

Branislav Hredzak

List of Publications by Year in descending order

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109
papers

4,553
citations

109137

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109
all docs

109
docs citations

109
times ranked

3845
citing authors

#	ARTICLE	IF	CITATIONS
1	Distributed Photovoltaic Inverters's™ Response to Voltage Phase-Angle Jump. IEEE Journal of Photovoltaics, 2022, 12, 429-436.	1.5	6
2	Harmonics propagation and interaction evaluation in small-scale wind farms and hydroelectric generating systems. ISA Transactions, 2022, 129, 334-344.	3.1	4
3	A novel coordinated optimization strategy for high utilization of renewable energy sources and reduction of coal costs and emissions in hybrid hydro-thermal-wind power systems. Applied Energy, 2022, 320, 119019.	5.1	13
4	Strategy for compensation of unbalanced powers in LV residential distribution networks using distributed single-phase battery systems. Electric Power Systems Research, 2022, 211, 108253.	2.1	3
5	Predictive Home Energy Management System With Photovoltaic Array, Heat Pump, and Plug-In Electric Vehicle. IEEE Transactions on Industrial Informatics, 2021, 17, 430-440.	7.2	72
6	Cascaded H-Bridge Low Capacitance Static Compensator With Modular Switched Capacitors. IEEE Transactions on Industrial Electronics, 2021, 68, 5944-5954.	5.2	15
7	Distributed Dynamic Clustering Algorithm for Formation of Heterogeneous Virtual Power Plants Based on Power Requirements. IEEE Transactions on Smart Grid, 2021, 12, 192-204.	6.2	38
8	Analysis on the Behavior of Grid-Connected Single-Phase Photovoltaic Inverters Under Voltage Phase-Angle Jumps. , 2021, , .		7
9	Fully decentralized control strategy for heterogeneous energy storage systems distributed in islanded DC datacentre microgrid. Energy, 2021, 231, 120914.	4.5	26
10	Centralized nonlinear switching control strategy for distributed energy storage systems communicating via a network with large time delays. Journal of Energy Storage, 2021, 41, 102834.	3.9	10
11	Dynamic Aggregation of Energy Storage Systems Into Virtual Power Plants Using Distributed Real-Time Clustering Algorithm. IEEE Transactions on Industrial Electronics, 2021, 68, 11002-11013.	5.2	14
12	Inductive Operation of the Low-Capacitance StatCom Using Modular Filter Inductor. , 2021, , .		1
13	Distributed Control Strategy of Single-Phase Battery Systems for Compensation of Unbalanced Active Powers in a Three-Phase Four-Wire Microgrid. Energies, 2021, 14, 8287.	1.6	9
14	Information-Gap Decision Theory for Robust Security-Constrained Unit Commitment of Joint Renewable Energy and Gridable Vehicles. IEEE Transactions on Industrial Informatics, 2020, 16, 3064-3075.	7.2	37
15	Distributed Control System With Aperiodic Sampled Time-Delayed Data for Batteries and Renewable Energy Sources in Microgrid. IEEE Transactions on Sustainable Energy, 2020, 11, 1013-1022.	5.9	24
16	Dynamic regulation reliability of a pumped-storage power generating system: Effects of wind power injection. Energy Conversion and Management, 2020, 222, 113226.	4.4	27
17	Profit assessment of home energy management system for buildings with A-C energy labels. Applied Energy, 2020, 277, 115618.	5.1	9
18	Decentralized Frequency Control of Battery Energy Storage Systems Distributed in Isolated Microgrid. Energies, 2020, 13, 3026.	1.6	11

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19	A robust model for generation and transmission expansion planning with emission constraints. Simulation, 2020, 96, 605-621.	1.1	4
20	Bi-level Control Structure with Accurate Real and Reactive Powers Sharing for Low Voltage Microgrids with Highly Resistive Line Impedances. , 2020, , .		0
21	Low-Capacitance StatCom With Modular Inductive Filter. IEEE Transactions on Power Electronics, 2019, 34, 3192-3203.	5.4	24
22	A Reconfigurable Converter with Bidirectional Energy Transfer. , 2019, , .		1
23	Topologies for Reduction of Second Harmonic Ripple in Battery Energy Storage Systems. , 2019, , .		2
24	Nonlinear Sliding Mode and Distributed Control of Battery Energy Storage and Photovoltaic Systems in AC Microgrids With Communication Delays. IEEE Transactions on Industrial Informatics, 2019, 15, 5149-5160.	7.2	61
25	Distributed Control With Virtual Capacitance for the Voltage Restorations, State of Charge Balancing, and Load Allocations of Heterogeneous Energy Storages in a DC Datacenter Microgrid. IEEE Transactions on Energy Conversion, 2019, 34, 1296-1308.	3.7	31
26	Security-Constrained Unit Commitment in Presence of Lithium-Ion Battery Storage Units Using Information-Gap Decision Theory. IEEE Transactions on Industrial Informatics, 2019, 15, 148-157.	7.2	76
27	Distributed Finite-Time Multiagent Control for DC Microgrids With Time Delays. IEEE Transactions on Smart Grid, 2019, 10, 2692-2701.	6.2	94
28	Communication-less Model Based Distributed Control for DC Microgrids. International Journal of Electrical and Electronic Engineering and Telecommunications, 2019, , 139-145.	3.4	24
29	Analysis and Mitigation of Oscillations in Bi-directional CLLC Resonant Converters. , 2019, , .		0
30	Distributed Control for Microgrid Batteries Communicating over Network with Aperiodically Sampled Data with Time Delays. , 2019, , .		0
31	A Frequency Deadband-Based Virtual Inertia Control for Grid-Connected Power Converters. , 2019, , .		5
32	Information Gap Decision Theory Based Preventive/Corrective Voltage Control for Smart Power Systems With High Wind Penetration. IEEE Transactions on Industrial Informatics, 2018, 14, 4385-4394.	7.2	29
33	Network Topology Independent Multi-Agent Dynamic Optimal Power Flow for Microgrids With Distributed Energy Storage Systems. IEEE Transactions on Smart Grid, 2018, 9, 3419-3429.	6.2	36
34	Control Strategies for Microgrids With Distributed Energy Storage Systems: An Overview. IEEE Transactions on Smart Grid, 2018, 9, 3652-3666.	6.2	307
35	Single-Phase Boost Inverter-Based Electric Vehicle Charger With Integrated Vehicle to Grid Reactive Power Compensation. IEEE Transactions on Power Electronics, 2018, 33, 3462-3471.	5.4	78
36	Model Predictive Control for Distributed Microgrid Battery Energy Storage Systems. IEEE Transactions on Control Systems Technology, 2018, 26, 1107-1114.	3.2	114

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37	Multi-Agent Sliding Mode Control for State of Charge Balancing Between Battery Energy Storage Systems Distributed in a DC Microgrid. IEEE Transactions on Smart Grid, 2018, 9, 4735-4743.	6.2	153
38	Review of FACTS technologies and applications for power quality in smart grids with renewable energy systems. Renewable and Sustainable Energy Reviews, 2018, 82, 502-514.	8.2	224
39	Scalable Energy Management for Low Voltage Microgrids Using Multi-Agent Storage System Aggregation. IEEE Transactions on Power Systems, 2018, 33, 1614-1623.	4.6	42
40	Current Ripple Reduction for Photovoltaic Powered Single-Phase Buck-Boost Differential Inverter under Nonlinear Loads. , 2018, , .		1
41	An Interleaved Boost Inverter Based Battery-Supercapacitor Hybrid Energy Storage System with a Reduced Number of Current Sensors. , 2018, , .		0
42	A Fixed-Frequency Sliding Mode Controller for a Boost-Inverter-Based Battery-Supercapacitor Hybrid Energy Storage System. IEEE Transactions on Power Electronics, 2017, 32, 668-680.	5.4	93
43	Supercapacitor Sizing Method for Energy-Controlled Filter-Based Hybrid Energy Storage Systems. IEEE Transactions on Power Electronics, 2017, 32, 1626-1637.	5.4	101
44	Low-Capacitance Cascaded H-Bridge Multilevel StatCom. IEEE Transactions on Power Electronics, 2017, 32, 1744-1754.	5.4	86
45	A Load-Sharing Strategy for the State of Charge Balancing Between the Battery Modules of Integrated Reconfigurable Converter. IEEE Transactions on Power Electronics, 2017, 32, 4056-4063.	5.4	14
46	Capacitor Voltages Measurement and Balancing in Flying Capacitor Multilevel Converters Utilizing a Single Voltage Sensor. IEEE Transactions on Power Electronics, 2017, 32, 8115-8123.	5.4	40
47	Passive Reactor Compensated Cascaded H-Bridge Multilevel LC-StatCom. IEEE Transactions on Power Electronics, 2017, 32, 8338-8348.	5.4	35
48	A cascaded boost inverter based battery energy storage system with reduced battery ripple current. , 2017, , .		3
49	Cooperative control of distributed heterogeneous energy storage devices with virtual impedance. , 2017, , .		5
50	Fuzzy logic improved washout filter-based method for voltage restoration in DC microgrids. , 2017, , .		0
51	Abnormal overheating detectability analysis based on cross Gramian for a supercapacitors string. , 2016, , .		1
52	Dynamic optimal power flow for DC microgrids with distributed battery energy storage systems. , 2016, , .		19
53	DC side ripple current reduction method for three-phase boost inverter with mismatched output capacitors. , 2016, , .		0
54	Integrated Reconfigurable Configuration for Battery/Ultracapacitor Hybrid Energy Storage Systems. IEEE Transactions on Energy Conversion, 2016, 31, 1583-1590.	3.7	30

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55	Distributed sliding mode control for multi-module battery energy storage system state of charge balancing. , 2016, , .		2
56	Multiple-Model-Based Overheating Detection in a Supercapacitors String. IEEE Transactions on Energy Conversion, 2016, 31, 1413-1422.	3.7	3
57	Power Balance of Cascaded H-Bridge Multilevel Converters for Large-Scale Photovoltaic Integration. IEEE Transactions on Power Electronics, 2016, 31, 292-303.	5.4	259
58	Integrated Reconfigurable Converter Topology for High-Voltage Battery Systems. IEEE Transactions on Power Electronics, 2016, 31, 1968-1979.	5.4	60
59	Distributed Control for State-of-Charge Balancing Between the Modules of a Reconfigurable Battery Energy Storage System. IEEE Transactions on Power Electronics, 2016, 31, 7986-7995.	5.4	90
60	A DC-Side Sensorless Cascaded H-Bridge Multilevel Converter-Based Photovoltaic System. IEEE Transactions on Industrial Electronics, 2016, 63, 4233-4241.	5.2	75
61	Cooperative Multi-Agent Control of Heterogeneous Storage Devices Distributed in a DC Microgrid. IEEE Transactions on Power Systems, 2016, 31, 2974-2986.	4.6	133
62	An Input Current Feedback Method to Mitigate the DC-Side Low-Frequency Ripple Current in a Single-Phase Boost Inverter. IEEE Transactions on Power Electronics, 2016, 31, 4594-4603.	5.4	66
63	Decoupled Control System for Cascaded H-Bridge Multilevel Converter Based STATCOM. IEEE Transactions on Industrial Electronics, 2016, 63, 322-331.	5.2	108
64	Power Balance Optimization of Cascaded H-Bridge Multilevel Converters for Large-Scale Photovoltaic Integration. IEEE Transactions on Power Electronics, 2016, 31, 1108-1120.	5.4	152
65	Unified Distributed Control for DC Microgrid Operating Modes. IEEE Transactions on Power Systems, 2016, 31, 802-812.	4.6	157
66	A Rule-Based Controller to Mitigate DC-Side Second-Order Harmonic Current in a Single-Phase Boost Inverter. IEEE Transactions on Power Electronics, 2016, 31, 1665-1679.	5.4	47
67	A new multiple converter topology for battery/ultracapacitor hybrid energy system. , 2015, , .		3
68	Battery-supercapacitor hybrid energy storage system with reduced low frequency input current ripple. , 2015, , .		12
69	Operation of Cascaded H-Bridge Multilevel Converters for Large-Scale Photovoltaic Power Plants Under Bridge Failures. IEEE Transactions on Industrial Electronics, 2015, 62, 7228-7236.	5.2	137
70	On Estimating Instantaneous Temperature of a Supercapacitor String Using an Observer Based on Experimentally Validated Lumped Thermal Model. IEEE Transactions on Energy Conversion, 2015, 30, 1438-1448.	3.7	17
71	Delta-connected cascaded H-bridge multilevel photovoltaic converters. , 2015, , .		9
72	Reduced-Capacitance Thin-Film H-Bridge Multilevel STATCOM Control Utilizing an Analytic Filtering Scheme. IEEE Transactions on Industrial Electronics, 2015, 62, 6457-6468.	5.2	60

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73	Multiple model estimator based detection of abnormal cell overheating in a Li-ion battery string with minimum number of temperature sensors. Journal of Power Sources, 2015, 273, 1171-1181.	4.0	21
74	Index-Based Assessment of Voltage Rise and Reverse Power Flow Phenomena in a Distribution Feeder Under High PV Penetration. IEEE Journal of Photovoltaics, 2015, 5, 1158-1168.	1.5	79
75	Communication delay robustness for multi-agent state of charge balancing between distributed AC microgrid storage systems. , 2015, , .		22
76	Distributed Cooperative Control of Microgrid Storage. IEEE Transactions on Power Systems, 2015, 30, 2780-2789.	4.6	145
77	Application of explicit model predictive control to a hybrid battery-ultracapacitor power source. Journal of Power Sources, 2015, 277, 84-94.	4.0	46
78	Single-Phase Grid-Connected LiFePO ₄ Battery-Supercapacitor Hybrid Energy Storage System With Interleaved Boost Inverter. IEEE Transactions on Power Electronics, 2015, 30, 5591-5604.	5.4	61
79	A fast filtering scheme for capacitor voltages of a cascaded H-bridge multilevel converter based STATCOM. , 2014, , .		2
80	Cooperative control of DC microgrid storage for energy balancing and equal power sharing. , 2014, , .		20
81	Optimal zero sequence injection in multilevel cascaded H-bridge converter under unbalanced photovoltaic power generation. , 2014, , .		22
82	A Low Complexity Control System for a Hybrid DC Power Source Based on Ultracapacitor-Lead-Acid Battery Configuration. IEEE Transactions on Power Electronics, 2014, 29, 2882-2891.	5.4	84
83	A Model Predictive Control System for a Hybrid Battery-Ultracapacitor Power Source. IEEE Transactions on Power Electronics, 2014, 29, 1469-1479.	5.4	362
84	Observability degree criteria evaluation for temperature observability in a battery string towards optimal thermal sensors placement. , 2014, , .		9
85	A single phase grid integration scheme for battery-supercapacitor AC line hybrid storage system. , 2014, , .		9
86	Fuzzy logic based control system for cascaded H-bridge converter. , 2014, , .		7
87	A generalized capacitors voltage estimation scheme for multilevel converters. , 2014, , .		10
88	A low complexity control system for a hybrid battery-ultracapacitor power source. , 2013, , .		3
89	An integration scheme for a direct AC line battery-supercapacitor hybrid energy storage system. , 2013, , .		2
90	State of health and life estimation methods for supercapacitors. , 2013, , .		5

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91	On extending the energy balancing limit of multilevel cascaded H-bridge converters for large-scale photovoltaic farms. , 2013, , .		34
92	A simple perturb and observe MPPT scheme for Cascaded H-Bridge based photovoltaic system. , 2013, , .		6
93	Model predictive control of a hybrid battery-ultracapacitor power source. , 2012, , .		14
94	Direct current control of a battery-ultracapacitor power supply. , 2012, , .		5
95	Optimization of placement of dynamic network-on-chip cores using simulated annealing. , 2011, , .		6
96	Improvement of short-span seeking performance in a dual-stage hard disk drive actuator. , 2010, , .		0
97	A novel discrete-time sliding mode technique and its application to a HDD dual-stage track-seeking and track-following servo system. International Journal of Adaptive Control and Signal Processing, 2008, 22, 344-358.	2.3	6
98	Discrete Robust Anti-Windup to Improve a Novel Dual-Stage Large-Span Track-Seek/Following Method. IEEE Transactions on Control Systems Technology, 2008, 16, 1342-1351.	3.2	17
99	Augmentation of Short-Span Seeking Performance Using Dynamic Saturation. IEEE Transactions on Magnetics, 2008, 44, 81-83.	1.2	1
100	Modeling and Compensation of Pivot Nonlinearity in Hard Disk Drives. Control Applications (CCA), Proceedings of the IEEE International Conference on, 2007, , .	0.0	6
101	High Density Servo Track Writing Using Two-Stage Configuration. Control Applications (CCA), Proceedings of the IEEE International Conference on, 2007, , .	0.0	0
102	Enhancement of Short-Span Seeking in a Dual-Stage Seek-Track Following Control Using Variable Saturation. , 2006, , .		0
103	New Method for Sensorless Measurement of Hard Disk Drives Imbalance. IEEE Transactions on Industrial Electronics, 2006, 53, 1662-1668.	5.2	4
104	New electromechanical balancing device for active imbalance compensation. Journal of Sound and Vibration, 2006, 294, 737-751.	2.1	29
105	Adjustable balancer with electromagnetic release of balancing members. IEEE Transactions on Magnetics, 2006, 42, 1591-1596.	1.2	5
106	A proximate-time-optimal-control design and its application to a hard disk drive dual-stage actuator system. IEEE Transactions on Magnetics, 2006, 42, 1708-1715.	1.2	43
107	A method for improving the resolution of active and passive balancing schemes for disc drives. Engineering Optimization, 2006, 38, 245-255.	1.5	0
108	Investigation of the feasibility of active balancing of hard disk drives. Mechatronics, 2004, 14, 853-859.	2.0	4

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109	Elimination of torque pulsations in a direct drive EV wheel motor. IEEE Transactions on Magnetics, 1996, 32, 5010-5012.	1.2	15