ZdenÄ›k Peroutka

List of Publications by Year
in descending order

98 papers	824 citations	840119 11 h-index	676716 22 g-index
98 all docs	98 docs citations	98 times ranked	868 citing authors

#	Article	IF	Citations
1	Hybrid Deep Learning Techniques for Predicting Complex Phenomena: A Review on COVID-19. AI, 2022, 3, 416-433.	2.1	11
2	A Review of the Potential of Artificial Intelligence Approaches to Forecasting COVID-19 Spreading. AI, 2022, 3, 493-511.	2.1	13
3	Multi-Pole Winding Behavior in Multiphase Motors Under Current Harmonics Operation. IEEE Transactions on Energy Conversion, 2022, 37, 2546-2555.	3.7	3
4	In-motion charged vehicle simulation considering traffic and power grid interactions. Transportation Research, Part D: Transport and Environment, 2022, 109, 103322.	3.2	0
5	Comparison of main design concepts of auxiliary drives for DC catenary fed light traction vehicles: SiC JFET vs Si IGBT technology. EPE Journal (European Power Electronics and Drives Journal), 2021, 31, 17-31.	0.7	1
6	FPGA-based Real-time HIL Simulator of Permanent Magnet Synchronous Motor Drive. , 2021, , .		4
7	Distributed Control System for Medium-Voltage STATCOM based on Parallel Connected Power Converters. , 2021, , .		0
8	Size reduction and performance improvement of a microstrip Wilkinson power divider using a hybrid design technique. Scientific Reports, 2021, 11, 7773.	1.6	64
9	Neuro-Fuzzy Approaches to Estimating Thermal Overstress Behavior of IGBTs. , 2021, , .		4
10	Maximizing power utilization of dual converter using predictive control with steady state cost. IET Power Electronics, 2021, 14, 2234-2248.	1.5	2
11	Constrained LQR Control of Dual Induction Motor Single Inverter Drive. IEEE Transactions on Industrial Electronics, 2021, 68, 5548-5558.	5.2	7
12	Dependence of IPMSM Motor Efficiency on Parameter Estimates. Sustainability, 2021, 13, 9299.	1.6	4
13	Four-Leg Transformer with Defined Zero Sequence Impedance for Ground Fault Compensation. , 2021, , .		0
14	Universal balancing method of flying capacitor converters. , 2021, , .		0
15	Predictive control of PMSM using improved model of the drive. , 2021, , .		1
16	A Conceptual Deep Learning Framework for COVID-19 Drug Discovery. , 2021, , .		15
17	A Modified Branch Line Coupler with Ultra-Wide Harmonics Rejection Using Resonators and Open-Ended Stubs. , 2021, , .		2
18	Cloud-based Machine Learning Techniques Implemented by Microsoft Azure for Designing Power Amplifiers. , 2021, , .		7

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19	Predictive Control of IM Drive Acoustic Noise. IEEE Transactions on Industrial Electronics, 2020, 67, 5666-5676.	5.2	8
20	Least Squares Method for Identification of IGBT Thermal Impedance Networks Using Direct Temperature Measurements. Energies, 2020, 13, 3749.	1.6	4
21	Comparison of IPMSM Parameter Estimation Methods for Motor Efficiency. , 2020, , .		6
22	Multistep MPC of Dual Inverter for Switching Losses Optimization. , 2020, , .		0
23	Ground Fault Active Compensation in Emulated Distribution Grid of 10 kV. , 2020, , .		2
24	Measurement of the Effects of Higher Harmonic Injection on Nine-phase Induction Motor. , 2020, , .		2
25	Modeling and optimal control of multi-winding permanent magnet synchronous motor. , 2020, , .		0
26	Improved accuracy of model predictive control of Induction motor drive using FPGA. , 2019, , .		2
27	Minimum Infinity Norm-Based PWM for Three-Phase Four-Leg Converters. , 2019, , .		0
28	DC Losses Heatsink Verification of IGBT Converter for Power Systems. , 2019, , .		1
29	Adaptive Speed Control of Induction Motor Drive With Inaccurate Model. IEEE Transactions on Industrial Electronics, 2018, 65, 8532-8542.	5.2	57
30	Control of a Single-Phase Cascaded H-Bridge Active Rectifier Under Unbalanced Load. IEEE Transactions on Power Electronics, 2018, 33, 5519-5527.	5.4	44
31	Direct Speed Control of a PMSM Drive Using SDRE and Convex Constrained Optimization. IEEE Transactions on Industrial Electronics, 2018, 65, 532-542.	5.2	30
32	Self-Sensing Control of Wound Rotor Synchronous Motor Drive for Mine Hoist. IEEE Transactions on Industrial Electronics, 2018, 65, 2009-2017.	5.2	15
33	Optimal Feedforward Torque Control of Synchronous Machines with Time-Varying Parameters. , 2018, , .		4
34	Control of Dual Inverter with Power Losses Minimization Using SVPWM and Prediction with Extended Horizon. , 2018, , .		0
35	Time-optimal current trajectory for predictive speed control of PMSM drive. , 2017, , .		7
36	Improved model predictive control with extended horizon for dual inverter with real-time minimization of converter power losses. , 2017, , .		8

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37	Control approaches of current-source rectifier: Predictive control versus PWM-based linear control. , 2017, , .		2
38	Model predictive control of multiple induction machines fed from single inverter. , 2017, , .		0
39	Overmodulation of seven-phase systems using minimum infinity norm. , 2017, , .		4
40	Implementation of predictive spectrum control of a LC filter using ADMM. , 2017, , .		3
41	Universal PWM Modulator for Multiphase Drives With a Minimum Infinity-Norm Approach. IEEE Transactions on Industrial Electronics, 2016, 63, 5979-5987.	5.2	18
42	LQ lookahead in finite control set MPC of current-source rectifier. , 2016, , .		2
43	Simulation and control of FLC converters for UPS systems. , 2016, , .		0
44	Multi-harmonic LQ control of single-phase converter with LCL filter. , 2016, , .		0
45	Steady state torque optimal operating point control for wound rotor synchronous motors. , 2016, , .		0
46	LQ control of single-phase converter with LCL filter with partially observed state. , 2016, , .		0
47	Carrier-based PWM with minimum infinity norm for overmodulation area of five-phase converters. , 2016, , .		4
48	Analysis of cost functions and setpoints for predictive speed control of PMSM drives. , 2016, , .		3
49	Model predictive control of dual inverter respecting temperature limits of IGBTs. , 2016, , .		4
50	Finite control set MPC with high frequency injections for sensorless position and speed estimation of a PMSM. , 2015, , .		10
51	Current Source Based on H-Bridge Inverter with Output LCL Filter. Journal of Electrical Engineering, 2015, 66, 287-291.	0.4	4
52	Finite control set MPC of active current-source rectifier with full state space model. , 2015, , .		6
53	Improved Stability of DC Catenary Fed Traction Drives Using Two-Stage Predictive Control. IEEE Transactions on Industrial Electronics, 2015, 62, 3192-3201.	5.2	30
54	Mitigation of electric drivetrain oscillation resulting from abrupt current derating at low coolant flow rate. , 2015, , .		3

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55	Multilevel active rectifier with independent phase control. , 2015, , .		1
56	Predictive current limiter for LQ based control of AC drives. , 2015, , .		0
57	Frequency spectrum shaping using finite control set MPC with LQ lookahead. , 2015, , .		6
58	Modulator for five-phase voltage-source inverters. , 2015, , .		1
59	The SVPWM modulator with active voltage balancing control for 4-level FLC converter. , 2015, , .		0
60	Position-Based T-S Fuzzy Power Management for Tram With Energy Storage System. IEEE Transactions on Industrial Electronics, 2015, 62, 3061-3071.	5.2	39
61	Implementation of SVPWM algorithm without trigonometric functions. , 2014, , .		3
62	Comparative study of vector PWM and FS-MPC for 3-level Neutral Point Clamped converter. , 2014, , .		2
63	Control of H-bridge power inverter with LCL filter. , 2014, , .		0
64	Reduced-order Kalman filter in phase coordinates for IPMSM with higher flux harmonics. , 2014, , .		0
65	Sensorless permanent magnet synchronous drive with DTC based on high frequency injections. , 2014, , .		0
66	A minimum infinity norm based PWM modulator for four-leg three-phase converters. , 2014, , .		1
67	Space vector modulated four-quadrant active current-source rectifier with DFT based power factor control for DC motor drive. , 2014, , .		3
68	Control of cascaded H-bridge active rectifier providing active voltage balancing. , 2014, , .		2
69	Start-stop system for a city bus based on model predictive control. , 2014, , .		2
70	Extending horizon of finite control set MPC of PMSM drive with input LC filter using LQ lookahead. , 2014, , .		2
71	Advanced Control Strategy for Singleâ€"Phase Voltageâ€"Source Active Rectifier with Low Harmonic Emission. Journal of Electrical Engineering, 2014, 65, 121-124.	0.4	6
72	A novel least norm-based PWM for a four-leg earth fault compensator. , 2014, , .		4

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73	Resolver motivated sensorless rotor position estimation of wound rotor synchronous motors. , 2013, , .		6
74	Frequency domain evaluation of a traction PMSM drive with direct torque control including field weakening area. , 2013, , .		2
75	Universal precharging method for dc-link and flying capacitors of four-level Flying Capacitor Converter. , 2013, , .		12
76	Low ripple current source based on resonant controllers. , 2013, , .		0
77	Sensorless PMSM control: Hybrid rotor position estimator using maximum likelihood model selection. , 2013, , .		2
78	Distributed compensation including earth fault compensation for renewable energy resources. , 2013, , .		1
79	Kalman filters unifying model-based and HF injection-based sensorless control of PMSM drives. , 2013, , .		6
80	Resolver motivated sensorless rotor position estimation of wound rotor synchronous motors with Kalman filter. , 2013, , .		7
81	FPGA implementation of marginalized particle filter for sensorless control of PMSM drives. , 2013, , .		7
82	Sensorless direct torque control of PMSM with reduced model Extended Kalman filter. , 2013, , .		5
83	Active suppression of current harmonics on single-phase current-source active rectifier AC side: Proposed approches and their evaluation. , 2012, , .		0
84	Marginalized particle filter for sensorless control of PMSM drives. , 2012, , .		3
85	Advantages of Square-Root Extended Kalman Filter for Sensorless Control of AC Drives. IEEE Transactions on Industrial Electronics, 2012, 59, 4189-4196.	5.2	89
86	Behavior of active current source rectifier under critical transient conditions in traction. , 2012, , .		1
87	Complete design of down-scale prototype of mining machine converter based on four-level voltage-source converter with flying capacitors. , 2012, , .		5
88	DTC controlled PMSM traction drive input LC filter stabilization using model predictive control. , 2012, , .		2
89	Optimal control and identification of model parameters of traction interior permanent magnet synchronous motor drive. , 2011, , .		13
90	Considerations about sensorless control of permanent magnet synchronous motors at low speed and standstill for wheel mounted drive of tram. , 2011, , .		3

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91	New Configuration of Traction Converter With Medium-Frequency Transformer Using Matrix Converters. IEEE Transactions on Industrial Electronics, 2011, 58, 5041-5048.	5.2	116
92	Reduced-order square-root EKF for sensorless control of PMSM drives. , 2011, , .		13
93	Current reference generator for 50-Hz and 16.7-Hz shunt active power filters. International Journal of Electronics, 2010, 97, 63-81.	0.9	13
94	Challenges of traction single-phase current-source active rectifier. , 2009, , .		5
95	Single Phase Current-Source Active Rectifier: design, simulation and practical problems. , 2007, , .		2
96	Comparison of 3D-SVPWM and Carrier-Based PWM of three-phase four-leg voltage source inverter. , 2007, , .		12
97	Single-phase current-source active rectifier for traction applications: new control strategy based on phase shift controller. , 2007, , .		6
98	New Control Algorithm for Traction Single-Phase Current-Source Active Rectifier. , 2007, , .		0