

João P Trovão

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2775497/publications.pdf>

Version: 2024-02-01

144
papers

2,312
citations

279701

23
h-index

265120

42
g-index

145
all docs

145
docs citations

145
times ranked

1794
citing authors

#	ARTICLE	IF	CITATIONS
1	A multi-level energy management system for multi-source electric vehicles – An integrated rule-based meta-heuristic approach. <i>Applied Energy</i> , 2013, 105, 304-318.	5.1	252
2	Real-Time Energy Management of Battery/Supercapacitor Electric Vehicles Based on an Adaptation of Pontryagin's Minimum Principle. <i>IEEE Transactions on Vehicular Technology</i> , 2019, 68, 203-212.	3.9	136
3	A Real-Time Energy Management Architecture for Multisource Electric Vehicles. <i>IEEE Transactions on Industrial Electronics</i> , 2015, 62, 3223-3233.	5.2	100
4	A Controllable Bidirectional Battery Charger for Electric Vehicles with Vehicle-to-Grid Capability. <i>IEEE Transactions on Vehicular Technology</i> , 2018, 67, 114-123.	3.9	100
5	Energy- and Power-Split Management of Dual Energy Storage System for a Three-Wheel Electric Vehicle. <i>IEEE Transactions on Vehicular Technology</i> , 2017, 66, 5540-5550.	3.9	91
6	Adaptive Energy Management System Based on a Real-Time Model Predictive Control With Nonuniform Sampling Time for Multiple Energy Storage Electric Vehicle. <i>IEEE Transactions on Vehicular Technology</i> , 2017, 66, 5520-5530.	3.9	91
7	Large-Signal Characterization of Power Inductors in EV Bidirectional DC-DC Converters Focused on Core Size Optimization. <i>IEEE Transactions on Industrial Electronics</i> , 2015, 62, 3042-3051.	5.2	59
8	A review of electric bus vehicles research topics – Methods and trends. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 159, 112211.	8.2	58
9	Power Split Strategy Optimization of a Plug-in Parallel Hybrid Electric Vehicle. <i>IEEE Transactions on Vehicular Technology</i> , 2018, 67, 315-326.	3.9	55
10	A Simulated Annealing Approach for Optimal Power Source Management in a Small EV. <i>IEEE Transactions on Sustainable Energy</i> , 2013, 4, 867-876.	5.9	53
11	A comparative analysis of meta-heuristic methods for power management of a dual energy storage system for electric vehicles. <i>Energy Conversion and Management</i> , 2015, 95, 281-296.	4.4	53
12	Towards health-aware energy management strategies in fuel cell hybrid electric vehicles: A review. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 10021-10043.	3.8	53
13	Variable Inductor Based Bidirectional DC-DC Converter for Electric Vehicles. <i>IEEE Transactions on Vehicular Technology</i> , 2017, 66, 8764-8772.	3.9	48
14	Application of Second-Order Sliding-Mode Concepts to Active Magnetic Bearings. <i>IEEE Transactions on Industrial Electronics</i> , 2018, 65, 855-864.	5.2	39
15	Hybrid electric excursion ships power supply system based on a multiple energy storage system. <i>IET Electrical Systems in Transportation</i> , 2016, 6, 190-201.	1.5	37
16	Effectiveness of Supercapacitors in Pure Electric Vehicles Using a Hybrid Metaheuristic Approach. <i>IEEE Transactions on Vehicular Technology</i> , 2016, 65, 29-36.	3.9	36
17	Robust DC-Link Control in EVs With Multiple Energy Storage Systems. <i>IEEE Transactions on Vehicular Technology</i> , 2012, 61, 3553-3565.	3.9	35
18	Optimal Energy Management of Hybrid Storage Systems Using an Alternative Approach of Pontryagin's Minimum Principle. <i>IEEE Transactions on Transportation Electrification</i> , 2021, 7, 2224-2237.	5.3	34

#	ARTICLE	IF	CITATIONS
19	Simulation model and road tests comparative results of a small urban electric vehicle. , 2009, , .		32
20	Calculation of Printed Circuit Board Power-Loop Stray Inductance in GaN or High $\frac{di}{dt}$ Applications. IEEE Transactions on Power Electronics, 2019, 34, 612-623.	5.4	32
21	Stability enhancement of the motor drive DC input voltage of an electric vehicle using on-board hybrid energy storage systems. Applied Energy, 2017, 205, 244-259.	5.1	27
22	Gallium Nitride Semiconductors in Power Electronics for Electric Vehicles: Advantages and Challenges. , 2015, , .		25
23	Control scheme for hybridised electric vehicles with an online power follower management strategy. IET Electrical Systems in Transportation, 2015, 5, 12-23.	1.5	25
24	Optimal Energy and Reserve Market Management in Renewable Microgrid-PEVs Parking Lot Systems: V2G, Demand Response and Sustainability Costs. Energies, 2020, 13, 1884.	1.6	25
25	Disturbance observer-based state-of-charge estimation for Li-ion battery used in light electric vehicles. Journal of Energy Storage, 2020, 27, 101144.	3.9	24
26	Wide-Bandgap Power Semiconductors for Electric Vehicle Systems: Challenges and Trends. IEEE Vehicular Technology Magazine, 2021, 16, 89-98.	2.8	24
27	Fuzzy logic-model predictive control energy management strategy for a dual-mode locomotive. Energy Conversion and Management, 2022, 253, 115111.	4.4	24
28	Multi-objective benchmark for energy management of dual-source electric vehicles: An optimal control approach. Energy, 2021, 223, 119857.	4.5	23
29	Shore power as a first step toward shipping decarbonization and related policy impact on a dry bulk cargo carrier. ETransportation, 2022, 11, 100150.	6.8	23
30	Fuel cell/supercapacitor passive configuration sizing approach for vehicular applications. International Journal of Hydrogen Energy, 2020, 45, 26501-26512.	3.8	22
31	Trends in Automotive Electronics [Automotive Electronics]. IEEE Vehicular Technology Magazine, 2019, 14, 100-109.	2.8	20
32	Passive hybrid energy storage system based on lithium-ion capacitor for an electric motorcycle. Journal of Energy Storage, 2019, 25, 100884.	3.9	19
33	Zero-emission casting-off and docking maneuvers for series hybrid excursion ships. Energy Conversion and Management, 2019, 184, 427-435.	4.4	19
34	Comprehensive Review on Main Topologies of Impedance Source Inverter Used in Electric Vehicle Applications. World Electric Vehicle Journal, 2020, 11, 37.	1.6	19
35	Comparative study of different electric machines in the powertrain of a small electric vehicle. , 2008, , .		17
36	Hybridisation ratio for hybrid excitation synchronous motors in electric vehicles with enhanced performance. IET Electrical Systems in Transportation, 2018, 8, 12-19.	1.5	16

#	ARTICLE	IF	CITATIONS
37	Optimal drivetrain design methodology for enhancing dynamic and energy performances of dual-motor electric vehicles. <i>Energy Conversion and Management</i> , 2022, 252, 115054.	4.4	16
38	Design Methodology of Energy Storage Systems for a Small Electric Vehicle. <i>World Electric Vehicle Journal</i> , 2009, 3, 670-681.	1.6	15
39	Electric vehicles chargers characterization: Load demand and harmonic distortion. , 2011, , .		15
40	Battery Pack Sizing Method - Case Study of an Electric Motorcycle. , 2018, , .		14
41	Softâ€ computing techniques for cruise controller tuning for an offâ€ road electric vehicle. <i>IET Electrical Systems in Transportation</i> , 2019, 9, 196-205.	1.5	14
42	Driving Mode Predictor-Based Real-Time Energy Management for Dual-Source Electric Vehicle. <i>IEEE Transactions on Transportation Electrification</i> , 2021, 7, 1173-1185.	5.3	14
43	DC link control for multiple energy sources in electric vehicles. , 2011, , .		13
44	A Comparative Study of Adaptive Filtering Strategies for Hybrid Energy Storage Systems in Electric Vehicles. <i>Energies</i> , 2021, 14, 3373.	1.6	13
45	IEEE VTS Motor Vehicles Challenge 2021 - Energy Management of A Dual-Motor All-Wheel Drive Electric Vehicle. , 2020, , .		13
46	Coupled energy management algorithm for MESS in urban EV. <i>IET Electrical Systems in Transportation</i> , 2017, 7, 125-134.	1.5	12
47	Passive and Active Coupling Comparison of Fuel Cell and Supercapacitor for a Threeâ€ Wheel Electric Vehicle. <i>Fuel Cells</i> , 2020, 20, 351-361.	1.5	12
48	Battery and SuperCapacitor Hybridization for a Pure Electric Three-Wheel Roadster. , 2015, , .		11
49	Component-Level Optimization of Hybrid Excitation Synchronous Machines for a Specified Hybridization Ratio Using NSGA-II. <i>IEEE Transactions on Energy Conversion</i> , 2020, 35, 1596-1605.	3.7	11
50	Sizing of a Battery Pack Based on Series/Parallel Configurations for a High-Power Electric Vehicle as a Constrained Optimization Problem. <i>IEEE Transactions on Vehicular Technology</i> , 2020, 69, 14150-14159.	3.9	11
51	IEEE VTS Motor Vehicles Challenge 2022 - Sizing and Energy Management of Hybrid dual-Energy Storage System for a Commercial Electric Vehicle. , 2021, , .		11
52	An integrated fuzzy logic energy management for a dual-source electric vehicle. , 2013, , .		10
53	Comparison of Different Battery Technologies for Electric Minibuses Using Energetic Macroscopic Representation. , 2014, , .		10
54	Modelling of an Urban Electric MiniBus Using Energetic Macroscopic Representation Graphic Description. , 2015, , .		10

#	ARTICLE	IF	CITATIONS
55	Online Modeling of a Fuel Cell System for an Energy Management Strategy Design. <i>Energies</i> , 2020, 13, 3713.	1.6	10
56	Real-Time Energy Management of Parallel Hybrid Electric Vehicles Using Linear Quadratic Regulation. <i>Energies</i> , 2020, 13, 5538.	1.6	10
57	Scenario-Based Multi-criteria decision analysis for rapid transit systems implementation in an urban context. <i>ETransportation</i> , 2021, 7, 100101.	6.8	10
58	Motor bearings and insulation system condition diagnosis by means of common-mode currents and shaft-ground voltage correlation. , 2008, , .		9
59	Digital Transformation, Systemic Design, and Automotive Electronics [Automotive Electronics]. <i>IEEE Vehicular Technology Magazine</i> , 2020, 15, 149-159.	2.8	9
60	Effect of battery voltage variation on electric vehicle performance driven by induction machine with optimal flux weakening strategy. <i>IET Electrical Systems in Transportation</i> , 2020, 10, 351-359.	1.5	9
61	Benefits of Regenerative Braking for an Electric Superbike Using Energetic Macroscopic Representation. , 2017, , .		8
62	Powertrain Analysis of an All-Wheel-Drive Off-Road Electric Vehicle. , 2019, , .		8
63	Automotive Electronics Under the COVID-19 Shadow [Automotive Electronics]. <i>IEEE Vehicular Technology Magazine</i> , 2020, 15, 101-108.	2.8	8
64	System-Level Optimization of Hybrid Excitation Synchronous Machines for a Three-Wheel Electric Vehicle. <i>IEEE Transactions on Transportation Electrification</i> , 2020, 6, 690-702.	5.3	8
65	Analysis of operation modes for a neighborhood electric vehicle with power sources hybridization. , 2010, , .		7
66	An automated energy management system in a smart grid context. , 2012, , .		7
67	Hybrid topologies comparison for electric vehicles with multiple energy storage systems. , 2013, , .		7
68	Information and Communication Technology Solution for the V2G Concept Implementation. , 2014, , .		7
69	An outlook of electric vehicle daily use in the framework of an energy management system. <i>Management of Environmental Quality</i> , 2015, 26, 588-606.	2.2	7
70	Problem- and Project-Based Learning in Engineering: A Focus on Electrical Vehicles. , 2016, , .		7
71	An Optimal Control-Based Strategy for Energy Management of Electric Vehicles Using Battery/Supercapacitor. , 2017, , .		7
72	Climate impact analysis on the optimal sizing of a stand-alone hybrid building. <i>Energy and Buildings</i> , 2020, 210, 109676.	3.1	7

#	ARTICLE	IF	CITATIONS
73	Optimisation of fractional-order PI controller for bidirectional quasi-Z-source inverter used for electric traction system. IET Electrical Systems in Transportation, 2020, 10, 376-384.	1.5	7
74	Online power and efficiency estimation of a fuel cell system for adaptive energy management designs. Energy Conversion and Management, 2022, 255, 115324.	4.4	7
75	Auxiliary converter for variable inductor control in a DC-DC converter application. , 2016, , .		6
76	A Comparison of Different Models for Permanent Magnet Synchronous Machines: Finite Element Analysis, D-Q Lumped Parameter Modeling, and Magnetic Equivalent Circuit. , 2019, , .		6
77	Multiple energy sources monitoring system for electric vehicle. , 2008, , .		5
78	Application of a decoupling method based on online filtering technique for multi-source electric vehicles. , 2013, , .		5
79	IP@Smart - Energy Management System Applied to Eco-Efficient Public Lighting Networks. , 2014, , .		5
80	A Model Predictive Control with Non-Uniform Sampling Times for a Hybrid Energy Storage System in Electric Vehicle Application. , 2015, , .		5
81	Semi-Active Hybrid Topology with Three-Level DC-DC Converter for Electric Vehicle Application. , 2015, , .		5
82	Integration of the Electric Vehicle as a Manageable Load in a Residential Energy Management System. , 2015, , .		5
83	A Sliding Mode Control of a Hybrid Magnetic Bearing for Wayside Flywheel Energy Storage Systems. , 2015, , .		5
84	Improved Voltage Limitation Method of Supercapacitors in Electric Vehicle Applications. , 2016, , .		5
85	Optimal Energy Management of a Parallel Hybrid Truck for Fuel Consumption Comparative Study. , 2018, , .		5
86	Design of Variable Inductor for Powertrain DC-DC Converter. , 2019, , .		5
87	Experimental Platform for Evaluation of On-Board Real-Time Motion Controllers for Electric Vehicles. Energies, 2020, 13, 6448.	1.6	5
88	Adaptive Parameter Identification of a Fuel Cell System for Health-Conscious Energy Management Applications. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 7963-7973.	4.7	5
89	Online characteristics estimation of a fuel cell stack through covariance intersection data fusion. Applied Energy, 2021, 292, 116907.	5.1	5
90	Longitudinal Motion Control of Electric Vehicles: Global Model and Design Using Passivity. IEEE Vehicular Technology Magazine, 2021, 16, 75-86.	2.8	5

#	ARTICLE	IF	CITATIONS
91	A Modular Control Architecture for a Small Electric Vehicle. , 2006, , .		4
92	Study of inductor effects in a bidirectional DC-DC converter for electrical vehicle. , 2010, , .		4
93	Experimental large-signal characterization of power inductors in bidirectional electric vehicle DC-DC converters for simulation analysis. , 2013, , .		4
94	Comparative Study of Different Energy Management Strategies for Dual-Source Electric Vehicles. World Electric Vehicle Journal, 2013, 6, 523-531.	1.6	4
95	Reduced-Scale Hardware-In-the-Loop Simulation to Study Several Hybridization Rates of Electric Vehicles. , 2014, , .		4
96	EMF waveform optimization using the permanent magnet volume-integration method. CES Transactions on Electrical Machines and Systems, 2017, 1, 189-198.	2.7	4
97	Comprehensive comparison and selection of magnetic materials for powertrain DC-DC converters. IET Electrical Systems in Transportation, 2020, 10, 125-134.	1.5	4
98	Electromobility Innovation Trends [Automotive Electronics]. IEEE Vehicular Technology Magazine, 2021, 16, 153-161.	2.8	4
99	A web-based monitoring approach for power systems in industrial plants. , 2008, , .		3
100	A unified energy management strategy for a dual-source electric vehicle. , 2013, , .		3
101	Hybrid Magnetic Bearing Regulation via Super Twisting Control. , 2015, , .		3
102	Overvoltage Reduction with Enhanced Snubber Design for GaN-Based Electric Vehicle Drive. , 2017, , .		3
103	Multi-Cell Emulation for Battery Management System Validation. , 2018, , .		3
104	An Overview of Automotive Electronics [Automotive Electronics]. IEEE Vehicular Technology Magazine, 2019, 14, 130-137.	2.8	3
105	Impact of Supercapacitors on Fuel Consumption and Battery Current of a Parallel Hybrid Truck. , 2019, , .		3
106	Comparison of Different Power Train Topologies for an Off-Road Electric Vehicle. , 2019, , .		3
107	Different Voltage and Current Control Schemes for Multi-pack Battery of Electric Scooters. , 2020, , .		3
108	Power adjustable electric vehicle charger under Energy Box purpose. , 2013, , .		2

#	ARTICLE	IF	CITATIONS
109	Sustainable Trolleybus System: Rectifier Substation Technology Improvement for Energy Efficiency and Operational Cost Reduction. , 2014, , .		2
110	Guest Editorial Special Issue based on "Energy Storage and Electric power Sub-Systems for Advanced Vehicles" For Invited Papers of IEEE VPPC 2014. IET Electrical Systems in Transportation, 2016, 6, 1-2.	1.5	2
111	Effect of Current Path on Parallel Lithium-Ion Cells in Electric Vehicles Battery Packs. , 2017, , .		2
112	Coupled electric and thermal batteries models using energetic macroscopic representation (EMR) for range estimation in electric vehicles. , 2017, , .		2
113	Bi-Level Optimal Energy Management of a Hybrid Truck Supplied by Batteries and Supercapacitors. , 2018, , .		2
114	Lithium-Ion Cell Empirical Efficiency Maps. , 2018, , .		2
115	Comparison of Bidirectional Quasi Z-Source- and Bidirectional Conventional Two-Stage-Inverter for Electric Traction System. , 2018, , .		2
116	Characterization of variable inductors using finite element analysis. Simulation Modelling Practice and Theory, 2019, 97, 101952.	2.2	2
117	Driving Range Evolution of an EV Regarding Cumulated Hours of Operation. , 2019, , .		2
118	New Concepts in Automotive Electronics [Automotive Electronics]. IEEE Vehicular Technology Magazine, 2021, 16, 113-123.	2.8	2
119	Quadratic Programming based Energy Management in a Multi-Stack Fuel Cell Hybrid Electric Vehicle. , 2021, , .		2
120	A systematic approach to analyse the harmonic distortion in industry. , 2011, , .		1
121	Comparative study of different energy management strategies for dual-source electric vehicles. , 2013, , .		1
122	DC-link stability control for dual-source electric vehicles using an extended kalman filter. , 2013, , .		1
123	Full-Bridge Topology for IPT System On-Board Charger. , 2014, , .		1
124	Motor Drive with Halbach Permanent Magnet Array for Urban Electric Vehicle Concept. , 2015, , .		1
125	Electric Motors Evaluation Algorithm Based on Their Effect on Electric Vehicle Mass Reduction. , 2016, , .		1
126	Design of a High Performance Battery Pack as a Constraint Satisfaction Problem. , 2018, , .		1

#	ARTICLE	IF	CITATIONS
127	Novel Ergonomic Regenerative Braking System for an Electric Motorcycle. , 2018, , .		1
128	Merging control of a hybrid energy storage system using battery/supercapacitor for electric vehicle application. , 2018, , .		1
129	Implications of Lithium-Ion Cell Variations on Multi-Cell Battery Pack Thermal Runaway. , 2019, , .		1
130	Impact of Battery Temperature on Motor Flux Weakening Operations in Electric Vehicles. , 2019, , .		1
131	Recent Impacts on the Automotive Electronics Industry [Automotive Electronics]. IEEE Vehicular Technology Magazine, 2020, 15, 139-146.	2.8	1
132	Automotive Electronics Market Evolution [Automotive Electronics]. IEEE Vehicular Technology Magazine, 2020, 15, 107-118.	2.8	1
133	Performance enhancement of powertrain DC-DC converter using variable inductor. IET Electrical Systems in Transportation, 2021, 11, 161-170.	1.5	1
134	Analysis of Harmonic distortion in building electrical installation with computer devices. Renewable Energy and Power Quality Journal, 2007, 1, 723-729.	0.2	1
135	Photovoltaic panels labView™ controlled- a platform for educational purposes. Renewable Energy and Power Quality Journal, 2008, 1, 667-672.	0.2	1
136	The Vehicle Industry Is Moving Fast [Automotive Electronics]. IEEE Vehicular Technology Magazine, 2022, 17, 98-107.	2.8	1
137	A Novel ICT Solution for Electric Vehicles Integration on Smart Grids. , 2015, , .		0
138	Bidirectional DC-DC Converter Using Variable Inductor Concept for Electric Vehicle Applications. , 2016, , .		0
139	Project-Based Learning in Engineering: Illustration by a Capstone Project of an Electric Vehicle. , 2019, , .		0
140	Extension of DC Supply Working Range Voltage in EVs Using Bidirectional Quasi-Z-Source Inverter. , 2019, , .		0
141	Guest Editorial: Special Section on Advanced Vehicle Power Propulsion Systems. IEEE Transactions on Vehicular Technology, 2019, 68, 11406-11408.	3.9	0
142	Analysis of Harmonic Current Propagation in Industrial Sector in Function of the Load Level. Renewable Energy and Power Quality Journal, 2003, 1, 175-182.	0.2	0
143	Glocal Energy Management System with Optimal Torque-Flux and Speed Controllers. , 2021, , .		0
144	Electric Vehicle Efficient Power and Propulsion Systems. Energies, 2022, 15, 3863.	1.6	0