

# Andreas Sumper

## List of Publications by Year in descending order

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118  
papers

5,719  
citations

109264

35  
h-index

79644

73  
g-index

138  
all docs

138  
docs citations

138  
times ranked

6172  
citing authors

#	ARTICLE	IF	CITATIONS
1	A review of energy storage technologies for wind power applications. <i>Renewable and Sustainable Energy Reviews</i> , 2012, 16, 2154-2171.	8.2	1,252
2	Participation of wind power plants in system frequency control: Review of grid code requirements and control methods. <i>Renewable and Sustainable Energy Reviews</i> , 2014, 34, 551-564.	8.2	289
3	Real time experimental implementation of optimum energy management system in standalone Microgrid by using multi-layer ant colony optimization. <i>International Journal of Electrical Power and Energy Systems</i> , 2016, 75, 265-274.	3.3	217
4	Experimental validation of a real-time energy management system using multi-period gravitational search algorithm for microgrids in islanded mode. <i>Applied Energy</i> , 2014, 128, 164-174.	5.1	205
5	Experimental validation of a real time energy management system for microgrids in islanded mode using a local day-ahead electricity market and MINLP. <i>Energy Conversion and Management</i> , 2013, 76, 314-322.	4.4	199
6	Local Flexibility Market Design for Aggregators Providing Multiple Flexibility Services at Distribution Network Level. <i>Energies</i> , 2018, 11, 822.	1.6	171
7	Microgrid clustering architectures. <i>Applied Energy</i> , 2018, 212, 340-361.	5.1	168
8	Ride-Through Control of a Doubly Fed Induction Generator Under Unbalanced Voltage Sags. <i>IEEE Transactions on Energy Conversion</i> , 2008, 23, 1036-1045.	3.7	159
9	Optimization problem for meeting distribution system operator requests in local flexibility markets with distributed energy resources. <i>Applied Energy</i> , 2018, 210, 881-895.	5.1	156
10	Experimental evaluation of a real time energy management system for stand-alone microgrids in day-ahead markets. <i>Applied Energy</i> , 2013, 106, 365-376.	5.1	155
11	Power oscillation damping supported by wind power: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2012, 16, 4994-5006.	8.2	135
12	Energy management of flywheel-based energy storage device for wind power smoothing. <i>Applied Energy</i> , 2013, 110, 207-219.	5.1	132
13	Optimum voltage control for loss minimization in HVDC multi-terminal transmission systems for large offshore wind farms. <i>Electric Power Systems Research</i> , 2012, 89, 54-63.	2.1	123
14	Control of a Flywheel Energy Storage System for Power Smoothing in Wind Power Plants. <i>IEEE Transactions on Energy Conversion</i> , 2014, 29, 204-214.	3.7	117
15	Life-cycle assessment of a photovoltaic system in Catalonia (Spain). <i>Renewable and Sustainable Energy Reviews</i> , 2011, 15, 3888-3896.	8.2	102
16	Pareto Optimal Reconfiguration of Power Distribution Systems Using a Genetic Algorithm Based on NSGA-II. <i>Energies</i> , 2013, 6, 1439-1455.	1.6	91
17	Modeling and control of the doubly fed induction generator wind turbine. <i>Simulation Modelling Practice and Theory</i> , 2010, 18, 1365-1381.	2.2	87
18	Reactive power dispatch in wind farms using particle swarm optimization technique and feasible solutions search. <i>Applied Energy</i> , 2011, 88, 4678-4686.	5.1	85

#	ARTICLE	IF	CITATIONS
19	Development of sustainable energy indexes by the utilization of new indicators: A comparative study. Energy Reports, 2019, 5, 375-383.	2.5	76
20	A Distance PLC Programming Course Employing a Remote Laboratory Based on a Flexible Manufacturing Cell. IEEE Transactions on Education, 2006, 49, 278-284.	2.0	75
21	Probabilistic Agent-Based Model of Electric Vehicle Charging Demand to Analyse the Impact on Distribution Networks. Energies, 2015, 8, 4160-4187.	1.6	69
22	Response of Fixed Speed Wind Turbines to System Frequency Disturbances. IEEE Transactions on Power Systems, 2009, 24, 181-192.	4.6	65
23	A review of high temperature superconductors for offshore wind power synchronous generators. Renewable and Sustainable Energy Reviews, 2014, 38, 404-414.	8.2	60
24	Control of a Wind Farm Based on Synchronous Generators With a Central HVDC-VSC Converter. IEEE Transactions on Power Systems, 2011, 26, 1632-1640.	4.6	59
25	Impact of operation strategies of large scale battery systems on distribution grid planning in Germany. Renewable and Sustainable Energy Reviews, 2017, 74, 1042-1063.	8.2	59
26	A review of deterministic and data-driven methods to quantify energy efficiency savings and to predict retrofitting scenarios in buildings. Renewable and Sustainable Energy Reviews, 2020, 131, 110027.	8.2	56
27	Coordinated operation of wind turbines and flywheel storage for primary frequency control support. International Journal of Electrical Power and Energy Systems, 2015, 68, 313-326.	3.3	53
28	Power generation efficiency analysis of offshore wind farms connected to a SLPC (single large power) Tj ETQq0 0 0 rjgBT /Overlock 10 Tf	4.5	50
29	Maximum generation power evaluation of variable frequency offshore wind farms when connected to a single power converter. Applied Energy, 2010, 87, 3103-3109.	5.1	47
30	The multi-energy system co-planning of nearly zero-energy districts " Status-quo and future research potential. Applied Energy, 2020, 267, 114953.	5.1	47
31	Distribution system reconfiguration using genetic algorithm based on connected graphs. Electric Power Systems Research, 2013, 104, 216-225.	2.1	44
32	Centralised and Distributed Optimization for Aggregated Flexibility Services Provision. IEEE Transactions on Smart Grid, 2020, 11, 3257-3269.	6.2	42
33	Active power control in a hybrid PV-storage power plant for frequency support. Solar Energy, 2017, 144, 49-62.	2.9	39
34	Measuring urban energy sustainability and its application to two Spanish cities: Malaga and Barcelona. Sustainable Cities and Society, 2019, 45, 335-347.	5.1	38
35	Technical and economic assessment of offshore wind power plants based on variable frequency operation of clusters with a single power converter. Applied Energy, 2014, 125, 218-229.	5.1	36
36	MV and LV Residential Grid Impact of Combined Slow and Fast Charging of Electric Vehicles. Energies, 2015, 8, 1760-1783.	1.6	35

#	ARTICLE	IF	CITATIONS
37	Hybrid AC-DC Offshore Wind Power Plant Topology: Optimal Design. IEEE Transactions on Power Systems, 2015, 30, 1868-1876.	4.6	35
38	Maximum wind power plant generation by reducing the wake effect. Energy Conversion and Management, 2015, 101, 73-84.	4.4	34
39	Technical and economic comparison of grid supportive vanadium redox flow batteries for primary control reserve and community electricity storage in Germany. International Journal of Energy Research, 2019, 43, 337-357.	2.2	30
40	Probabilistic Method to Assess the Impact of Charging of Electric Vehicles on Distribution Grids. Energies, 2012, 5, 1503-1531.	1.6	28
41	Economic evaluation of Nearly Zero Energy Cities. Applied Energy, 2019, 237, 404-416.	5.1	28
42	Optimal Operation of DC Networks to Support Power System Outage Management. IEEE Transactions on Smart Grid, 2016, 7, 2953-2961.	6.2	27
43	Experience on the implementation of a microgrid project in Barcelona. , 2010, , .		26
44	Flicker mitigation by reactive power control in wind farm with doubly fed induction generators. International Journal of Electrical Power and Energy Systems, 2014, 55, 285-296.	3.3	25
45	Renewable technologies for generation systems in islands and their application to Cozumel Island, Mexico. Renewable and Sustainable Energy Reviews, 2016, 64, 348-361.	8.2	25
46	A data-driven methodology for enhanced measurement and verification of energy efficiency savings in commercial buildings. Applied Energy, 2021, 301, 117502.	5.1	24
47	Electrical vehicles: State of art and issues for their connection to the network. , 2009, , .		23
48	Analysis of a multi turbine offshore wind farm connected to a single large power converter operated with variable frequency. Energy, 2011, 36, 3272-3281.	4.5	23
49	A model for an economic evaluation of energy systems using TRNSYS. Applied Energy, 2018, 215, 765-777.	5.1	22
50	Methodology for the assessment of the impact of existing high voltage lines in urban areas. Energy Policy, 2010, 38, 6036-6044.	4.2	21
51	Pitch control system design to improve frequency response capability of fixed-speed wind turbine systems. European Transactions on Electrical Power, 2011, 21, 1984-2006.	1.0	21
52	Integral approach to energy planning and electric grid assessment in a renewable energy technology integration for a 50/50 target applied to a small island. Applied Energy, 2019, 233-234, 524-543.	5.1	21
53	Advanced Distribution Measurement Technologies and Data Applications for Smart Grids: A Review. Energies, 2020, 13, 3730.	1.6	21
54	A Comparison of Power Conversion Systems for Modular Battery-Based Energy Storage Systems. IEEE Access, 2020, 8, 29557-29574.	2.6	21

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55	Day-ahead micro-market design for distributed energy resources. , 2016, , .		20
56	Smart Grid Architecture for Rural Distribution Networks: Application to a Spanish Pilot Network. Energies, 2018, 11, 844.	1.6	20
57	Experimental validation of a single phase Intelligent Power Router. Sustainable Energy, Grids and Networks, 2015, 4, 1-15.	2.3	19
58	Techno-Economic Assessment of Flexibility Options Versus Grid Expansion in Distribution Grids. IEEE Transactions on Power Systems, 2021, 36, 3830-3839.	4.6	19
59	DFIG-based offshore wind power plant connected to a single VSC-HVDC operated at variable frequency: Energy yield assessment. Energy, 2015, 86, 311-322.	4.5	17
60	Optimization of the Operation of Smart Rural Grids through a Novel Energy Management System. Energies, 2018, 11, 9.	1.6	16
61	Frequency control of isolated wind and diesel hybrid MicroGrid power system by using fuzzy logic controllers and PID controllers. , 2011, , .		15
62	Modeling and validation of a flywheel energy storage lab-setup. , 2012, , .		15
63	Optimization of Surge Arrester Locations in Overhead Distribution Networks. IEEE Transactions on Power Delivery, 2015, 30, 674-683.	2.9	15
64	PV, Wind and Storage Integration on Small Islands for the Fulfilment of the 50-50 Renewable Electricity Generation Target. Sustainability, 2017, 9, 905.	1.6	14
65	Optimal feeder flow control for grid connected microgrids. International Journal of Electrical Power and Energy Systems, 2019, 112, 144-155.	3.3	13
66	Voltage Control of Distribution Grids with Multi-Microgrids Using Reactive Power Management. Advances in Electrical and Computer Engineering, 2015, 15, 83-88.	0.5	13
67	Planning of High-Power Charging Stations for Electric Vehicles: A Review. Applied Sciences (Switzerland), 2022, 12, 3214.	1.3	13
68	IEC 61850 as a flexible tool for electrical systems monitoring. , 2007, , .		11
69	Electric vehicles in power systems with distributed generation: Vehicle to Microgrid (V2M) project. , 2011, , .		10
70	Active power estimation of photovoltaic generators for distribution network planning based on correlation models. Energy, 2014, 64, 758-770.	4.5	10
71	Contribution of type-2 wind turbines to sub-synchronous resonance damping. International Journal of Electrical Power and Energy Systems, 2014, 55, 714-722.	3.3	10
72	Electrical Infrastructure Design Methodology of Dynamic and Static Charging for Heavy and Light Duty Electric Vehicles. Energies, 2021, 14, 3362.	1.6	10

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73	Development and implementation of a condition monitoring system in a substation. , 2007, , .		9
74	Contribution of Smart Cities to the Energy Sustainability of the Binomial between City and Country. Applied Sciences (Switzerland), 2019, 9, 3247.	1.3	9
75	Digital simulation of voltage dip characteristics of wind turbine systems. , 2007, , .		8
76	Modeling and control of a pitch-controlled variable-speed wind turbine driven by a DFIG with frequency control support in PSS/E. , 2012, , .		8
77	Type-2 Wind Turbine with Additional Sub-synchronous Resonance Damping. , 2013, , .		8
78	Baseline Energy Use Modeling and Characterization in Tertiary Buildings Using an Interpretable Bayesian Linear Regression Methodology. Energies, 2021, 14, 5556.	1.6	8
79	Assess the impact of photovoltaic generation systems on low-voltage network: software analysis tool development. , 2007, , .		7
80	Permanent magnet synchronous generator offshore wind farms connected to a single power converter. , 2010, , .		7
81	A utility connected microgrid based on power emulators. , 2011, , .		7
82	The Optimization of Microgrids Operation through a Heuristic Energy Management Algorithm. Advanced Engineering Forum, 0, 8-9, 185-194.	0.3	7
83	Techno-economic comparison of a schedule-based and a forecast-based control strategy for residential photovoltaic storage systems in Germany. Electrical Engineering, 2016, 98, 375-383.	1.2	7
84	Modeling of Second Generation HTS Cables for Grid Fault Analysis Applied to Power System Simulation. IEEE Transactions on Applied Superconductivity, 2013, 23, 5401204-5401204.	1.1	6
85	Methodology for the Evaluation of Resilience of ICT Systems for Smart Distribution Grids. Energies, 2017, 10, 1287.	1.6	6
86	Energy sustainability analyses using feasible indicators for urban areas. International Journal of Energy and Water Resources, 2019, 3, 127-140.	1.3	6
87	General form of consensus optimization for distributed OPF in HVAC-VSC-HVDC systems. International Journal of Electrical Power and Energy Systems, 2020, 121, 106049.	3.3	6
88	Power quality education using a remote monitoring laboratory. , 2007, , .		5
89	Short-term voltage stability of fixed-speed wind turbines: Comparison of single and double cage. , 2010, , .		5
90	Optimal operation of hybrid high voltage direct current and alternating current networks based on OPF combined with droop voltage control. International Journal of Electrical Power and Energy Systems, 2018, 101, 176-188.	3.3	5

#	ARTICLE	IF	CITATIONS
91	Reactive Power Compensation. , 0, , 371-398.		5
92	Modeling the stochastic dependencies in a probabilistic load flow including wind generation. , 2009, , .		4
93	Dynamic Simulation of HTSC Cables With a Conventional Simulation Program. IEEE Transactions on Applied Superconductivity, 2011, 21, 1025-1029.	1.1	4
94	PSS CONTROLLER FOR WIND POWER GENERATION SYSTEMS. International Journal of Modern Physics B, 2012, 26, 1246012.	1.0	4
95	Dynamic Model of an HTS Cable for Power Grid Simulation. Physics Procedia, 2012, 36, 1272-1278.	1.2	4
96	Deterministic and Probabilistic Assessment of the Impact of the Electrical Vehicles on the Power Grid. Renewable Energy and Power Quality Journal, 2010, 1, 1505-1509.	0.2	4
97	Mitigation of Capacitor Bank Energization Harmonic Transients. , 2006, , .		3
98	Grid impact analysis of a HTSC cable by using an enhanced conventional simulator. Journal of Physics: Conference Series, 2010, 234, 032007.	0.3	3
99	Modeling and simulation of the fixed speed wind power generation system for grid studies. , 2011, , .		3
100	Protection system remote laboratory. , 2011, , .		3
101	Modeling, Control and Experimental Validation of a Flywheel-Based Energy Storage Device. EPE Journal (European Power Electronics and Drives Journal), 2013, 23, 41-51.	0.7	3
102	Extending 2-D space vector PWM for three-phase four-leg inverters. EPE Journal (European Power) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.7	3
103	Assessment of the Visual Impact of Existing High-Voltage Lines in Urban Areas. Electricity, 2021, 2, 285-299.	1.4	3
104	Smart rural grid pilot in Spain. , 2019, , 315-345.		2
105	Electricity: A New Open Access Journal. Electricity, 2020, 1, 60-61.	1.4	2
106	Impact Evaluation of Plug-in Electric Vehicles on Power System. Power Systems, 2015, , 149-178.	0.3	2
107	Object oriented backward/forward algorithm for unbalanced and harmonic polluted distribution systems. , 2011, , .		1
108	Probabilistic analysis in normal operation of distribution system with distributed generation. , 2011, , .		1

#	ARTICLE	IF	CITATIONS
109	Requirements for EV charge stations with photovoltaic generation and storage. , 2012, , .		1
110	Monitoring Power Quality in Microgrids Based on Disturbances Propagation Algorithms. Advanced Engineering Forum, 0, 8-9, 127-138.	0.3	1
111	A scheduling optimization model of electric water heaters for electricity cost minimization with limited information. , 2019, , .		1
112	Quantum Grid. , 2019, , 283-314.		1
113	Selection criteria of high-power static Uninterruptible Power Supplies. , 2007, , .		0
114	Control for power conditioner based PEM Fuel Cell and back-up power system with Supercapacitor. , 2011, , .		0
115	Promotion of renewable energy in Latin America for the security of electric supply. , 2011, , .		0
116	Special Issue on Microgrids. Applied Sciences (Switzerland), 2019, 9, 4710.	1.3	0
117	RESOLVD: ICT services and energy storage for increasing renewable hosting capacity in LV distribution grids. , 2020, , .		0
118	Monitoring Power Quality. , 0, , 445-462.		0