

Mario VaÅ¡jak

List of Publications by Year in descending order

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Version: 2024-02-01

81
papers

961
citations

759190

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h-index

610883

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81
all docs

81
docs citations

81
times ranked

918
citing authors

#	ARTICLE	IF	CITATIONS
1	Energy-Efficient Model Predictive Train Traction Control With Incorporated Traction System Efficiency. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 5044-5055.	8.0	8
2	Optimal Day-Ahead Operation Scheduling of a One-Pipe Heating System. , 2022, , .		1
3	Cascaded Control of Back-to-Back Converter DC Link Voltage Robust to Grid Parameters Variation. IEEE Transactions on Industrial Electronics, 2021, 68, 1994-2004.	7.9	13
4	Modular Hierarchical Model Predictive Control for Coordinated and Holistic Energy Management of Buildings. IEEE Transactions on Energy Conversion, 2021, 36, 2670-2682.	5.2	20
5	Worst-case optimal scheduling and real-time control of a microgrid offering active power reserve. , 2021, , .		1
6	Maximization of Damage from a Non-Detected Cyber-Attack to a Control System with an Invariant-Set-Based Protection. , 2021, , .		2
7	Set Invariance Based Localization of Kalman Filter Estimation Error in Automatic Generation Control. , 2021, , .		1
8	Constrained Kalman Filter for Identification of Semiphysical Building Thermal Models. IEEE Transactions on Control Systems Technology, 2020, 28, 2697-2704.	5.2	7
9	Analysis of a diesel-generator-assisted peak power reduction in a production plant. , 2020, , .		1
10	Price-optimal Electrical and Thermal Energy Flow Control within Microgrid " Smart Grid Interaction. , 2020, , .		0
11	Optimal parameterization of a PV and a battery system add-on for a consumer. , 2020, , .		3
12	Identification of a control-oriented energy model for a system of fan coil units. Control Engineering Practice, 2019, 91, 104100.	5.5	12
13	Model predictive control of building HVAC system employing zone thermal energy requests. , 2019, , .		6
14	Optimal control for daily operation planning of a water distribution system with pumped storage. , 2019, , .		0
15	Hierarchical Model Predictive Control for Coordinated Electric Railway Traction System Energy Management. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 2715-2727.	8.0	39
16	A Battery Management System for Efficient Adherence to Energy Exchange Commands Under Longevity Constraints. IEEE Transactions on Industry Applications, 2018, 54, 3019-3033.	4.9	9
17	Energy-Efficient Train Traction Control on Complex Rail Configurations. , 2018, , .		5
18	Distributed Optimal Batteries Charging Control for Heterogenous Electric Vehicles Fleet. , 2018, , .		1

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19	Price-Optimal Energy Flow Control of a Building Microgrid Connected to a Smart Grid. , 2018, , .		4
20	Modular energy cost optimization for buildings with integrated microgrid. Applied Energy, 2017, 197, 14-28.	10.1	52
21	A one-day-ahead photovoltaic array power production prediction with combined static and dynamic on-line correction. Solar Energy, 2017, 142, 49-60.	6.1	24
22	Comfort control in buildings with adherence to the required thermal energy input in zones. , 2017, , .		2
23	Nonlinear hierarchical building zone and microgrid control based on sensitivity analysis. , 2017, , .		1
24	Control of a buck-boost DC-DC power converter for microgrid energy storage. , 2017, , .		10
25	Optimal charging of valve-regulated lead-acid batteries based on model predictive control. Applied Energy, 2017, 187, 189-202.	10.1	28
26	Upgrade of a typical office building automation system for enabling open energy management services. , 2017, , .		6
27	On Operating Envelope Protection Design for Nonlinear Discrete-time Systems. IFAC-PapersOnLine, 2017, 50, 1390-1396.	0.9	1
28	Hierarchical coordination of trains and traction substation storages for energy cost optimization. , 2017, , .		10
29	DC link voltage control of back-to-back converter robust to grid conditions. , 2017, , .		6
30	Clustering-based identification of MIMO piecewise affine systems. , 2017, , .		4
31	Wind turbine overspeed protection based on polytopic robustly invariant sets. Wind Energy, 2016, 19, 1713-1731.	4.2	4
32	Multi-level optimal control of a microgrid-supplied cooling system in a building. , 2016, , .		2
33	Predictive control for heating power variance and peak reduction in buildings. , 2016, , .		2
34	Model predictive control for energy-saving and comfortable temperature control in buildings. , 2016, , .		12
35	Comparison of battery management approaches for energy flow optimization in microgrids. , 2016, , .		2
36	Hierarchical energy management of multi-train railway transport system with energy storages. , 2016, , .		16

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37	Photovoltaic panel and array static models for power production prediction: Integration of manufacturersâ€™ and on-line data. Renewable Energy, 2016, 97, 399-413.	8.9	15
38	Increasing accuracy of Kalman filter-based sensorless control of wind turbine PM synchronous generator. , 2015, , .		5
39	Adaptable urban water demand prediction system. Water Science and Technology: Water Supply, 2015, 15, 958-964.	2.1	10
40	Water Use Disaggregation Based on Classification of Feature Vectors Extracted from Smart Meter Data. Procedia Engineering, 2015, 119, 1381-1390.	1.2	8
41	Optimal wind turbine yaw control supported with very short-term wind predictions. , 2015, , .		19
42	Analysis of microgrid power flow optimization with consideration of residual storages state. , 2015, , .		21
43	Predictor-corrector method for weather forecast improvement using local measurements. , 2015, , .		0
44	Adaptive H ∞ control of large wind turbines. , 2015, , .		2
45	Deep neural networks for ultra-short-term wind forecasting. , 2015, , .		58
46	Estimation of disturbance heat flux in buildings. , 2015, , .		0
47	Stochastic model predictive control for optimal economic operation of a residential DC microgrid. , 2015, , .		29
48	Estimation of VRLA battery states and parameters using Sigma-point Kalman filter. , 2015, , .		8
49	Dynamic Day-ahead Water Pricing Based on Smart Metering and Demand Prediction. Procedia Engineering, 2014, 89, 1031-1036.	1.2	10
50	Model identification of a photovoltaic system for a DC microgrid simulation. , 2014, , .		7
51	Fault-tolerant Control of wound rotor synchronous generator in wind turbines. , 2014, , .		1
52	Parameter estimation for low-order models of complex buildings. , 2014, , .		9
53	Load forecast of a university building for application in microgrid power flow optimization. , 2014, , .		12
54	Control of induction machine based on mathematical model with included anisotropy. , 2014, , .		0

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55	Dynamical behaviour analysis of a DC microgrid in distributed and centralized voltage control configurations. , 2014, , .		9
56	Detection of Partially Fallen-Out Magnetic Slot Wedges in Inverter-Fed AC Machines at Lower Load Conditions. IEEE Transactions on Industry Applications, 2014, 50, 1161-1167.	4.9	5
57	Stator-Current Spectrum Signature of Healthy Cage Rotor Induction Machines. IEEE Transactions on Industrial Electronics, 2013, 60, 4025-4033.	7.9	103
58	Dynamical optimal positioning of a photovoltaic panel in all weather conditions. Applied Energy, 2013, 108, 429-438.	10.1	34
59	Fault-tolerant Control of a Wind Turbine with a Squirrel-cage Induction Generator and Rotor Bar Defects. Automatika, 2013, 54, 316-328.	2.0	5
60	Fault-tolerant Control of a Wind Turbine with Generator Stator Inter-turn Faults. Automatika, 2013, 54, 89-102.	2.0	7
61	Optimal flux magnitude tracking with application to fault-tolerant control of wind turbine generators. , 2013, , .		0
62	Detection of partially fallen-out magnetic slot wedges in inverter fed AC machines under various load conditions. , 2012, , .		4
63	Detecting partially fallen-out magnetic slot wedges in AC machines based on electrical quantities only. , 2012, , .		1
64	Field-oriented control of an induction machine with winding asymmetries. , 2012, , .		1
65	State and parameter estimation for field-oriented control of induction machine based on unscented Kalman filter. , 2012, , .		10
66	Fault-tolerant control of a wind turbine with a squirrel-cage induction generator and stator inter-turn faults. , 2012, , .		2
67	Dynamic induction machine model accounting for stator and rotor slotting. , 2012, , .		5
68	Separating inherent asymmetries from high sensitivity rotor bar fault indicator. , 2011, , .		4
69	Stator line current spectrum content of a healthy cage rotor induction machine. , 2011, , .		6
70	A method to detect missing magnetic slot wedges in AC machines without disassembling. , 2011, , .		10
71	Efficient implementation of patched LQR for control and protection of multi-mass drives. , 2011, , .		3
72	Robust invariant set-based protection of multi-mass electrical drives. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2010, 29, 205-220.	0.9	13

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73	Patched LQR control for robust protection of multi-mass electrical drives with constraints. , 2010, , .		5
74	Optimal rail route energy management under constraints and fixed arrival time. , 2009, , .		16
75	Protective predictive control of electrical drives with elastic transmission. , 2008, , .		11
76	Bounding the torque ripple in switched reluctance motors using polyhedral invariant set theory. , 2007, , .		2
77	Hybrid Theory-Based Time-Optimal Control of an Electronic Throttle. IEEE Industrial Electronics Magazine, 2007, 54, 1483-1494.	2.6	118
78	Efficient computation of the one-step robust sets for piecewise affine systems with polytopic additive uncertainties. , 2007, , .		2
79	Constrained optimal control of an electronic throttle. International Journal of Control, 2006, 79, 465-478.	1.9	52
80	Piecewise affine identification of MIMO processes. , 2006, , .		2
81	Piecewise Affine Identification of MIMO Processes. , 2006, , .		2