

# Syed Islam

## List of Publications by Year in descending order

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136  
papers

4,070  
citations

117453

34  
h-index

128067

60  
g-index

136  
all docs

136  
docs citations

136  
times ranked

2975  
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	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
3	A Novel Online Technique to Detect Power Transformer Winding Faults. IEEE Transactions on Power Delivery, 2012, 27, 849-857.	2.9	162
4	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
5	Understanding power transformer frequency response analysis signatures. IEEE Electrical Insulation Magazine, 2013, 29, 48-56.	1.1	142
6	A novel fuzzy logic approach to transformer fault diagnosis. IEEE Transactions on Dielectrics and Electrical Insulation, 2000, 7, 177-186.	1.8	135
7	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
8	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
9	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
10	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
11	Classifying Transformer Winding Deformation Fault Types and Degrees Using FRA Based on Support Vector Machine. IEEE Access, 2019, 7, 112494-112504.	2.6	78
12	Significance of cellulose power transformer condition assessment. IEEE Transactions on Dielectrics and Electrical Insulation, 2011, 18, 1591-1598.	1.8	73
13	Reliability based optimum location of distributed generation. International Journal of Electrical Power and Energy Systems, 2011, 33, 1470-1478.	3.3	73
14	Modeling the polarization spectrum in composite oil/paper insulation systems. IEEE Transactions on Dielectrics and Electrical Insulation, 1999, 6, 145-151.	1.8	70
15	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
16	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
17	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
18	Fuzzy logic approach in power transformers management and decision making. IEEE Transactions on Dielectrics and Electrical Insulation, 2014, 21, 2343-2354.	1.8	68

#	ARTICLE	IF	CITATIONS
19	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
20	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
21	A Novel Fuzzy-Logic Approach for Furan Estimation in Transformer Oil. IEEE Transactions on Power Delivery, 2012, 27, 469-474.	2.9	61
22	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
23	Overview of Power Converter Control in Microgrids—Challenges, Advances, and Future Trends. IEEE Transactions on Power Electronics, 2022, 37, 9907-9922.	5.4	58
24	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
25	Modeling of multi-junction photovoltaic cell using MATLAB/Simulink to improve the conversion efficiency. Renewable Energy, 2015, 74, 917-924.	4.3	55
26	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
27	Design of a wind turbine pitch angle controller for power system stabilisation. Renewable Energy, 2007, 32, 2334-2349.	4.3	50
28	Fault ride-through capability enhancement of doubly-fed induction wind generators. IET Renewable Power Generation, 2011, 5, 368.	1.7	49
29	Fault Location on Radial Distribution Networks via Distributed Synchronized Traveling Wave Detectors. IEEE Transactions on Power Delivery, 2020, 35, 1553-1562.	2.9	46
30	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
31	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
32	Principles of electricity demand forecasting. Part 1: Methodologies. Power Engineering Journal, 1996, 10, 139-143.	0.2	40
33	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
34	A New Data Driven Long-Term Solar Yield Analysis Model of Photovoltaic Power Plants. IEEE Access, 2020, 8, 136223-136233.	2.6	37
35	Trustworthiness of Self-Driving Vehicles for Intelligent Transportation Systems in Industry Applications. IEEE Transactions on Industrial Informatics, 2021, 17, 961-970.	7.2	37
36	Design and Analysis of Nano-Structured Gratings for Conversion Efficiency Improvement in GaAs Solar Cells. Energies, 2016, 9, 690.	1.6	27

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37	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
38	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
39	Reduced Switch Multilevel Inverter Topologies for Renewable Energy Sources. IEEE Access, 2021, 9, 120580-120595.	2.6	25
40	Mitigation of harmonics in smart grids with high penetration of plug-in electric vehicles. , 2010, , .		24
41	Assessing Trust Level of a Driverless Car Using Deep Learning. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 4457-4466.	4.7	24
42	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
43	Impact of PEV charging and rooftop PV penetration on distribution transformer life. , 2013, , .		22
44	Remnant life estimation of power transformer using oil UV-Vis spectral response. , 2009, , .		21
45	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
46	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
47	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
48	Risk constrained short-term scheduling with dynamic line ratings for increased penetration of wind power. Renewable Energy, 2015, 83, 1139-1146.	4.3	17
49	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
50	Impact of uncoordinated and coordinated charging of plug-in electric vehicles on substation transformer in smart grid with charging stations. , 2011, , .		16
51	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
52	Performance analysis of substation automation systems architecture based on IEC 61850. , 2014, , .		15
53	Online coordination of plug-in electric vehicle charging in smart grid with distributed wind power generation systems. , 2014, , .		15
54	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

#	ARTICLE	IF	CITATIONS
55	High performance communication redundancy in a digital substation based on IEC 62439-3 with a station bus configuration. , 2015, , .		15
56	Toward a Substation Automation System Based on IEC 61850. Electronics (Switzerland), 2021, 10, 310.	1.8	15
57	A novel current controller for three-phase voltage-source inverters. , 2009, , .		13
58	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
59	Impact of Load Ramping on Power Transformer Dissolved Gas Analysis. IEEE Access, 2019, 7, 170343-170351.	2.6	13
60	Modelling and analysis of multi-junction solar cells to improve the conversion efficiency of photovoltaic systems. , 2014, , .		12
61	Analysis of end-to-end delay characteristics for various packets in IEC 61850 substation communications system. , 2015, , .		12
62	Improved condition monitoring technique for wind turbine gearbox and shaft stress detection. IET Science, Measurement and Technology, 2017, 11, 431-437.	0.9	12
63	Process-to-bay level peer-to-peer network delay in IEC 61850 substation communication systems. , 2013, , .		11
64	Performance evaluation of a process bus architecture in a zone substation based on IEC 61850-9-2. , 2015, , .		11
65	Condition assessment of power transformer bushing using SFRA and DGA as auxiliary tools. , 2016, , .		11
66	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
67	Wind-Diesel-Battery Hybrid Generation System Reliability Analysis on Site and Size Factors. , 2006, , .		9
68	Photovoltaic cell modeling for maximum power point tracking using MATLAB/Simulink to improve the conversion efficiency. , 2013, , .		9
69	Performance evaluation of data transmission in a single and double bus network within the utility substation based on IEC 61850. , 2014, , .		9
70	A travelling wave detector based fault location device and data recorder for medium voltage distribution systems. , 2016, , .		9
71	Travelling wave fault location in rural radial distribution networks to reduce wild fire risk. , 2015, , .		8
72	Challenges and opportunities in grid connected commercial scale PV and wind farms. , 2016, , .		8

#	ARTICLE	IF	CITATIONS
73	Performance monitoring of a PMU in a microgrid environment based on IEC 61850-90-5. , 2016, , .		8
74	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
75	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
76	Using equidistant vector-based hysteresis current regulators in DFIG wind generation systems. Electric Power Systems Research, 2011, 81, 1151-1160.	2.1	7
77	Risk of supply insecurity with weather condition-based operation of plug in hybrid electric vehicles. IET Generation, Transmission and Distribution, 2014, 8, 2153-2162.	1.4	7
78	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
79	Power transfer capability improvement of an induction generator wind energy conversion system. , 2009, , .		6
80	Software implementation of two seamless redundant topologies in a digital protection system based on IEC 62439-3. , 2016, , .		6
81	Digital applications in implementation of smart grid. , 2016, , .		6
82	Identification of Coherent Generators by Support Vector Clustering With an Embedding Strategy. IEEE Access, 2019, 7, 105420-105431.	2.6	6
83	Optimal Placement of Synchronized Voltage Traveling Wave Sensors in a Radial Distribution Network. IEEE Access, 2021, 9, 65380-65387.	2.6	6
84	Modelling and Simulation of Power Systems. Studies in Systems, Decision and Control, 2016, , 15-28.	0.8	6
85	Model Predictive Control for Microgrids: From power electronic converters to energy management. , 2021, , .		6
86	Forced Oscillation in Power Systems With Converter Controlled-Based Resources—A Survey With Case Studies. IEEE Access, 2021, 9, 150911-150924.	2.6	6
87	Estimation of induction motor parameters using hybrid algorithms for power system dynamic studies. , 2013, , .		5
88	Impact of conducting materials on furan-spectral correlation of transformer oil. , 2013, , .		5
89	Power transformer winding fault analysis using transfer function. , 2013, , .		5
90	Impact of buckling deformation on the FRA signature of power transformer. , 2013, , .		5

#	ARTICLE	IF	CITATIONS
91	Application of online impulse technique to diagnose inter-turn short circuit in transformer windings. , 2016, , .		5
92	Improving voltage of remote connection using windá€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
93	Verification of Latency and Delays Related to a Digital Topology based on IEC 61850. , 2019, , .		5
94	A Fast and Reliable Blocked Bus Bar Protection Scheme Leveraging on Sampled Value and GOOSE Protection based on IEC 61850 Architecture. , 2021, , .		5
95	High frequency transformer computer modeling. , 2007, , .		4
96	Building a state of the art laboratory for teaching and research in renewable electric energy systems and microgrids. , 2011, , .		4
97	Emergency control of DFIG-based wind turbines to meet new European Grid Code requirements. , 2011, , .		4
98	Furan measurement in transformer oil by UV-Vis spectral response using Fuzzy Logic. , 2008, , .		3
99	Understanding online frequency response signatures for transformer winding deformation: Axial displacement simulation. , 2016, , .		3
100	Performance evaluation of two interconnected high voltage utility substations using PRP topology based on IEC 62439-3. , 2017, , .		3
101	High Voltage Substation Automation and Protection System Based on IEC 61850. , 2018, , .		3
102	Implementing PRP and HSR Schemes in a HV Substation based on IEC62439-3. , 2018, , .		3
103	The Impact of Number of Partitions on Transient Stability of Intentional Controlled Islanding. , 2019, , .		3
104	Fundamentals of Power Systems. Studies in Systems, Decision and Control, 2016, , 1-13.	0.8	3
105	Analytical approaches to assess embedded wind generation effects on distribution networks. , 2010, , .		2
106	A novel current regulator for DFIG wind turbines with enhanced performance under unbalanced supply voltage condition. , 2010, , .		2
107	A novel direct active power control method for DFIG wind turbine applications. , 2011, , .		2
108	A novel predictive direct power control. , 2011, , .		2

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109	Investigation on architectures for power system communications between substations using IEC 61850. , 2014, , .		2
110	Experimental Modeling of Nano Power Generation using Thermoelectric Generator (TEG) from Incinerator Waste Heat. , 2018, , .		2
111	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
112	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
113	Micro Grid Planning and Operation. Studies in Systems, Decision and Control, 2016, , 29-47.	0.8	2
114	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
115	A Low Voltage Electronic Ballast Designed For Hybrid Wind-Solar Power Systems. , 2007, , .		1
116	The Effect of Non-Sinusoidal Current Waveforms on Electro-Mechanical &#x0026; Solid State Overcurrent Relay Operation. , 2009, , .		1
117	Analysis of incident light angles on nano-grating structure for minimizing reflection losses in GaAs solar cells. , 2013, , .		1
118	Security of Supply in Active Distribution Networks with PHEV-Based Strategic Microgrids. , 2014, , 17-31.		1
119	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
120	Application of S transform for detection of external interferences in online transformer impulse frequency response analysis. , 2017, , .		1
121	Online detection of partial discharge inside power transformer winding through IFRA. , 2017, , .		1
122	Mitigation of Sympathetic Tripping Leveraging on IEC 61850 Protocol. , 2018, , .		1
123	Nano-structured GaAs Solar Cell Design, Simulation and Analysis for Conversion Efficiency Improvement. , 2018, , .		1
124	Market model for clustered microgrids optimisation including distribution network operations. IET Generation, Transmission and Distribution, 2019, 13, 5139-5150.	1.4	1
125	Impact of MMC-HVDC Control Parameter Selection on the Dynamic Performance of AC System. , 2020, , .		1
126	Automatic Generation Controller in a Chip. , 2006, , .		0



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127	High efficiency plasmonics-based solar cells for smarter electricity grids. , 2011, , .		0
128	Security enhancement with nodal criticality based integration of PHEV micro grids. , 2013, , .		0
129	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
130	Voltage profile modification in harmonically affected power networks. , 2016, , .		0
131	State Estimation within IED Based Smart Grid Using Kalman Estimates. Electronics (Switzerland), 2021, 10, 1783.	1.8	0
132	Grid Integration of Renewable Energy Systems. Studies in Systems, Decision and Control, 2016, , 75-97.	0.8	0
133	Assessing Reliability of Smart Grid Against Cyberattacks using Stability Index. , 2021, , .		0
134	Forced Oscillation in Power System with Renewable Generations. , 2020, , .		0
135	Mitigation of Power Quality Issues with Solar PV Penetration into LV/MV Distribution System. , 2021, , .		0
136	MATLAB/Simulink Modelling of Multi-junction PV Cell for Conversion Efficiency Improvement using Maximum Power Point Tracking Method. , 2021, , .		0