

Taha Selim Ustun

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

151
papers

2,605
citations

26
h-index

45
g-index

167
ext. papers

3,971
ext. citations

4.4
avg, IF

6.26
L-index

#	Paper	IF	Citations
151	Recent developments in microgrids and example cases around the world—A review. <i>Renewable and Sustainable Energy Reviews</i> , 2011 , 15, 4030-4041	16.2	233
150	Modeling of a Centralized Microgrid Protection System and Distributed Energy Resources According to IEC 61850-7-420. <i>IEEE Transactions on Power Systems</i> , 2012 , 27, 1560-1567	7	196
149	Comparative Review of Energy Storage Systems, Their Roles, and Impacts on Future Power Systems. <i>IEEE Access</i> , 2019 , 7, 4555-4585	3.5	146
148	Fault current coefficient and time delay assignment for microgrid protection system with central protection unit. <i>IEEE Transactions on Power Systems</i> , 2013 , 28, 598-606	7	110
147	Enabling private sector investment in microgrid-based rural electrification in developing countries: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2015 , 52, 1268-1281	16.2	96
146	Implementing Vehicle-to-Grid (V2G) Technology With IEC 61850-7-420. <i>IEEE Transactions on Smart Grid</i> , 2013 , 4, 1180-1187	10.7	69
145	. <i>IEEE Transactions on Smart Grid</i> , 2015 , 6, 2493-2500	10.7	58
144	A survey on behind the meter energy management systems in smart grid. <i>Renewable and Sustainable Energy Reviews</i> , 2017 , 72, 1208-1232	16.2	58
143	Electric Vehicle Potential in Australia: Its Impact on Smartgrids. <i>IEEE Industrial Electronics Magazine</i> , 2013 , 7, 15-25	6.2	55
142	Lessons learned from rural electrification initiatives in developing countries: Insights for technical, social, financial and public policy aspects. <i>Renewable and Sustainable Energy Reviews</i> , 2019 , 102, 35-53	16.2	52
141	A Review of Strategies to Increase PV Penetration Level in Smart Grids. <i>Energies</i> , 2020 , 13, 636	3.1	49
140	State-of-the-art of controllers and soft computing techniques for regulated load frequency management of single/multi-area traditional and renewable energy based power systems. <i>Applied Energy</i> , 2020 , 266, 114858	10.7	45
139	Dynamic protection of power systems with high penetration of renewables: A review of the traveling wave based fault location techniques. <i>International Journal of Electrical Power and Energy Systems</i> , 2020 , 114, 105410	5.1	41
138	IEEE 1609 WAVE and IEC 61850 Standard Communication Based Integrated EV Charging Management in Smart Grids. <i>IEEE Transactions on Vehicular Technology</i> , 2018 , 67, 7690-7697	6.8	38
137	. <i>IEEE Transactions on Industry Applications</i> , 2018 , 54, 135-142	4.3	37
136	Composition, placement, and economics of rural microgrids for ensuring sustainable development. <i>Sustainable Energy, Grids and Networks</i> , 2018 , 13, 1-18	3.6	37
135	Design and Performance Analysis of a Stand-alone PV System with Hybrid Energy Storage for Rural India. <i>Electronics (Switzerland)</i> , 2019 , 8, 952	2.6	35

134	Performance analysis of PV panels based on different technologies after two years of outdoor exposure in Fukushima, Japan. <i>Renewable Energy</i> , 2019 , 136, 159-178	8.1	35
133	Communication Modeling of Solar Home System and Smart Meter in Smart Grids. <i>IEEE Access</i> , 2018 , 6, 16985-16996	3.5	34
132	A Review of IEC 62351 Security Mechanisms for IEC 61850 Message Exchanges. <i>IEEE Transactions on Industrial Informatics</i> , 2020 , 16, 5643-5654	11.9	34
131	Analysis of Smart Inverter's Impact on the Distribution Network Operation. <i>IEEE Access</i> , 2019 , 7, 9790-9804	3.5	33
130	IEC 61850 and XMPP Communication Based Energy Management in Microgrids Considering Electric Vehicles. <i>IEEE Access</i> , 2018 , 6, 35657-35668	3.5	31
129	IEC 61850-Based Communication Modeling of EV Charge-Discharge Management for Maximum PV Generation. <i>IEEE Access</i> , 2019 , 7, 4219-4231	3.5	30
128	A microgrid protection system with central protection unit and extensive communication 2011 ,		28
127	Performance Evaluation and Analysis of IEC 62351-6 Probabilistic Signature Scheme for Securing GOOSE Messages. <i>IEEE Access</i> , 2019 , 7, 32343-32351	3.5	27
126	A central microgrid protection system for networks with fault current limiters 2011 ,		27
125	Effects of a Static Synchronous Series Compensator (SSSC) Based on a Soft Switching 48-Pulse PWM Inverter on the Power Demand from the Grid. <i>Journal of Power Electronics</i> , 2010 , 10, 85-90	0.9	26
124	IEC 61850 based substation automation system: A survey. <i>International Journal of Electrical Power and Energy Systems</i> , 2020 , 120, 106008	5.1	25
123	Cost Optimization of a Stand-Alone Hybrid Energy System with Fuel Cell and PV. <i>Energies</i> , 2020 , 13, 1295-1311	5.1	25
122	Artificial Neural Networks Based Optimization Techniques: A Review. <i>Electronics (Switzerland)</i> , 2021 , 10, 2689	2.6	25
121	The Emerging Energy Internet: Architecture, Benefits, Challenges, and Future Prospects. <i>Electronics (Switzerland)</i> , 2019 , 8, 1037	2.6	24
120	Certificate Based Security Mechanisms in Vehicular Ad-Hoc Networks based on IEC 61850 and IEEE WAVE Standards. <i>Electronics (Switzerland)</i> , 2019 , 8, 96	2.6	24
119	Differential protection of microgrids with central protection unit support 2013 ,		23
118	An adaptive microgrid protection scheme based on a wide-area smart grid communications network 2013 ,		21
117	Optimal Energy Routing in Microgrids With IEC 61850 Based Energy Routers. <i>IEEE Transactions on Industrial Electronics</i> , 2020 , 67, 5161-5169	8.9	21

116	Double stage controller optimization for load frequency stabilization in hybrid wind-ocean wave energy based maritime microgrid system. <i>Applied Energy</i> , 2021 , 282, 116171	10.7	21
115	Certificate Based Authentication Mechanism for PMU Communication Networks Based on IEC 61850-90-5. <i>Electronics (Switzerland)</i> , 2018 , 7, 370	2.6	21
114	Analysis and Implementation of Message Authentication Code (MAC) Algorithms for GOOSE Message Security. <i>IEEE Access</i> , 2019 , 7, 80980-80984	3.5	20
113	The case for microgrids in electrifying Sub-Saharan Africa 2015 ,		20
112	The role of microgrids & renewable energy in addressing Sub-Saharan Africa's current and future energy needs 2015 ,		20
111	Virtual Power Plant Management in Smart Grids with XMPP Based IEC 61850 Communication. <i>Energies</i> , 2019 , 12, 2398	3.1	20
110	Simulation of communication infrastructure of a centralized microgrid protection system based on IEC 61850-7-420 2012 ,		19
109	Scaling renewable energy based microgrids in underserved communities: Latin America, South Asia, and Sub-Saharan Africa 2016 ,		19
108	Optimum Synthesis of a BOA Optimized Novel Dual-Stage PI ((1 + ID) Controller for Frequency Response of a Microgrid. <i>Energies</i> , 2020 , 13, 3446	3.1	18
107	A review on fractional order (FO) controllers optimization for load frequency stabilization in power networks. <i>Energy Reports</i> , 2021 , 7, 4009-4021	4.6	18
106	Advanced Laboratory Testing Methods Using Real-Time Simulation and Hardware-in-the-Loop Techniques: A Survey of Smart Grid International Research Facility Network Activities. <i>Energies</i> , 2020 , 13, 3267	3.1	17
105	A Novel Approach for Mitigation of Replay and Masquerade Attacks in Smartgrids Using IEC 61850 Standard. <i>IEEE Access</i> , 2019 , 7, 156044-156053	3.5	16
104	Smart Inverter Functionality Testing for Battery Energy Storage Systems. <i>Smart Grid and Renewable Energy</i> , 2017 , 08, 337-350	0.4	16
103	Active Power Management of Virtual Power Plant under Penetration of Central Receiver Solar Thermal-Wind Using Butterfly Optimization Technique. <i>Sustainability</i> , 2020 , 12, 6979	3.6	16
102	A Method for Achieving Confidentiality and Integrity in IEC 61850 GOOSE Messages. <i>IEEE Transactions on Power Delivery</i> , 2020 , 35, 2565-2567	4.3	15
101	S-GoSV: Framework for Generating Secure IEC 61850 GOOSE and Sample Value Messages. <i>Energies</i> , 2019 , 12, 2536	3.1	14
100	Implementation of Dijkstra's algorithm in a dynamic microgrid for relay hierarchy detection 2011 ,		14
99	Implementing Secure Routable GOOSE and SV Messages Based on IEC 61850-90-5. <i>IEEE Access</i> , 2020 , 8, 26162-26171	3.5	13

98	Extending IEC 61850-7-420 for distributed generators with fault current limiters 2011 ,		13
97	Optimal VoltageFrequency Regulation in Distributed Sustainable Energy-Based Hybrid Microgrids with Integrated Resource Planning. <i>Energies</i> , 2021 , 14, 2735	3.1	13
96	Impact of Smart Inverters on Feeder Hosting Capacity of Distribution Networks. <i>IEEE Access</i> , 2019 , 7, 163526-163536	3.5	13
95	Using IEC 61850 and IEEE WAVE standards in ad-hoc networks for electric vehicle charging management 2016 ,		12
94	Smart microgrid operation simulator for management and electrification planning 2016 ,		12
93	Performance Assessment of an Islanded Hybrid Power System with Different Storage Combinations Using an FPA-Tuned Two-Degree-of-Freedom (2DOF) Controller. <i>Energies</i> , 2020 , 13, 5610	3.1	10
92	A Novel Scheme for Performance Evaluation of an IEC 61850-Based Active Distribution System Substation. <i>IEEE Access</i> , 2019 , 7, 123893-123902	3.5	10
91	Interoperability and interchangeability considerations in microgrids employing IEC61850 standard 2013 ,		10
90	A Review of Cybersecurity Issues in Smartgrid Communication Networks 2019 ,		10
89	Advanced Grid Integration Test Platform for Increased Distributed Renewable Energy Penetration in Smart Grids. <i>IEEE Access</i> , 2021 , 9, 34040-34053	3.5	10
88	IEC 61850-Based Communication Layer Modeling for Electric Vehicles: Electric Vehicle Charging and Discharging Processes Based on the International Electrotechnical Commission 61850 Standard and Its Extensions. <i>IEEE Industrial Electronics Magazine</i> , 2020 , 14, 4-14	6.2	9
87	Microgrid Controller Testing Using Power Hardware-in-the-Loop. <i>Energies</i> , 2020 , 13, 2044	3.1	9
86	Data Standardization for Smart Infrastructure in First-Access Electricity Systems. <i>Proceedings of the IEEE</i> , 2019 , 107, 1790-1802	14.3	9
85	2014 ,		9
84	Interoperability and interchangeability for microgrid protection systems using IEC 61850 standard 2016 ,		9
83	Performance Investigation of a Solar Photovoltaic/Diesel Generator Based Hybrid System with Cycle Charging Strategy Using BBO Algorithm. <i>Sustainability</i> , 2021 , 13, 8048	3.6	9
82	IEC 61850 based energy management system using plug-in electric vehicles and distributed generators during emergencies. <i>International Journal of Electrical Power and Energy Systems</i> , 2020 , 119, 105873	5.1	8
81	Hardware-in-the-loop simulation based testing of power conditioning systems 2018 ,		8

80	IEC 61850 Modeling of UPFC and XMPP Communication for Power Management in Microgrids. <i>IEEE Access</i> , 2020 , 8, 141696-141704	3.5	8
79	A Novel SCL Configuration Method for Modeling Microgrids With IEC 61850. <i>IEEE Systems Journal</i> , 2020 , 14, 2676-2683	4.3	8
78	A Survey of Authentication Techniques in Vehicular Ad-Hoc Networks. <i>IEEE Intelligent Transportation Systems Magazine</i> , 2021 , 13, 39-52	2.6	8
77	Price Based Demand Response for Optimal Frequency Stabilization in ORC Solar Thermal Based Isolated Hybrid Microgrid under Salp Swarm Technique. <i>Electronics (Switzerland)</i> , 2020 , 9, 2209	2.6	7
76	Cybersecurity Vulnerabilities of Smart Inverters and Their Impacts on Power System Operation 2019 ,		7
75	MPTCP based mitigation of Denial of Service (DoS) Attack in PMU Communication Networks 2018 ,		7
74	IEC 61850 communication based dual stage load frequency controller for isolated hybrid microgrid. <i>International Journal of Electrical Power and Energy Systems</i> , 2021 , 130, 106909	5.1	7
73	IEC 62351-4 Security Implementations for IEC 61850 MMS Messages. <i>IEEE Access</i> , 2020 , 8, 123979-123985	5.5	6
72	Energizing microgrids with electric vehicles during emergencies [Natural disasters, sabotage and warfare 2015 ,		6
71	Integration of Precision Agriculture and SmartGrid technologies for sustainable development 2015 ,		6
70	Electric bus migration in Bengaluru with dynamic charging technologies. <i>AIMS Energy</i> , 2017 , 5, 944-959	1.8	6
69	Using ID-Based Authentication and Key Agreement Mechanism for Securing Communication in Advanced Metering Infrastructure. <i>IEEE Access</i> , 2020 , 8, 210503-210512	3.5	6
68	Novel business models and policy directions based on SE4ALL global framework for minigrids 2016 ,		6
67	Energy Management Scheduling for Microgrids in the Virtual Power Plant System Using Artificial Neural Networks. <i>Energies</i> , 2021 , 14, 6507	3.1	5
66	IEC-61850-Based Communication for Integrated EV Management in Power Systems with Renewable Penetration. <i>Energies</i> , 2021 , 14, 2493	3.1	5
65	Enhancing Cybersecurity in Smart Grids: False Data Injection and Its Mitigation. <i>Energies</i> , 2021 , 14, 2657	3.1	5
64	Voltage stability assessment of isolated hybrid dish-stirling solar thermal-diesel microgrid with STATCOM using mine blast algorithm. <i>Electric Power Systems Research</i> , 2021 , 196, 107239	3.5	5
63	The importance of microgrids & renewable energy in meeting energy needs of the Brazilian Amazon 2016 ,		5

62	IEC 61850 Communication Assisted Synchronization Strategy for Microgrids 2018,		5
61	Automated Network Topology Extraction Based on Graph Theory for Distributed Microgrid Protection in Dynamic Power Systems. <i>Electronics (Switzerland)</i> , 2019 , 8, 655	2.6	4
60	Neuro-Fuzzy-Based Model Predictive Energy Management for Grid Connected Microgrids. <i>Electronics (Switzerland)</i> , 2020 , 9, 900	2.6	4
59	Modeling and simulation of a microgrid protection system with central protection unit 2013,		4
58	Differential protection of microgrids over a WiMAX network 2013,		4
57	Power Generation Control of Renewable Energy Based Hybrid Deregulated Power System. <i>Energies</i> , 2022 , 15, 517	3.1	4
56	An Economic Risk Analysis in Wind and Pumped Hydro Energy Storage Integrated Power System Using Meta-Heuristic Algorithm. <i>Sustainability</i> , 2021 , 13, 13542	3.6	4
55	Standardized Communication Model for Home Energy Management System. <i>IEEE Access</i> , 2020 , 8, 180067-180075	3.3	4
54	Machine Learning-Based Intrusion Detection for Achieving Cybersecurity in Smart Grids Using IEC 61850 GOOSE Messages. <i>Symmetry</i> , 2021 , 13, 826	2.7	4
53	Feasibility of microgrid optimization and grid extension for rural electrification 2016,		4
52	Stochastic Simulator for Smart Microgrid Planning 2016,		4
51	Artificial Intelligence Based Intrusion Detection System for IEC 61850 Sampled Values Under Symmetric and Asymmetric Faults. <i>IEEE Access</i> , 2021 , 9, 56486-56495	3.5	4
50	Maiden Voltage Control Analysis of Hybrid Power System With Dynamic Voltage Restorer. <i>IEEE Access</i> , 2021 , 9, 60531-60542	3.5	4
49	Active Power Control to Mitigate Frequency Deviations in Large-Scale Grid-Connected PV System Using Grid-Forming Single-Stage Inverters. <i>Energies</i> , 2022 , 15, 2035	3.1	4
48	Integration of communication standards in Electrical Vehicle Ad-Hoc Networks for smartgrid support 2016,		3
47	Mini-grid policy directions for decentralized smart energy models in Sub-Saharan Africa 2017,		3
46	Using input-output correlations and a modified slide attack to compromise IEC 62055-41 2017,		3
45	Performance evaluation of electric vehicle ad-hoc network technologies for charging management 2017,		3

44	Computer-based smart energy management system for rural health centers 2015 ,		3
43	Developing Power Hardware-in-the-Loop Based Testing Environment for Volt-Var and Frequency-Watt Functions of 500 kW Photovoltaic Smart Inverter. <i>IEEE Access</i> , 2020 , 8, 224135-224144	3.5	3
42	Optimal PI controller based PSO optimization for PV inverter using SPWM techniques. <i>Energy Reports</i> , 2021 , 8, 1003-1003	4.6	3
41	Social Welfare Maximization of Competitive Congested Power Market Considering Wind Farm and Pumped Hydroelectric Storage System. <i>Electronics (Switzerland)</i> , 2021 , 10, 2611	2.6	3
40	Optimal PV-INV Capacity Ratio for Residential Smart Inverters Operating Under Different Control Modes. <i>IEEE Access</i> , 2020 , 8, 116078-116089	3.5	3
39	Power Hardware in-the-Loop Testing to Analyze Fault Behavior of Smart Inverters in Distribution Networks. <i>Sustainability</i> , 2020 , 12, 9365	3.6	3
38	Design and Implementation of Maiden Dual-Level Controller for Ameliorating Frequency Control in a Hybrid Microgrid. <i>Energies</i> , 2021 , 14, 2418	3.1	3
37	An Improved Security Scheme for IEC 61850 MMS Messages in Intelligent Substation Communication Networks. <i>Journal of Modern Power Systems and Clean Energy</i> , 2020 , 8, 591-595	4	3
36	Case Study of Grid-Connected Photovoltaic Power System Installed at Monthly Optimum Tilt Angles for Different Climatic Zones in India. <i>IEEE Access</i> , 2021 , 9, 60077-60088	3.5	3
35	Aggregate Modeling of Distribution System with Multiple Smart Inverters 2019 ,		2
34	Analysis of GOA optimized two-stage controller for frequency regulation of grid integrated virtual power plant. <i>Energy Reports</i> , 2022 , 8, 493-500	4.6	2
33	Performance Analysis of IEC 61850 Messages in LTE Communication for Reactive Power Management in Microgrids. <i>Energies</i> , 2020 , 13, 6011	3.1	2
32	Fractional Order Fuzzy Based Virtual Inertia Controller Design for Frequency Stability in Isolated Hybrid Power Systems. <i>Energies</i> , 2021 , 14, 1634	3.1	2
31	Chaotic Evolutionary Programming for an Engineering Optimization Problem. <i>Applied Sciences (Switzerland)</i> , 2021 , 11, 2717	2.6	2
30	Optimization of Two-Stage IPD-(1+I) Controllers for Frequency Regulation of Sustainable Energy Based Hybrid Microgrid Network. <i>Electronics (Switzerland)</i> , 2021 , 10, 919	2.6	2
29	A Critical Review of IEC 61850 Testing Tools. <i>Sustainability</i> , 2021 , 13, 6213	3.6	2
28	Wireless power grid: Leapfrogging in power infrastructure of developing countries 2016 ,		2
27	Modelling and performance of an automated small hybrid plant. <i>African Journal of Science, Technology, Innovation and Development</i> , 2018 , 10, 1-7	0.7	2

26	A Risk Curtailment Strategy for Solar PV-Battery Integrated Competitive Power System. <i>Electronics (Switzerland)</i> , 2022 , 11, 1251	2.6	2
25	Secure Communication Modeling for Microgrid Energy Management System: Development and Application. <i>Energies</i> , 2020 , 13, 68	3.1	1
24	Design of a generic microgrid testbed with novel control and smart technologies 2015 ,		1
23	Optimizing energy use of SmartFarms with smartgrid integration 2015 ,		1
22	Grid planning: Agent based approach for early notification of air conditioning loads to smart grid 2015 ,		1
21	Day-Ahead DSM-Integrated Hybrid-Power-Management-Incorporated CEED of Solar Thermal/Wind/Wave/BESS System Using HFPSO. <i>Sustainability</i> , 2022 , 14, 1169	3.6	1
20	Smart Inverter Communication Model and Impact of Cybersecurity Attack 2020 ,		1
19	Simultaneous analysis of frequency and voltage control of the interconnected hybrid power system in presence of FACTS devices and demand response scheme. <i>Energy Reports</i> , 2021 , 7, 7445-7459	4.6	1
18	Optimal Allocation of a Hybrid Photovoltaic Biogas Energy System Using Multi-Objective Feasibility Enhanced Particle Swarm Algorithm. <i>Sustainability</i> , 2022 , 14, 685	3.6	1
17	Communication based Predictive Dynamic Stability Scheme in Microgrid with High Penetration of Distributed Energy Resources 2020 ,		1
16	Experiences and Applications of Electric and Plug-In Hybrid Vehicles in Power System Networks 2017 , 243-280		1
15	Implementation and Performance Evaluation of IEC 61850 based Home Energy Management System 2019 ,		1
14	Integrated Power Hardware-in-the-Loop and Lab Testing for Microgrid Controller 2019 ,		1
13	Modeling Smart Inverters for Hardware-in-the-loop tests in Low-Voltage Distribution Systems 2019 ,		1
12	Implementation of IEC 61850 Based Integrated EV Charging Management in Smart Grids 2019 ,		1
11	Aggregation of Radial Distribution System Bus with Volt-Var Control. <i>Energies</i> , 2021 , 14, 5390	3.1	1
10	Initialization Vector for application of IEC 61850-90-5 security features on R-GOOSE and R-SV messages. <i>International Journal of Electrical Power and Energy Systems</i> , 2021 , 132, 107189	5.1	1
9	A Joint Scheduling Strategy for Wind and Solar Photovoltaic Systems to Grasp Imbalance Cost in Competitive Market. <i>Sustainability</i> , 2022 , 14, 5005	3.6	1

8	IEC 61850 modeling of an AGC dispatching scheme for mitigation of short-term power flow variations. <i>Energy Reports</i> , 2022 , 8, 381-391	4.6	o
7	A Security Mechanism for IEEE C37.118.2 PMU Communication. <i>IEEE Transactions on Industrial Electronics</i> , 2021 , 1-1	8.9	o
6	Impact of Wind Farm Integration on LMP in Deregulated Energy Markets. <i>Sustainability</i> , 2022 , 14, 4354	3.6	o
5	Isolated and Interconnected Multi-Area Hybrid Power Systems: A Review on Control Strategies. <i>Energies</i> , 2021 , 14, 8276	3.1	o
4	Cyberphysical testbed for Wide Area Measurement System employing IEC 61850 and IEEE C37.118 based communication. <i>Energy Reports</i> , 2022 , 8, 570-578	4.6	o
3	Techno-economic assessment and environmental analysis of an optimal hybrid system under novel demand response scheme for a remote region of India. <i>Energy Reports</i> , 2022 , 8, 284-291	4.6	o
2	Flywheel energy storage system based microgrid controller design and PHIL testing. <i>Energy Reports</i> , 2022 , 8, 470-475	4.6	o
1	A Novel Fundamental Frequency Switching Operation for Conventional VSI to Enable Single-Stage High-Gain Boost Inversion with ANN Tuned QWS Controller. <i>Electronics (Switzerland)</i> , 2021 , 10, 2499	2.6	