MultiGood MicroGrid: Modeling and Experimental Results. Processes, 2021, 9, 323.	1.3	16
15	Editorial for Special Issue: "Feature Papers of Forecasting". Forecasting, 2021, 3, 135-137.	1.6	3
16	Outdoor Assessment and Performance Evaluation of OPV Modules. IEEE Journal of Photovoltaics, 2021, 11, 391-399.	1.5	8
17	An Innovative Tunable Rule-Based Strategy for the Predictive Management of Hybrid Microgrids. Electronics (Switzerland), 2021, 10, 1162.	1.8	8
18	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

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19	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
20	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
21	Photovoltaic Plant Inspection by means of UAV: current practices and future perspectives. , 2021, , .		2
22	Oxidation Impact of CIGS Photovoltaic Modules Performance after 10 Years of Operation. , 2021, , .		1
23	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
24	Hybrid Power System Optimization in Mission-Critical Communication. Electronics (Switzerland), 2020, 9, 1971.	1.8	2
25	Solar PV systems design and monitoring. , 2020, , 117-145.		19
26	Solar PV power plants. , 2020, , 313-348.		1
27	New concepts and applications of solar PV systems. , 2020, , 349-390.		2
28	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
29	PV Plant Power Nowcasting: A Real Case Comparative Study With an Open Access Dataset. IEEE Access, 2020, 8, 194428-194440.	2.6	17
30	Hybrid Renewable Power System for Radio Networks in Mission Critical Applications. , 2020, , .		2
31	Multiple Site Intraday Solar Irradiance Forecasting by Machine Learning Algorithms: MGPP and MLP Neural Networks. Energies, 2020, 13, 3005.	1.6	27
32	Advanced Methods for Photovoltaic Output Power Forecasting: A Review. Applied Sciences (Switzerland), 2020, 10, 487.	1.3	158
33	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
34	Seamless Grid: an off-chain model proposal for scalable P2P electricity markets and grids management. , 2019, , .		4
35	PV power forecasting improvement by means of a selective ensemble approach. , 2019, , .		8
36	Intra-day forecasting of building-integrated PV systems for power systems operation using ANN ensemble. , 2019, , .		5

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37	Overview on Photovoltaic Inspections Procedure by means of Unmanned Aerial Vehicles. , 2019, , .		9
38	Battery Energy Storage System and Improved Communication Topology for Enhancing Power Quality of Microgrid. , 2019, , .		0
39	Economics of Vehicle-to-Grid Application for Providing Ancillary Services in Italy. , 2019, , .		5
40	Computational Intelligence in Photovoltaic Systems. Applied Sciences (Switzerland), 2019, 9, 1826.	1.3	3
41	Day-Ahead Photovoltaic Forecasting: A Comparison of the Most Effective Techniques. Energies, 2019, 12, 1621.	1.6	131
42	Experimental validation of a model for PV systems under partial shading for building integrated applications. Solar Energy, 2019, 183, 356-370.	2.9	31
43	Comparison of Data-Driven Techniques for Nowcasting Applied to an Industrial-Scale Photovoltaic Plant. Energies, 2019, 12, 4520.	1.6	9
44	Robust 24 Hours ahead Forecast in a Microgrid: A Real Case Study. Electronics (Switzerland), 2019, 8, 1434.	1.8	20
45	Advanced Asset Management Tools in Photovoltaic Plant Monitoring: UAV-Based Digital Mapping. Energies, 2019, 12, 4736.	1.6	24
46	PV Module Fault Diagnosis Based on Microconverters and Day-Ahead Forecast. IEEE Transactions on Industrial Electronics, 2019, 66, 3928-3937.	5.2	40
47	Modeling and Performance Evaluation of a Fuzzy Logic Controller for Buck-Boost DC/DC Converters. , 2018, , .		6
48	Validation of ANN Training Approaches for Day-Ahead Photovoltaic Forecasts. , 2018, , .		12
49	Intelligent Approach to Improve Genetic Programming Based Intra-Day Solar Forecasting Models. , 2018, , .		6
50	Aerial Infrared Thermography of a Utility-Scale PV Plant After a Meteorological Tsunami in Brazil. , 2018, , .		11
51	Case Studies on Possible Failures in PV Power Plants. , 2018, , .		0
52	Assessment of Exogenous Variables on Intra-Day Solar Irradiance Forecasting Models. , 2018, , .		1
53	A Comparative Study on Controllers for Improving Transient Stability of DFIG Wind Turbines During Large Disturbances. Energies, 2018, 11, 480.	1.6	48
54	Comparison of Training Approaches for Photovoltaic Forecasts by Means of Machine Learning. Applied Sciences (Switzerland), 2018, 8, 228.	1.3	46

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55	An Evolutionary-Based MPPT Algorithm for Photovoltaic Systems under Dynamic Partial Shading. Applied Sciences (Switzerland), 2018, 8, 558.	1.3	35
56	Computational Intelligence Techniques Applied to the Day Ahead PV Output Power Forecast: PHANN, SNO and Mixed. Energies, 2018, 11, 1487.	1.6	32
57	Physical and hybrid methods comparison for the day ahead PV output power forecast. Renewable Energy, 2017, 113, 11-21.	4.3	150
58	Survey on PV Modulesâ€™ 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
59	Optimizing DISCOs planning for networks with distributed energy resources. , 2017, , .		2
60	PV plant digital mapping for modulesâ€™ defects detection by unmanned aerial vehicles. IET Renewable Power Generation, 2017, 11, 1221-1228.	1.7	68
61	ANN Sizing Procedure for the Day-Ahead Output Power Forecast of a PV Plant. Applied Sciences (Switzerland), 2017, 7, 622.	1.3	45
62	Feasibility analysis of storage systems in wind plants â€™ an Italian application. , 2017, , .		4
63	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
64	Performance analysis of a 310Wp photovoltaic module based on single and double diode model. , 2016, , .		8
65	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
66	A hybrid Fuzzy-PI cascade controller for transient stability improvement in DFIG wind generators. , 2016, , .		4
67	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
68	PV power plant inspection by image mosaicing techniques for IR real-time images. , 2016, , .		28
69	The Optimum PV Plant for a Given Solar DC/AC Converter. Energies, 2015, 8, 4853-4870.	1.6	56
70	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
71	Hybrid controller for transient stability in wind generators. , 2015, , .		7
72	Comparison of different physical models for PV power output prediction. Solar Energy, 2015, 119, 83-99.	2.9	268

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73	Improved LVRT based on coordination control of active crowbar and reactive power for doubly fed induction generators. , 2015, , .		13
74	A Physical Hybrid Artificial Neural Network for Short Term Forecasting of PV Plant Power Output. Energies, 2015, 8, 1138-1153.	1.6	152
75	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
76	Productivity comparison and performance improvement of a concentrated photovoltaic. , 2015, , .		3
77	Innovative Automated Control System for PV Fields Inspection and Remote Control. IEEE Transactions on Industrial Electronics, 2015, 62, 7287-7296.	5.2	118
78	Coordination control of active crowbar for doubly fed induction generators. , 2014, , .		12
79	Pitch angle control using hybrid controller for all operating regions of SCIG wind turbine system. Renewable Energy, 2014, 70, 197-203.	4.3	116
80	Urban Scale Photovoltaic Charging Stations for Electric Vehicles. IEEE Transactions on Sustainable Energy, 2014, 5, 1234-1241.	5.9	98
81	Improving LVRT characteristics in variable-speed wind power generation by means of fuzzy logic. , 2014, , .		16
82	Investigation on Performance Decay on Photovoltaic Modules: Snail Trails and Cell Microcracks. IEEE Journal of Photovoltaics, 2014, 4, 1204-1211.	1.5	67
83	Power quality analysis of LED lighting system for railway applications. , 2014, , .		2
84	Light Unmanned Aerial Vehicles (UAVs) for Cooperative Inspection of PV Plants. IEEE Journal of Photovoltaics, 2014, 4, 1107-1113.	1.5	188
85	Comparison of active crowbar protection schemes for DFIGs wind turbines. , 2014, , .		25
86	Thermal and luminous investigations of a pcLED based refrigerating liquid prototype. Applied Thermal Engineering, 2014, 70, 884-891.	3.0	7
87	Experimental investigation of partial shading scenarios on PV (photovoltaic) modules. Energy, 2013, 55, 466-475.	4.5	184
88	Hybrid Predictive Models for Accurate Forecasting in PV Systems. Energies, 2013, 6, 1918-1929.	1.6	83
89	Power electronic converters for PV systems in extreme environmental conditions. , 2013, , .		3
90	Hybrid model for hourly forecast of photovoltaic and wind power. , 2013, , .		29

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91	Transient Analysis of Large Scale PV Systems with Floating DC Section. Energies, 2012, 5, 3736-3752.	1.6	17
92	Power Quality and Harmonic Analysis of End User Devices. Energies, 2012, 5, 5453-5466.	1.6	58
93	Impact of High-Voltage Primary Supply Lines in the 2 $\times$ 25 kV $\sim$ 50 Hz Railway System on the Equivalent Impedance at Pantograph Terminals. IEEE Transactions on Power Delivery, 2012, 27, 164-175.	2.9	61
94	Stray Current Effects Mitigation in Subway Tunnels. IEEE Transactions on Power Delivery, 2012, 27, 2304-2311.	2.9	59
95	Analysis of a Fresnel lenses concentrator. , 2012, , .		7
96	Refrigerating liquid prototype for LED's thermal management. Applied Thermal Engineering, 2012, 48, 155-163.	3.0	26
97	Performance Analysis of a Single-Axis Tracking PV System. IEEE Journal of Photovoltaics, 2012, 2, 524-531.	1.5	66
98	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
99	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
100	Dynamic analysis of a new network topology for high power grid connected PV systems. , 2010, , .		23
101	Effects of the DC stray currents on subway tunnel structures evaluated by FEM analysis. , 2010, , .		9
102	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
103	Hybrid renewable energy-fuel cell system: Design and performance evaluation. Electric Power Systems Research, 2009, 79, 316-324.	2.1	55
104	Faults analysis theory and schemes of four-phase power systems. , 2009, , .		2
105	Experimental test of seven widely-adopted MPPT algorithms. , 2009, , .		55
106	New network topologies for large scale photovoltaic Systems. , 2009, , .		17
107	A Distributed-Constants Model of Three-Phase Induction Drives for Conducted Emission Studies. , 2009, , .		0
108	Dynamic Analysis of a High-Speed Train. IEEE Transactions on Vehicular Technology, 2008, 57, 107-119.	3.9	29

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109	Symmetrical Components and Space-Vector Transformations for Four-Phase Networks. IEEE Transactions on Power Delivery, 2008, 23, 2191-2200.	2.9	6
110	Dynamic Stability of Isolated System in the Presence of PQ Disturbances. IEEE Transactions on Power Delivery, 2008, 23, 831-840.	2.9	16
111	Symmetrical and Clarke-Park transformations for four-phase systems. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2008, 27, 1370-1386.	0.5	2
112	MPPT techniques for PV Systems: Energetic and cost comparison. , 2008, , .		189
113	Three-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
114	Energetic sustainable development of railway stations. IEEE Power Engineering Society General Meeting, 2007, , .	0.0	12
115	On board multimachine network: PQ effects on stability studies. IEEE Power Engineering Society General Meeting, 2007, , .	0.0	1
116	A Physical Decomposition of Three-Phase Variables into Common and Differential Mode Quantities. , 2007, , .		7
117	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
118	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
119	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
120	On the Use of the Current and Flux State Variables in the Dynamic Analysis of Magnetolectric Networks. , 2005, , 119-124.		0
121	Waves and complex power in transmission lines. IEEE Transactions on Power Delivery, 2003, 18, 1320-1327.	2.9	5
122	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
123	An approach to the non-active power concept in terms of the poynting-Park vector. European Transactions on Electrical Power, 2001, 11, 291-299.	1.0	10
124	Topological considerations on the symmetrical components transformation. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2000, 47, 1202-1211.	0.1	19