

Ali Mehrizi-Sani

List of Publications by Year in descending order

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115
papers

5,540
citations

236925

25
h-index

123424

61
g-index

115
all docs

115
docs citations

115
times ranked

4888
citing authors

#	ARTICLE	IF	CITATIONS
1	Trends in Microgrid Control. IEEE Transactions on Smart Grid, 2014, 5, 1905-1919.	9.0	2,316
2	Distributed Control Techniques in Microgrids. IEEE Transactions on Smart Grid, 2014, 5, 2901-2909.	9.0	559
3	Dynamic Averaged and Simplified Models for MMC-Based HVDC Transmission Systems. IEEE Transactions on Power Delivery, 2013, 28, 1723-1730.	4.3	440
4	Potential-Function Based Control of a Microgrid in Islanded and Grid-Connected Modes. IEEE Transactions on Power Systems, 2010, 25, 1883-1891.	6.5	351
5	A Current Limiting Strategy to Improve Fault Ride-Through of Inverter Interfaced Autonomous Microgrids. IEEE Transactions on Smart Grid, 2017, 8, 2138-2148.	9.0	137
6	Modeling of LCC-HVDC Systems Using Dynamic Phasors. IEEE Transactions on Power Delivery, 2014, 29, 1989-1998.	4.3	127
7	An Optimized Space Vector Modulation Sequence for Improved Harmonic Performance. IEEE Transactions on Industrial Electronics, 2009, 56, 2894-2903.	7.9	90
8	Small-Signal Stability Analysis of an Inverter-Based Microgrid With Internal Model-Based Controllers. IEEE Transactions on Smart Grid, 2018, 9, 5393-5402.	9.0	88
9	Interfacing Power System and ICT Simulators: Challenges, State-of-the-Art, and Case Studies. IEEE Transactions on Smart Grid, 2018, 9, 14-24.	9.0	77
10	Low-voltage ride-through of a droop-based three-phase four-wire grid-connected microgrid. IET Generation, Transmission and Distribution, 2018, 12, 1906-1914.	2.5	60
11	Transient Monitoring Function-Based Fault Detection for Inverter-Interfaced Microgrids. IEEE Transactions on Smart Grid, 2016, , 1-1.	9.0	57
12	Internal Model-Based Current Control of the α - β Filter-Based Voltage-Sourced Converter. IEEE Transactions on Energy Conversion, 2014, 29, 873-881.	5.2	56
13	Constrained Potential Function-Based Control of Microgrids for Improved Dynamic Performance. IEEE Transactions on Smart Grid, 2012, 3, 1885-1892.	9.0	54
14	Washout Filter-Based Power Sharing. IEEE Transactions on Smart Grid, 2015, , 1-2.	9.0	51
15	Application of Balanced Realizations for Model-Order Reduction of Dynamic Power System Equivalents. IEEE Transactions on Power Delivery, 2016, 31, 2304-2312.	4.3	50
16	Cyber Security Risk Assessment of Solar PV Units with Reactive Power Capability. , 2018, , .		48
17	Online Set Point Adjustment for Trajectory Shaping in Microgrid Applications. IEEE Transactions on Power Systems, 2012, 27, 216-223.	6.5	45
18	Estimation of Electromechanical Oscillation Parameters Using an Extended Kalman Filter. IEEE Transactions on Power Systems, 2015, 30, 2994-3002.	6.5	43

#	ARTICLE	IF	CITATIONS
19	Internal Model-Based Active Resonance Damping Current Control of a Grid-Connected Voltage-Sourced Converter With an LCL Filter. IEEE Transactions on Power Systems, 2018, 33, 6025-6036.	6.5	39
20	Fuel Cell-Based Auxiliary Power Unit: EMS, Sizing, and Current Estimator-Based Controller. IEEE Transactions on Vehicular Technology, 2016, 65, 4826-4835.	6.3	38
21	Trends in modern power systems resilience: State-of-the-art review. Renewable and Sustainable Energy Reviews, 2022, 162, 112397.	16.4	37
22	Online Set Point Modulation to Enhance Microgrid Dynamic Response: Theoretical Foundation. IEEE Transactions on Power Systems, 2012, 27, 2167-2174.	6.5	35
23	Inductive fault current limiters: A review. Electric Power Systems Research, 2020, 187, 106499.	3.6	35
24	Low Switching Frequency-Based Predictive Control of a Grid-Connected Voltage-Sourced Converter. IEEE Transactions on Energy Conversion, 2017, 32, 686-697.	5.2	31
25	Techniques for Interfacing Electromagnetic Transient Simulation Programs With General Mathematical Tools IEEE Taskforce on Interfacing Techniques for Simulation Tools. IEEE Transactions on Power Delivery, 2008, 23, 2610-2622.	4.3	29
26	Tools for Analysis and Design of Distributed Resources—Part II: Tools for Planning, Analysis and Design of Distribution Networks With Distributed Resources. IEEE Transactions on Power Delivery, 2011, 26, 1653-1662.	4.3	29
27	Interfacing Issues in Multiagent Simulation for Smart Grid Applications. IEEE Transactions on Power Delivery, 2013, 28, 1918-1927.	4.3	25
28	A Comprehensive Study of the Parameters Impacting the Fuel Economy of Plug-In Hybrid Electric Vehicles. IEEE Transactions on Intelligent Vehicles, 2020, 5, 596-615.	12.7	23
29	Estimation of Stator Resistance in Direct Torque Control Synchronous Motor Drives. IEEE Transactions on Energy Conversion, 2015, 30, 626-634.	5.2	21
30	A Generalized Switching Strategy and Capacitor Sizing Algorithm for Granular Multilevel Converters. IEEE Transactions on Industrial Electronics, 2018, 65, 4443-4453.	7.9	21
31	Protection of Inverter-Based Islanded Microgrids via Synthetic Harmonic Current Pattern Injection. IEEE Transactions on Power Delivery, 2021, 36, 2434-2445.	4.3	21
32	Design Tradeoffs in Selection of the DC-Side Voltage for a D-STATCOM. IEEE Transactions on Power Delivery, 2018, 33, 3230-3232.	4.3	20
33	Mitigation of Subsynchronous Resonance Induced by a Type III Wind System. IEEE Transactions on Sustainable Energy, 2020, 11, 1717-1727.	8.8	20
34	Microgrid Controller Design, Implementation, and Deployment: A Journey from Conception to Implementation at the Philadelphia Navy Yard. IEEE Power and Energy Magazine, 2017, 15, 50-62.	1.6	18
35	Load Frequency Control in Variable Inertia Systems. IEEE Transactions on Power Systems, 2020, 35, 4904-4907.	6.5	18
36	Cyberattack to Cyber-Physical Model of Wind Farm SCADA. , 2018, , .		16

#	ARTICLE	IF	CITATIONS
37	Harmonic Directional Overcurrent Relay For Islanded Microgrids With Inverter-Based DGs. IEEE Systems Journal, 2021, 15, 2720-2731.	4.6	16
38	Islanding Detection for DC Microgrids Based on Episode of Care Severity Index. IEEE Transactions on Smart Grid, 2022, 13, 954-961.	9.0	16
39	Predictive Set Point Modulation to Mitigate Transients in Lightly Damped Balanced and Unbalanced Systems. IEEE Transactions on Power Systems, 2016, , 1-1.	6.5	15
40	Performance Evaluation of an Inverter-Based Microgrid Under Cyberattacks. , 2020, , .		15
41	Generalized Step-Down Switched-Capacitor Converter Under ZCS for Photovoltaic Applications. IEEE Transactions on Energy Conversion, 2018, 33, 1321-1329.	5.2	14
42	Smooth Reference Modulation to Improve Dynamic Response in Electric Drive Systems. IEEE Transactions on Power Electronics, 2018, 33, 6434-6443.	7.9	14
43	Operation paradigm of an all converter interfaced generation bulk power system. IET Generation, Transmission and Distribution, 2018, 12, 4240-4248.	2.5	13
44	Cyber-Physical Vulnerability and Security Analysis of Power Grid with HVDC Line. , 2019, , .		13
45	Review of Control Techniques for Wind Energy Systems. Energies, 2020, 13, 6666.	3.1	13
46	Analysis of Fault Response of Inverter-Interfaced Distributed Generators in Sequence Networks. , 2018, , .		12
47	PWM A-CHB Converter Based on Trinary Multilevel Converter: Topology, Switching Algorithm, and Stability Analysis. IEEE Transactions on Industrial Electronics, 2019, 66, 4166-4176.	7.9	12
48	Everyday Electrical Engineering: A One-Week Summer Academy Course for High School Students. IEEE Transactions on Education, 2012, 55, 488-494.	2.4	11
49	Development of Data Translators for Interfacing Power-Flow Programs With EMTP-Type Programs: Challenges and Lessons Learned. IEEE Transactions on Power Delivery, 2013, 28, 1192-1201.	4.3	11
50	Dynamic Average-Value Modeling of Direct Power-Controlled Active Front-End Rectifiers. IEEE Transactions on Power Delivery, 2014, 29, 2458-2466.	4.3	11
51	Energy loss estimation in distribution networks using stochastic simulation. , 2015, , .		10
52	State-Space Modeling and Reachability Analysis for a DC Microgrid. , 2019, , .		10
53	Analysis and Output Voltage Control of a High-Efficiency Converter for DC Microgrids. , 2018, , .		9
54	A new two-motor drive to control a two-phase induction motor and a DC motor. , 2015, , .		8

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55	Sensorless Speed Control of Synchronous Motors: Analysis and Mitigation of Stator Resistance Error. IEEE Transactions on Energy Conversion, 2016, 31, 540-548.	5.2	8
56	Model predictive control of a fuel cell-based power unit. , 2017, , .		8
57	Reachability analysis for a grid-connected voltage-sourced converter (VSC). , 2018, , .		8
58	Five-Level NPC Based Grid-Tied Inverter with Voltage Boosting Capability and Eliminated Leakage Current. , 2022, , .		8
59	Predictive set point modulation technique to enhance the dynamic response of a power system. , 2017, , .		7
60	Comparison of fault current limitation with saturable reactor and dynamic voltage restorer. , 2017, , .		7
61	Current Limiting and Torque Pulsation Reduction of the Induction Motors. , 2019, , .		7
62	A Multistage Resonant DC-DC Converter for Step-Up Applications. IEEE Transactions on Power Electronics, 2021, 36, 9251-9262.	7.9	7
63	A Single-Stage Transformer-less Five-Level Grid-Tied Inverter with Boosting Capability. , 2022, , .		7
64	A new multilevel converter with granular voltage steps and reduced number of switches. , 2015, , .		6
65	A Robust Exciter Controller Design for Synchronous Condensers in Weak Grids. IEEE Transactions on Power Systems, 2022, 37, 1857-1867.	6.5	6
66	A Planning Method for Synchronous Condensers in Weak Grids Using Semi-Definite Optimization. IEEE Transactions on Power Systems, 2023, 38, 1632-1641.	6.5	6
67	Design of a fuel cell-based battery extender auxiliary power unit for a vehicular microgrid. , 2014, , .		5
68	Case Studies on Cascade Voltage Control of Islanded Microgrids Based on the Internal Model Control. IFAC-PapersOnLine, 2015, 48, 578-582.	0.9	5
69	Model Predictive Control of Single-Phase Grid-Connected Voltage-Sourced Converters. , 2018, , .		5
70	Sensor Malfunction Detection and Mitigation Strategy for a Multilevel Photovoltaic Converter. IEEE Transactions on Energy Conversion, 2020, 35, 886-895.	5.2	5
71	On the Educational Aspects of Potential Functions for the System Analysis and Control. IEEE Transactions on Power Systems, 2011, 26, 878-885.	6.5	4
72	A simple algorithm to control two-phase induction motors using a two-leg VSC. , 2014, , .		4

#	ARTICLE	IF	CITATIONS
73	Study of stability of an islanded microgrid in the presence of communication delays. , 2014, , .		4
74	Step-up MMC with staircase modulation: Analysis, control, and switching strategy. , 2016, , .		4
75	Predictive set point modulation to mitigate transients in power systems with a multiple-input-multiple-output control system. , 2016, , .		4
76	Performance Evaluation of an Angle Droop-Based Power Sharing Algorithm for An Inverter-Dominated Power System. , 2019, , .		4
77	Performance Analysis of Distance Protection in Presence of Type III Wind Turbine Generators. , 2021, , .		4
78	Reliability Evaluation of Renewable-Rich Microgrids Using Monte Carlo Simulation Considering Resource and Equipment Availability. , 2020, , .		4
79	Guest editorial: Special issue on data-analytics for stability analysis, control, and situational awareness of power system with high-penetration of renewable energy. International Journal of Electrical Power and Energy Systems, 2022, 137, 107773.	5.5	4
80	Internal model-based current control of the RL filter-based voltage-sourced converter. , 2015, , .		3
81	Software-based hardware-in-the-loop real-time simulation of distribution systems. , 2016, , .		3
82	Analysis and output voltage control of a cascaded switched-capacitor converter under ZVS condition. , 2017, , .		3
83	Dual-Band Reduced-Order Model of an HVDC Link Embedded Into a Power Network for EMT Studies. IEEE Transactions on Energy Conversion, 2020, 35, 416-424.	5.2	3
84	A Fault Tolerant Selective Harmonic Elimination Method for Modular Multilevel Converters. , 2020, , .		3
85	Power sharing for transmission systems with 100% inverter-based generating resources. IET Generation, Transmission and Distribution, 2020, 14, 6504-6511.	2.5	3
86	Set point adjustment strategy for mitigating transients in a microgrid. , 2013, , .		2
87	A novel approach for ringdown detection using extended Kalman filter. , 2013, , .		2
88	A Low-Cost and Simple Control Approach for Two-Phase Induction Motors at High Speeds. EPE Journal (European Power Electronics and Drives Journal), 2014, 24, 31-38.	0.7	2
89	Feedforward Accurate Power Sharing and Voltage Control for Multi-Terminal HVDC Grids. , 2019, , .		2
90	Performance Evaluation of an Angle Droop-Based Power Sharing for a Power System Dominated by Inverter-Based Generation. , 2019, , .		2

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91	Transient behaviour verification and controller tuning for an uncertain grid-connected photovoltaic system using reachability analysis. IET Renewable Power Generation, 2021, 15, 2849-2859.	3.1	2
92	Adaptive set point modulation to mitigate transients in power systems. IET Generation, Transmission and Distribution, 2020, 14, 5463-5470.	2.5	2
93	Power Systems Performance under 5G Radio Access Network in a Co-Simulation Environment. , 2021, , .		2
94	Fault Current Directionality in Islanded Microgrids Using SVM and Synthetic Harmonic Injection. , 2021, , .		2
95	Submodule Fault Detection in MMCs using Support Vector Classification. , 2021, , .		2
96	A strategy to improve reference tracking of distributed energy resources. , 2013, , .		1
97	Effect of orthohydrogen-parahydrogen composition on performance of a proton exchange membrane fuel cell. International Journal of Hydrogen Energy, 2014, 39, 14955-14958.	7.1	1
98	Overshoot control of the electromagnetic torque during fault recovery for an SCIG with a STATCOM. , 2016, , .		1
99	Internal Model-Based Voltage Control of a Standalone Distributed Generator. , 2018, , .		1
100	Multi-Port DC Microgrids: Online Parameter Adaptation in Model Predictive Control. , 2018, , .		1
101	Hardware-in-the-Loop Demonstration of a Grid-Connected Voltage-Sourced Converter with an LCL Filter. , 2019, , .		1
102	Facilitating the Transition to an Inverter Dominated Power System: Experimental Evaluation of a Non-Intrusive Add-On Predictive Controller. Energies, 2020, 13, 4237.	3.1	1
103	Frequency Response Improvement of PMSG Wind Turbines Using a Washout Filter. Energies, 2020, 13, 4797.	3.1	1
104	Frequency Scan-Based Mitigation Approach of Subsynchronous Control Interaction in Type-3 Wind Turbines. Energies, 2021, 14, 4626.	3.1	1
105	Prediction Strategies for Smooth Set Point Modulation to Improve Sensitive DER Response. , 2020, , .		1
106	A Novel Frequency and Voltage Controller for Parallel Voltage Source Converters and Synchronous Generators Coexisting in Islanded Microgrids. , 2020, , .		1
107	Marginal Cost of Reliability Improvement for Standalone Microgrids. , 2021, , .		1
108	Multi-Stage Protection Coordination Optimization for Distribution Systems with Topology Changes. , 2020, , .		1

#	ARTICLE	IF	CITATIONS
109	DSP-based sensorless speed control drive system for two-phase synchronous motors. , 2015, , .		0
110	Modeling and Analysis of Transient Interactions in AC/DC Interconnected Microgrid. , 2019, , .		0
111	Undergraduate Students as Visiting Students in the United Kingdom. , 0, , .		0
112	Erratum to "Mitigation of Subsynchronous Resonance Induced by a Type III Wind System" [Jul 20 1717-1727]. IEEE Transactions on Sustainable Energy, 2020, 11, 2985-2985.	8.8	0
113	Switching Angle prediction with Artificial Neural Network for Complete and Partial Selective Harmonic Elimination of Multilevel Inverters. , 2021, , .		0
114	Board # 89 : Scholarships for Future Leaders in Electric Energy and Smart Grid. , 0, , .		0
115	Board # 99 : An Intelligent Software Tutor for Scaffolding Solving DC-DC Converter Circuits. , 0, , .		0