

Syed Islam

List of Publications by Year in descending order

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136
papers

4,070
citations

117453

34
h-index

128067

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g-index

136
all docs

136
docs citations

136
times ranked

2975
citing authors

#	ARTICLE	IF	CITATIONS
1	Notice of Removal: NCIT Enabled OPNET Based Design of a Digital Substation for IEC 61850-9-2 Implementation. IEEE Transactions on Power Delivery, 2024, , 1-1.	2.9	2
2	Overview of Power Converter Control in Microgridsâ€”Challenges, Advances, and Future Trends. IEEE Transactions on Power Electronics, 2022, 37, 9907-9922.	5.4	58
3	Trustworthiness of Self-Driving Vehicles for Intelligent Transportation Systems in Industry Applications. IEEE Transactions on Industrial Informatics, 2021, 17, 961-970.	7.2	37
4	Transiently stable intentional controlled islanding considering post-islanding voltage and frequency stability constraints. International Journal of Electrical Power and Energy Systems, 2021, 127, 106650.	3.3	8
5	Toward a Substation Automation System Based on IEC 61850. Electronics (Switzerland), 2021, 10, 310.	1.8	15
6	Reduced Switch Multilevel Inverter Topologies for Renewable Energy Sources. IEEE Access, 2021, 9, 120580-120595.	2.6	25
7	Optimal Placement of Synchronized Voltage Traveling Wave Sensors in a Radial Distribution Network. IEEE Access, 2021, 9, 65380-65387.	2.6	6
8	State Estimation within IED Based Smart Grid Using Kalman Estimates. Electronics (Switzerland), 2021, 10, 1783.	1.8	0
9	Assessing Trust Level of a Driverless Car Using Deep Learning. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 4457-4466.	4.7	24
10	Dissolved Gas Analysis for Power Transformers within Distributed Renewable Generation-Based Systems. IEEE Transactions on Dielectrics and Electrical Insulation, 2021, 28, 1349-1356.	1.8	8
11	Interpretation of transformer winding deformation fault by the spectral clustering of FRA signature. International Journal of Electrical Power and Energy Systems, 2021, 130, 106933.	3.3	16
12	A Unified Model Predictive Voltage and Current Control for Microgrids With Distributed Fuzzy Cooperative Secondary Control. IEEE Transactions on Industrial Informatics, 2021, 17, 8024-8034.	7.2	40
13	Model Predictive Control for Microgrids: From power electronic converters to energy management. , 2021, , .		6
14	Forced Oscillation in Power Systems With Converter Controlled-Based Resourcesâ€”A Survey With Case Studies. IEEE Access, 2021, 9, 150911-150924.	2.6	6
15	Assessing Reliability of Smart Grid Against Cyberattacks using Stability Index. , 2021, , .		0
16	A Fast and Reliable Blocked Bus Bar Protection Scheme Leveraging on Sampled Value and GOOSE Protection based on IEC 61850 Architecture. , 2021, , .		5
17	Mitigation of Power Quality Issues with Solar PV Penetration into LV/MV Distribution System. , 2021, , .		0
18	MATLAB/Simulink Modelling of Multi-junction PV Cell for Conversion Efficiency Improvement using Maximum Power Point Tracking Method. , 2021, , .		0

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19	Fault Location on Radial Distribution Networks via Distributed Synchronized Traveling Wave Detectors. IEEE Transactions on Power Delivery, 2020, 35, 1553-1562.	2.9	46
20	A comprehensive analyses of aging characteristics of oil-paper insulation system in HVDC converter transformers. IEEE Transactions on Dielectrics and Electrical Insulation, 2020, 27, 1707-1714.	1.8	20
21	A New Data Driven Long-Term Solar Yield Analysis Model of Photovoltaic Power Plants. IEEE Access, 2020, 8, 136223-136233.	2.6	37
22	Enhancement of microgrid operation by considering the cascaded impact of communication delay on system stability and power management. International Journal of Electrical Power and Energy Systems, 2020, 120, 105964.	3.3	11
23	Forced Oscillation in Power System with Renewable Generations. , 2020, , .		0
24	Impact of MMC-HVDC Control Parameter Selection on the Dynamic Performance of AC System. , 2020, , .		1
25	Identification of Coherent Generators by Support Vector Clustering With an Embedding Strategy. IEEE Access, 2019, 7, 105420-105431.	2.6	6
26	Classifying Transformer Winding Deformation Fault Types and Degrees Using FRA Based on Support Vector Machine. IEEE Access, 2019, 7, 112494-112504.	2.6	78
27	The Impact of Number of Partitions on Transient Stability of Intentional Controlled Islanding. , 2019, , .		3
28	Improving voltage of remote connection using wind&solar farms equipped with new voltage control strategy based on virtual impedance monitoring enabled by IEC 61850 communication. IET Generation, Transmission and Distribution, 2019, 13, 2199-2207.	1.4	5
29	Impact of Load Ramping on Power Transformer Dissolved Gas Analysis. IEEE Access, 2019, 7, 170343-170351.	2.6	13
30	Diagnostic of transformer winding deformation fault types using continuous wavelet transform of pulse response. Measurement: Journal of the International Measurement Confederation, 2019, 140, 197-206.	2.5	25
31	Diagnosing Transformer Winding Deformation Faults Based on the Analysis of Binary Image Obtained From FRA Signature. IEEE Access, 2019, 7, 40463-40474.	2.6	27
32	Verification of Latency and Delays Related to a Digital Topology based on IEC 61850. , 2019, , .		5
33	Market model for clustered microgrids optimisation including distribution network operations. IET Generation, Transmission and Distribution, 2019, 13, 5139-5150.	1.4	1
34	Time-Delay Analysis of Wide-Area Voltage Control Considering Smart Grid Contingences in a Real-Time Environment. IEEE Transactions on Industrial Informatics, 2018, 14, 1242-1252.	7.2	41
35	Detection of Power Transformer Winding Deformation Using Improved FRA Based on Binary Morphology and Extreme Point Variation. IEEE Transactions on Industrial Electronics, 2018, 65, 3509-3519.	5.2	69
36	High Voltage Substation Automation and Protection System Based on IEC 61850. , 2018, , .		3

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37	Experimental Modeling of Nano Power Generation using Thermoelectric Generator (TEG) from Incinerator Waste Heat. , 2018, , .		2
38	Mitigation of Sympathetic Tripping Leveraging on IEC 61850 Protocol. , 2018, , .		1
39	Nano-structured GaAs Solar Cell Design, Simulation and Analysis for Conversion Efficiency Improvement. , 2018, , .		1
40	Implementing PRP and HSR Schemes in a HV Substation based on IEC62439-3. , 2018, , .		3
41	Improved Method to Obtain the Online Impulse Frequency Response Signature of a Power Transformer by Multi Scale Complex CWT. IEEE Access, 2018, 6, 48934-48945.	2.6	17
42	Electrical Power Engineering Education Down Under: Australia and New Zealand Are Adding Energy to Their University Curricula. IEEE Power and Energy Magazine, 2018, 16, 64-73.	1.6	2
43	Application of S transform for detection of external interferences in online transformer impulse frequency response analysis. , 2017, , .		1
44	Improved condition monitoring technique for wind turbine gearbox and shaft stress detection. IET Science, Measurement and Technology, 2017, 11, 431-437.	0.9	12
45	Online detection of partial discharge inside power transformer winding through IFRA. , 2017, , .		1
46	Performance evaluation of two interconnected high voltage utility substations using PRP topology based on IEC 62439-3. , 2017, , .		3
47	Design and Analysis of Nano-Structured Gratings for Conversion Efficiency Improvement in GaAs Solar Cells. Energies, 2016, 9, 690.	1.6	27
48	A travelling wave detector based fault location device and data recorder for medium voltage distribution systems. , 2016, , .		9
49	Challenges and opportunities in grid connected commercial scale PV and wind farms. , 2016, , .		8
50	Determination of nanosecond pulse parameters on transfer function measurement for power transformer winding deformation. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 3761-3770.	1.8	7
51	Voltage profile modification in harmonically affected power networks. , 2016, , .		0
52	Understanding online frequency response signatures for transformer winding deformation: Axial displacement simulation. , 2016, , .		3
53	Software implementation of two seamless redundant topologies in a digital protection system based on IEC 62439-3. , 2016, , .		6
54	Condition assessment of power transformer bushing using SFRA and DGA as auxiliary tools. , 2016, , .		11

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55	Digital applications in implementation of smart grid. , 2016, , .		6
56	Impact of capacitive coupling circuit on online impulse frequency response of a power transformer. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 1285-1293.	1.8	20
57	Application of online impulse technique to diagnose inter-turn short circuit in transformer windings. , 2016, , .		5
58	Performance monitoring of a PMU in a microgrid environment based on IEC 61850-90-5. , 2016, , .		8
59	Combined Online and Delayed Coordinated Charging of Plug-In Electric Vehicles Considering Wind and Rooftop PV Generations. Technology and Economics of Smart Grids and Sustainable Energy, 2016, 1, 1.	1.8	1
60	Detection of power transformer bushing faults and oil degradation using frequency response analysis. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 222-229.	1.8	65
61	Modelling and Simulation of Power Systems. Studies in Systems, Decision and Control, 2016, , 15-28.	0.8	6
62	Micro Grid Planning and Operation. Studies in Systems, Decision and Control, 2016, , 29-47.	0.8	2
63	Fundamentals of Power Systems. Studies in Systems, Decision and Control, 2016, , 1-13.	0.8	3
64	A Preliminary Study on Conversion Efficiency Improvement of a Multi-junction PV Cell with MPPT. Studies in Systems, Decision and Control, 2016, , 49-73.	0.8	2
65	Grid Integration of Renewable Energy Systems. Studies in Systems, Decision and Control, 2016, , 75-97.	0.8	0
66	Performance evaluation of a process bus architecture in a zone substation based on IEC 61850-9-2. , 2015, , .		11
67	High performance communication redundancy in a digital substation based on IEC 62439-3 with a station bus configuration. , 2015, , .		15
68	Analysis of end-to-end delay characteristics for various packets in IEC 61850 substation communications system. , 2015, , .		12
69	Improved power transformer winding fault detection using FRA diagnostics “ part 1: axial displacement simulation. IEEE Transactions on Dielectrics and Electrical Insulation, 2015, 22, 556-563.	1.8	127
70	Assessment of post-contingency congestion risk of wind power with asset dynamic ratings. International Journal of Electrical Power and Energy Systems, 2015, 69, 295-303.	3.3	13
71	Improved power transformer winding fault detection using FRA diagnostics “ part 2: radial deformation simulation. IEEE Transactions on Dielectrics and Electrical Insulation, 2015, 22, 564-570.	1.8	53
72	Risk constrained short-term scheduling with dynamic line ratings for increased penetration of wind power. Renewable Energy, 2015, 83, 1139-1146.	4.3	17

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73	Guest Editorial: Special Section on Large-Scale Grid Integration and Regulatory Issues of Variable Power Generation. IEEE Transactions on Sustainable Energy, 2015, 6, 915-915.	5.9	0
74	A new technique to measure interfacial tension of transformer oil using UV-Vis spectroscopy. IEEE Transactions on Dielectrics and Electrical Insulation, 2015, 22, 1275-1282.	1.8	61
75	Real-time charging coordination of plug-in electric vehicles based on hybrid fuzzy discrete particle swarm optimization. Electric Power Systems Research, 2015, 128, 19-29.	2.1	57
76	Travelling wave fault location in rural radial distribution networks to reduce wild fire risk. , 2015, , .		8
77	Modeling of multi-junction photovoltaic cell using MATLAB/Simulink to improve the conversion efficiency. Renewable Energy, 2015, 74, 917-924.	4.3	55
78	Fuzzy logic approach in power transformers management and decision making. IEEE Transactions on Dielectrics and Electrical Insulation, 2014, 21, 2343-2354.	1.8	68
79	Performance evaluation of data transmission in a single and double bus network within the utility substation based on IEC 61850. , 2014, , .		9
80	Modelling and analysis of multi-junction solar cells to improve the conversion efficiency of photovoltaic systems. , 2014, , .		12
81	Investigation on architectures for power system communications between substations using IEC 61850. , 2014, , .		2
82	Security of Supply in Active Distribution Networks with PHEV-Based Strategic Microgrids. , 2014, , 17-31.		1
83	Performance analysis of substation automation systems architecture based on IEC 61850. , 2014, , .		15
84	Risk of supply insecurity with weather conditions-based operation of plug in hybrid electric vehicles. IET Generation, Transmission and Distribution, 2014, 8, 2153-2162.	1.4	7
85	Online coordination of plug-in electric vehicle charging in smart grid with distributed wind power generation systems. , 2014, , .		15
86	Security of Energy Supply With Change in Weather Conditions and Dynamic Thermal Limits. IEEE Transactions on Smart Grid, 2014, 5, 2246-2254.	6.2	15
87	Steady-state security in distribution networks with large wind farms. Journal of Modern Power Systems and Clean Energy, 2014, 2, 134-142.	3.3	21
88	Estimation of induction motor parameters using hybrid algorithms for power system dynamic studies. , 2013, , .		5
89	A new fuzzy logic approach for consistent interpretation of dissolved gas-in-oil analysis. IEEE Transactions on Dielectrics and Electrical Insulation, 2013, 20, 2343-2349.	1.8	109
90	Impact of conducting materials on furan-spectral correlation of transformer oil. , 2013, , .		5

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91	Power transformer winding fault analysis using transfer function. , 2013, , .		5
92	Photovoltaic cell modeling for maximum power point tracking using MATLAB/Simulink to improve the conversion efficiency. , 2013, , .		9
93	Analysis of incident light angles on nano-grating structure for minimizing reflection losses in GaAs solar cells. , 2013, , .		1
94	Process-to-bay level peer-to-peer network delay in IEC 61850 substation communication systems. , 2013, , .		11
95	Understanding power transformer frequency response analysis signatures. IEEE Electrical Insulation Magazine, 2013, 29, 48-56.	1.1	142
96	Impact of buckling deformation on the FRA signature of power transformer. , 2013, , .		5
97	Security enhancement with nodal criticality based integration of PHEV micro grids. , 2013, , .		0
98	Impact of PEV charging and rooftop PV penetration on distribution transformer life. , 2013, , .		22
99	A new approach to identify power transformer criticality and asset management decision based on dissolved gas-in-oil analysis. IEEE Transactions on Dielectrics and Electrical Insulation, 2012, 19, 1007-1012.	1.8	148
100	A Novel Online Technique to Detect Power Transformer Winding Faults. IEEE Transactions on Power Delivery, 2012, 27, 849-857.	2.9	162
101	A Novel Fuzzy-Logic Approach for Furan Estimation in Transformer Oil. IEEE Transactions on Power Delivery, 2012, 27, 469-474.	2.9	61
102	Review of international grid codes for wind power integration: Diversity, technology and a case for global standard. Renewable and Sustainable Energy Reviews, 2012, 16, 3876-3890.	8.2	256
103	A novel direct active power control method for DFIG wind turbine applications. , 2011, , .		2
104	Building a state of the art laboratory for teaching and research in renewable electric energy systems and microgrids. , 2011, , .		4
105	Emergency control of DFIG-based wind turbines to meet new European Grid Code requirements. , 2011, , .		4
106	High efficiency plasmonics-based solar cells for smarter electricity grids. , 2011, , .		0
107	Impact of uncoordinated and coordinated charging of plug-in electric vehicles on substation transformer in smart grid with charging stations. , 2011, , .		16
108	Hybrid genetic-fuzzy algorithm for volt/var/total harmonic distortion control of distribution systems with high penetration of non-linear loads. IET Generation, Transmission and Distribution, 2011, 5, 425.	1.4	43

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109	Significance of cellulose power transformer condition assessment. IEEE Transactions on Dielectrics and Electrical Insulation, 2011, 18, 1591-1598.	1.8	73
110	A novel predictive direct power control. , 2011, , .		2
111	Fault ride-through capability enhancement of doubly-fed induction wind generators. IET Renewable Power Generation, 2011, 5, 368.	1.7	49
112	Application of SMES Unit in Improving the Performance of an AC/DC Power System. IEEE Transactions on Sustainable Energy, 2011, 2, 109-121.	5.9	64
113	Using equidistant vector-based hysteresis current regulators in DFIG wind generation systems. Electric Power Systems Research, 2011, 81, 1151-1160.	2.1	7
114	Low and high voltage ride-through of DFIG wind turbines using hybrid current controlled converters. Electric Power Systems Research, 2011, 81, 1456-1465.	2.1	70
115	Reliability based optimum location of distributed generation. International Journal of Electrical Power and Energy Systems, 2011, 33, 1470-1478.	3.3	73
116	A New Vector-Based Hysteresis Current Control Scheme for Three-Phase PWM Voltage-Source Inverters. IEEE Transactions on Power Electronics, 2010, 25, 2299-2309.	5.4	95
117	Analytical approaches to assess embedded wind generation effects on distribution networks. , 2010, , .		2
118	A novel current regulator for DFIG wind turbines with enhanced performance under unbalanced supply voltage condition. , 2010, , .		2
119	Mitigation of harmonics in smart grids with high penetration of plug-in electric vehicles. , 2010, , .		24
120	The Effect of Nonsinusoidal Current Waveforms on Electromechanical and Solid-State Overcurrent Relay Operation. IEEE Transactions on Industry Applications, 2010, 46, 2127-2133.	3.3	22
121	Power transfer capability improvement of an induction generator wind energy conversion system. , 2009, , .		6
122	Remnant life estimation of power transformer using oil UV-Vis spectral response. , 2009, , .		21
123	A novel current controller for three-phase voltage-source inverters. , 2009, , .		13
124	The Effect of Non-Sinusoidal Current Waveforms on Electro-Mechanical & Solid State Overcurrent Relay Operation. , 2009, , .		1
125	Furan measurement in transformer oil by UV-Vis spectral response using Fuzzy Logic. , 2008, , .		3
126	A Low Voltage Electronic Ballast Designed For Hybrid Wind-Solar Power Systems. , 2007, , .		1

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127	High frequency transformer computer modeling. , 2007, , .		4
128	Predictive control of an integrated PV-diesel water and power supply system using an artificial neural network. Renewable Energy, 2007, 32, 1426-1439.	4.3	96
129	Design of a wind turbine pitch angle controller for power system stabilisation. Renewable Energy, 2007, 32, 2334-2349.	4.3	50
130	Wind-Diesel-Battery Hybrid Generation System Reliability Analysis on Site and Size Factors. , 2006, , .		9
131	Automatic Generation Controller in a Chip. , 2006, , .		0
132	Optimum Control Strategies in Energy Conversion of PMSG Wind Turbine System Without Mechanical Sensors. IEEE Transactions on Energy Conversion, 2004, 19, 392-399.	3.7	586
133	A novel fuzzy logic approach to transformer fault diagnosis. IEEE Transactions on Dielectrics and Electrical Insulation, 2000, 7, 177-186.	1.8	135
134	Modeling the polarization spectrum in composite oil/paper insulation systems. IEEE Transactions on Dielectrics and Electrical Insulation, 1999, 6, 145-151.	1.8	70
135	Principles of electricity demand forecasting. Part 1: Methodologies. Power Engineering Journal, 1996, 10, 139-143.	0.2	40
136	Forecasting monthly electric load and energy for a fast growing utility using an artificial neural network. Electric Power Systems Research, 1995, 34, 1-9.	2.1	69