

Umanand Loganathan

List of Publications by Year in descending order

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citing authors

#	ARTICLE	IF	CITATIONS
1	Adaptation of Slip Gain for Modified Transient Vector Estimator-Based Speed Control of Induction Machine Drive. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 248-259.	5.4	2
2	A Very High Resolution 30-Sided Space Vector Generation From a Single DC-Link for Induction Motor Drives. IEEE Transactions on Industrial Electronics, 2022, 69, 160-168.	7.9	7
3	A Single DC-Link Multilevel 42-Sided Polygonal Voltage Space Vector Generation With Lower Order Harmonic Suppression Using Switched-Capacitor Filter. IEEE Transactions on Industrial Electronics, 2022, 69, 12369-12378.	7.9	0
4	A Multilevel Inverter With Inherent Common Coupling Point Voltage Balancing of Stacked Capacitors Across a Single DC-Link for Induction Motor Drives. IEEE Transactions on Industrial Electronics, 2022, 69, 12496-12505.	7.9	4
5	A Ten-Level Inverter Fed Drive Scheme with Extended Linear Modulation Range. IEEE Transactions on Industrial Electronics, 2022, 69, 12261-12269.	7.9	2
6	Modelling and Control of Ultra Capacitor-Based High-Gain DC-DC Converter System with Charge Equalization Circuits. , 2022, 7, 289-298.		1
7	A Multilevel Inverter for Instantaneous Voltage Balancing of Single Sourced Stacked DC-Link Capacitors for an Induction Motor Load. IEEE Transactions on Power Electronics, 2022, 37, 10633-10641.	7.9	7
8	A Novel Switched Capacitor DC-DC Converter Topology for High Voltage and High Gain Application. , 2022, , .		2
9	A Novel DC-DC Converter with Extended Range of Gain for Buck-Boost Applications. , 2022, , .		2
10	A General Multilevel Polygonal Space Vector Generation Scheme With Reduced Switching for the Inverter and Harmonic Suppression Using a Switched-Capacitive Filter for the Full Modulation Range. IEEE Transactions on Power Electronics, 2022, 37, 8167-8176.	7.9	7
11	A Fault-Tolerant 24-Sided Voltage Space Vector Structure for Open-End Winding Induction Motor Drive. IEEE Transactions on Power Electronics, 2022, 37, 10738-10746.	7.9	4
12	A Fault-Tolerant Inverter Circuit to Generate Thirteen-Level 24-Sided Voltage Space Vector Structure for Open-End Winding Induction Motor Drive. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 7539-7548.	5.4	6
13	A Cascaded Nine-Level Inverter Topology With T-Type and H-Bridge With Increased DC-Bus Utilization. IEEE Transactions on Power Electronics, 2021, 36, 285-294.	7.9	28
14	A Fault-Tolerant Five-Level Inverter Topology With Reduced Component Count for OEIM Drives. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 961-969.	5.4	24
15	Suppression of Lower Order Harmonics for the Full Modulation Range for a Two-Level Inverter-Fed IM Drive With a Switched-Capacitive Filter Technique Forming a 42-Sided Voltage Space Vector Structure. IEEE Transactions on Industrial Electronics, 2021, 68, 6701-6709.	7.9	6
16	Slip Gain Estimation Scheme for Transient Vector Estimator-Based High-Performance Control of Induction Motor Drives. , 2021, 6, 311.		1
17	Current Control of Boost Converter for PV Interface With Momentum-Based Perturb and Observe MPPT. IEEE Transactions on Industry Applications, 2021, 57, 4071-4079.	4.9	42
18	A Multilevel 30-Sided Space Vector Structure With Congruent Triangles and Timing Calculation Using Only Sampled Reference Voltages. IEEE Transactions on Industrial Electronics, 2021, 68, 7884-7894.	7.9	4

#	ARTICLE	IF	CITATIONS
19	A Simple Dual Three-Level Inverter Topology With Improved Fault Tolerance. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 5954-5961.	5.4	3
20	A Dense Multilevel 30-Sided Space Vector Generation Using a Single DC Link for an Induction Motor Drive. IEEE Transactions on Power Electronics, 2021, 36, 11681-11690.	7.9	4
21	Energy Disaggregation Using Energy Demand Model and IoT-Based Control. IEEE Transactions on Industry Applications, 2021, 57, 1746-1754.	4.9	11
22	Suppression of lower order harmonics by Switched-Capacitive filtering using Polygonal Space Vector Structures and Capacitor Sizing for Induction Motor Drive Applications. , 2021, , .		1
23	A 24-sided Polygonal Voltage Space Vector Structure for IM drive with Open end winding Configuration. , 2021, , .		4
24	Suppression of Lower Order Harmonics using a 21-Concentric 42-sided polygonal Space Vector Structure for Induction Motor Drive Applications. , 2021, , .		0
25	Minimization of Switched Capacitor Voltage Ripple in a Multilevel Dodecagonal Voltage Space Vector Structure for Drives. IEEE Transactions on Industrial Electronics, 2020, 67, 126-135.	7.9	6
26	A 5-Level Inverter Scheme Using Single DC Link With Reduced Number of Floating Capacitors and Switches for Open-End IM Drives. IEEE Transactions on Industrial Electronics, 2020, 67, 960-968.	7.9	38
27	A Reduced Component Count Five-Level Inverter Topology for High Reliability Electric Drives. IEEE Transactions on Power Electronics, 2020, 35, 725-732.	7.9	35
28	A Switched Capacitive Filter-Based Harmonic Elimination Technique by Generating a 30-Sided Voltage Space Vector Structure for IM Drive. IEEE Transactions on Power Electronics, 2020, 35, 2402-2410.	7.9	11
29	A Nine Level Inverter Topology with Linear Operation at Over-modulation Region. , 2020, , .		3
30	Generation of 42-sided polygonal Voltage Space Vector Structure for suppression of lower order harmonics in IM Drive Applications. , 2020, , .		4
31	A Novel DC to AC Converter Topology based on Magnetic Flux Rate Switching. , 2020, , .		3
32	A Fifteen Concentric 30-sided Polygonal Space Vector Structure Using a Single DC-link for OEIM drive. , 2020, , .		0
33	Integration of Photovoltaic Panels with DC Grid Using High Gain DC-DC Converter. , 2020, , .		6
34	A Multilevel 30-sided Space Vector Structure Generation for an Induction Motor Drive Using a Single DC-link. , 2020, , .		0
35	Bond Graph Approach for Modelling Solar PV-Thermal and Thermoelectric Devices. , 2020, , .		1
36	Three-Phase Five-Level Grid Synchronized PV Inverter with MPPT for Micro-Grid Application. , 2020, , .		1

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37	Particle Swarm Optimization based Output-feedback Control of Vector-controlled Induction Motor Drives considering Core Loss Resistance. , 2020, , .		1
38	Robust Control of Modified Transient Vector based Control of Induction Machine Drive considering the impact of Core loss Resistance. , 2020, , .		1
39	Offline Recursive Identification of Electrical Parameters of VSI-Fed Induction Motor Drives. IEEE Transactions on Power Electronics, 2020, 35, 10711-10719.	7.9	23
40	Extending the Linear Modulation Range to Full Base Speed Independent of Load Power Factor for a Multilevel Inverter Fed IM Drive. IEEE Transactions on Industrial Electronics, 2020, 67, 9143-9152.	7.9	10
41	A Novel approach for the analysis of Harmonic Suppression in higher-sided polygonal SV structures. , 2020, , .		3
42	Internet of Things based Demand Side Energy Management System using Non-Intrusive Load Monitoring. , 2020, , .		10
43	Preliminary Analysis of Photovoltaic-Powered Electrodialysis for In-Home Water Desalination in Rural India. , 2020, , .		0
44	Instantaneous Balancing of Neutral-Point Voltages for Stacked DC-Link Capacitors of a Multilevel Inverter for Dual-Inverter-Fed Induction Motor Drives. IEEE Transactions on Power Electronics, 2019, 34, 2505-2514.	7.9	25
45	A Unified Controller for Utility-Interactive Uninterruptible Power Converters for Grid Connected and Autonomous Operations. IEEE Transactions on Power Electronics, 2019, 34, 3871-3887.	7.9	23
46	A Novel Fractional Harmonic d - q Domain Based Power Line Signaling Technique for Power Converters in a Microgrid. IEEE Transactions on Power Electronics, 2019, 34, 11264-11277.	7.9	10
47	Robust and High-Dynamic-Performance Control of Induction Motor Drive Using Transient Vector Estimator. IEEE Transactions on Industrial Electronics, 2019, 66, 7529-7538.	7.9	13
48	A Hybrid 7-Level Inverter Using Low-Voltage Devices and Operation With Single DC-Link. IEEE Transactions on Power Electronics, 2019, 34, 9844-9853.	7.9	59
49	A High-Performance Dynamic Controller For an Active Power Decoupler With AC-Side Storage Element. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2019, 7, 2041-2056.	5.4	6
50	A Twelve Concentric Multilevel Twenty-Four Sided Polygonal Voltage Space Vector Structure for Variable Speed Drives. IEEE Transactions on Power Electronics, 2019, 34, 9906-9915.	7.9	8
51	A Novel Wide Duty Cycle Range Wide Band High Frequency Isolated Gate Driver for Power Converters. IEEE Transactions on Industry Applications, 2018, 54, 437-446.	4.9	6
52	Design and Analysis of the Low Device Stress Active Power Decoupling for Single-Phase Grid Connection for a Wide Range of Power Factor. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2018, 6, 1921-1931.	5.4	16
53	Generation of High-Resolution 12-Sided Voltage Space Vector Structure Using Low-Voltage Stacked and Cascaded Basic Inverter Cells. IEEE Transactions on Power Electronics, 2018, 33, 7349-7358.	7.9	16
54	A Two-Phase Five-Level Converter With Least Number of Power Switches Requiring Only a Single DC Source. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2018, 6, 1942-1952.	5.4	18

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55	A New Two-Phase Five-Level Converter for Three-Phase Isolated Grid-Tied Systems With Inherent Capacitor Balancing and Reduced Component Count. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2018, 6, 1325-1335.	5.4	15
56	A Low-Order Harmonic Elimination Scheme for Induction Motor Drives Using a Multilevel Octadecagonal Space Vector Structure With a Single DC Source. IEEE Transactions on Power Electronics, 2018, 33, 2430-2437.	7.9	15
57	Design of Controller for Selected Harmonic Power Elimination from DC Bus in Single Phase Inverter. , 2018, , .		0
58	Virtual Energy Routers (VERs) for Energy Internet. , 2018, , .		4
59	Approach to Non-Intrusive Load Monitoring using Factorial Hidden Markov Model. , 2018, , .		14
60	Improving the Dynamic Response of Scalar Control of Induction Machine Drive Using Phase Angle Control. , 2018, , .		7
61	Perturb and Observe with Momentum Term applied to Current Referenced Boost Converter for PV Interface. , 2018, , .		3
62	A Unified Control Approach with Inherent Islanding and Synchronizing Capabilities for Grid Interfaced Inverters Operating in Autonomous Mode. , 2018, , .		0
63	A Hybrid Seven Level Inverter Topology Formed by Cascading T-Type and Active Neutral Point Clamped Inverter for Induction Motor Drives. , 2018, , .		5
64	Development of SCADA Automation System as a Testing Platform at IISC (Indian Institute of Science) Campus. , 2018, , .		5
65	A Novel Least Component Count Single DC-link Fed Generalized Multilevel Inverter Configuration for Three-phase High Power Isolated Grid Connected Systems. , 2018, , .		1
66	17-level inverter with low component count for open-end induction motor drives. IET Power Electronics, 2018, 11, 922-929.	2.1	19
67	Fifth- and Seventh-Order Harmonic Elimination With Multilevel Dodecagonal Voltage Space Vector Structure for IM Drive Using a Single DC Source for the Full Speed Range. IEEE Transactions on Power Electronics, 2017, 32, 60-68.	7.9	25
68	Active power decoupling with reduced converter stress for single-phase power conversion and interfacing. Sadhana - Academy Proceedings in Engineering Sciences, 2017, 42, 1411-1417.	1.3	1
69	Low Switch Count Nine-Level Inverter Topology for Open-End Induction Motor Drives. IEEE Transactions on Industrial Electronics, 2017, 64, 1009-1017.	7.9	23
70	A novel active phase router for dynamic load balancing in a three phase microgrid. , 2017, , .		4
71	A novel PLL based algorithm for seamless transfer from autonomous to grid mode for utility interactive converters. , 2017, , .		1
72	A wide duty cycle range wide band high frequency isolated gate driver for power converters. , 2016, , .		1

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73	Reduced switch count seventeen level inverter topology for open-end induction motor drives. , 2016, , .		0
74	Elimination of dead-time transients in a three-level flying capacitor inverter using a state machine for switching state sequence selection. , 2016, , .		2
75	Multilevel Dodecagonal Voltage Space Vector Structure Generation for Open-End Winding IM Using a Single DC Source. IEEE Transactions on Industrial Electronics, 2016, 63, 2757-2765.	7.9	23
76	Nine level inverter for open end induction motor with eight switches per phase. , 2015, , .		3
77	A Brushless Wound Rotor Induction Generator for Variable Speed Microhydel Plants Without Ballast Load. IEEE Transactions on Sustainable Energy, 2015, 6, 20-27.	8.8	6
78	Analysis of the modulation process in advanced bus-clamping PWM techniques. , 2013, , .		8
79	Harmonic current injection based powerline communication method for grid connected single phase inverters in domestic microgrids. , 2013, , .		1
80	Medium Voltage Drive for Induction Motors Using Multilevel Octadecagonal Voltage Space Vectors. IEEE Transactions on Power Electronics, 2013, 28, 3573-3580.	7.9	21
81	Slip power optimisation in turbine-generator systems for variable speed distributed microhydel power generation. , 2013, , .		1
82	Modified current space vector based Powerline Communication method for distributed inverters interfaced smart grids. , 2012, , .		1
83	Turbine emulator for development of variable speed microhydro power generation systems. , 2012, , .		6
84	Multilevel octadecagonal space vector generation for induction motor drives by cascading asymmetric three level inverters. , 2012, , .		1
85	A multi-winding transformer based power converter topology for a growing DC micro-grid structure. , 2012, , .		5
86	Multiphase Bidirectional Flyback Converter Topology for Hybrid Electric Vehicles. IEEE Transactions on Industrial Electronics, 2009, 56, 78-84.	7.9	143
87	Improved flux estimation and stator-resistance adaptation scheme for sensorless control of induction motor. IET Electric Power Applications, 2006, 153, 911.	1.4	32
88	Multi Power Port Converter for Hybrid Electric Vehicles Using Multi Phase Bidirectional Fly-Back Topology. , 2006, , .		3
89	A Multilevel Inverter System for an Induction Motor With Open-End Windings. IEEE Transactions on Industrial Electronics, 2005, 52, 824-836.	7.9	169
90	A harmonic elimination and suppression scheme for an open-end winding induction motor drive. IEEE Transactions on Industrial Electronics, 2003, 50, 1187-1198.	7.9	130

#	ARTICLE	IF	CITATIONS
91	A Space Vector Based PWM Method Using Only the Instantaneous Amplitudes of Reference Phase Voltages for Three Level Inverters. EPE Journal (European Power Electronics and Drives Journal), 2003, 13, 35-45.	0.7	25
92	A High Resolution Multilevel Voltage Space Phasor Generation for an Open-end Winding Induction Motor Drive. EPE Journal (European Power Electronics and Drives Journal), 2003, 13, 29-37.	0.7	19
93	A multi axis space phasor based current hysteresis controller for PWM inverters. , 0, , .		14
94	Direct torque control of induction motor with extended Kalman filter. , 0, , .		7
95	A five-level inverter voltage space phasor generation for an open-end winding induction motor drive. , 0, , .		17