Hasan Komurcugil

List of Publications by Year
in descending order

140 papers	3,436 citations	147566 31 h-index	161609 54 g-index
140 all docs	140 docs citations	140 times ranked	2081 citing authors

#	Article	IF	Citations
1	Lyapunov-based control for three-phase PWM AC/DC voltage-source converters. IEEE Transactions on Power Electronics, 1998, 13, 801-813.	5.4	206
2	Lyapunov-Function and Proportional-Resonant-Based Control Strategy for Single-Phase Grid-Connected VSI With LCL Filter. IEEE Transactions on Industrial Electronics, 2016, 63, 2838-2849.	5.2	176
3	Rotating-Sliding-Line-Based Sliding-Mode Control for Single-Phase UPS Inverters. IEEE Transactions on Industrial Electronics, 2012, 59, 3719-3726.	5.2	170
4	An Extended Lyapunov-Function-Based Control Strategy for Single-Phase UPS Inverters. IEEE Transactions on Power Electronics, 2015, 30, 3976-3983.	5.4	159
5	Adaptive terminal sliding-mode control strategy for DCâ€“DC buck converters. ISA Transactions, 2012, 51, 673-681.	3.1	154
6	Sliding-Mode Control for Single-Phase Grid-Connected <inline-formula> <tex-math notation="LaTeX">$mbox{LCL}$</tex-math></inline-formula>-Filtered VSI With Double-Band Hysteresis Scheme. IEEE Transactions on Industrial Electronics, 2016, 63, 864-873.	5.2	143
7	A Three-Level Hysteresis Function Approach to the Sliding-Mode Control of Single-Phase UPS Inverters. IEEE Transactions on Industrial Electronics, 2009, 56, 3477-3486.	5.2	132
8	A new control strategy for single-phase shunt active power filters using a Lyapunov function. IEEE Transactions on Industrial Electronics, 2006, 53, 305-312.	5.2	130
9	Non-singular terminal sliding-mode control of DCâ€“DC buck converters. Control Engineering Practice, 2013, 21, 321-332.	3.2	119
10	Optimized Sliding Mode Control to Maximize Existence Region for Single-Phase Dynamic Voltage Restorers. IEEE Transactions on Industrial Informatics, 2016, 12, 1486-1497.	7.2	102
11	Improved passivityâ€based control method and its robustness analysis for singleâ€phase uninterruptible power supply inverters. IET Power Electronics, 2015, 8, 1558-1570.	1.5	90
12	Sliding Mode Control: Overview of Its Applications in Power Converters. IEEE Industrial Electronics Magazine, 2021, 15, 40-49.	2.3	86
13	Sliding-Mode Control in Natural Frame With Reduced Number of Sensors for Three-Phase Grid-Tied <italic> LCL</italic>-Interfaced Inverters. IEEE Transactions on Industrial Electronics, 2019, 66, 2903-2913.	5.2	73
14	Steady-State Analysis and Passivity-Based Control of Single-Phase PWM Current-Source Inverters. IEEE Transactions on Industrial Electronics, 2010, 57, 1026-1030.	5.2	72
15	A novel current-control method for three-phase PWM AC/DC voltage-source converters. IEEE Transactions on Industrial Electronics, 1999, 46, 544-553.	5.2	71
16	Protection of Sensitive Loads Using Sliding Mode Controlled Three-Phase DVR With Adaptive Notch Filter. IEEE Transactions on Industrial Electronics, 2019, 66, 5465-5475.	5.2	68
17	Deadbeat control method for single-phase UPS inverters with compensation of computation delay. IET Electric Power Applications, 1999, 146, 123.	1.4	61
18	Time-Varying and Constant Switching Frequency-Based Sliding-Mode Control Methods for Transformerless DVR Employing Half-Bridge VSI. IEEE Transactions on Industrial Electronics, 2017, 64, 2570-2579.	5.2	58

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19	Indirect Sliding Mode Control for DCâ€“DC SEPIC Converters. IEEE Transactions on Industrial Informatics, 2020, 16, 4099-4108.	7.2	54
20	Decoupled sliding-mode controller based on time-varying sliding surfaces for fourth-order systems. Expert Systems With Applications, 2010, 37, 6764-6774.	4.4	48
21	Variable- and Fixed-Switching-Frequency-Based HCC Methods for Grid-Connected VSI With Active Damping and Zero Steady-State Error. IEEE Transactions on Industrial Electronics, 2017, 64, 7009-7018.	5.2	48
22	An Enhanced Lyapunov-Function Based Control Scheme for Three-Phase Grid-Tied VSI With LCL Filter. IEEE Transactions on Sustainable Energy, 2019, 10, 504-513.	5.9	45
23	Comparative study on Lyapunovâ€functionâ€based control schemes for singleâ€phase gridâ€connected voltageâ€source inverter with LCL filter. IET Renewable Power Generation, 2017, 11, 1473-1482.	1.7	44
24	Control strategy for single-phase UPS inverters. IET Electric Power Applications, 2003, 150, 743.	1.4	43
25	Double-band hysteresis current-controlled single-phase shunt active filter for switching frequency mitigation. International Journal of Electrical Power and Energy Systems, 2015, 69, 131-140.	3.3	41
26	Nonsingular decoupled terminal sliding-mode control for a class of fourth-order nonlinear systems. Communications in Nonlinear Science and Numerical Simulation, 2013, 18, 2527-2539.	1.7	40
27	Threeâ€level hysteresis current control strategy for threeâ€phase fourâ€switch shunt active filters. IET Power Electronics, 2016, 9, 1732-1740.	1.5	40
28	Super Twisting Sliding-Mode Control of DVR With Frequency-Adaptive Brockett Oscillator. IEEE Transactions on Industrial Electronics, 2021, 68, 10730-10739.	5.2	39
29	Multi-Input Multi-Output-Based Sliding-Mode Controller for Single-Phase Quasi-Z-Source Inverters. IEEE Transactions on Industrial Electronics, 2020, 67, 6439-6449.	5.2	38
30	Model-Based Current Control for Single-Phase Grid-Tied Quasi-Z-Source Inverters With Virtual Time Constant. IEEE Transactions on Industrial Electronics, 2018, 65, 8277-8286.	5.2	35
31	Sliding-Mode Control Strategy for Three-Phase Three-Level T-Type Rectifiers With DC Capacitor Voltage Balancing. IEEE Access, 2020, 8, 64555-64564.	2.6	34
32	Model-Based Current Control Strategy With Virtual Time Constant for Improved Dynamic Response of Three-Phase Grid-Connected VSI. IEEE Transactions on Industrial Electronics, 2019, 66, 4156-4165.	5.2	31
33	Single-input fuzzy-like moving sliding surface approach to the sliding mode control. Electrical Engineering, 2008, 90, 199-207.	1.2	29
34	Multiple-Frequency Resonating Compensation for Multichannel Transmission of Wireless Power Transfer. IEEE Transactions on Power Electronics, 2021, 36, 5169-5180.	5.4	29
35	High Gain Switched-Inductor-Double-Leg Converter With Wide Duty Range for DC Microgrid. IEEE Transactions on Industrial Electronics, 2021, 68, 9561-9573.	5.2	26
36	Model Predictive Control of DCâ€“DC SEPIC Converters With Autotuning Weighting Factor. IEEE Transactions on Industrial Electronics, 2021, 68, 9433-9443.	5.2	25

#	Article	IF	Citations
37	Control strategy for single-phase PWM rectifiers. Electronics Letters, 1997, 33, 1745.	0.5	24
38	A Sliding-Mode Controlled Single-Phase Grid-Connected Quasi-Z-Source NPC Inverter With Double-Line Frequency Ripple Suppression. IEEE Access, 2019, 7, 160004-160016.	2.6	23
39	Lyapunov Energy Function Based Control Method for Three-Phase UPS Inverters With Output Voltage Feedback Loops. IEEE Access, 2019, 7, 113699-113711.	2.6	22
40	Two-stage grid-connected inverter for PV systems. , 2018, , .		21
41	Time-varying sliding-coefficient-based decoupled terminal sliding-mode control for a class of fourth-order systems. ISA Transactions, 2014, 53, 1044-1053.	3.1	18
42	A novel multi-level bi-directional DC/DC converter for inductive power transfer applications. , 2015, , .		18
43	Model predictive control of packed U cells based transformerless single-phase dynamic voltage restorer. , 2018, , .		16
44	A New Control Strategy for Three-Phase Shunt Active Power Filters Based on FIR Prediction. IEEE Transactions on Industrial Electronics, 2021, 68, 7702-7713.	5.2	16
45	Optimal control for single-phase UPS inverters based on linear quadratic regulator approach. , 0, , .		15
46	Passivity-Based Control of Single-Phase PWM Current-Source Inverters. , 2007, , .		15
47	Singleâ€phase ACâ€AC Zâ€source converter based on asymmetrical gamma structure with continuous input current and safe commutation strategy. IET Power Electronics, 2021, 14, 680-689.	1.5	15
48	An Effective Model Predictive Control Method With Self-Balanced Capacitor Voltages for Single-Phase Three-Level Shunt Active Filters. IEEE Access, 2021, 9, 103811-103821.	2.6	15
49	Energy Function Based Finite Control Set Predictive Control Strategy for Single-Phase Split Source Inverters. IEEE Transactions on Industrial Electronics, 2022, 69, 5669-5679.	5.2	15
50	Distributed Direct Power Sliding-Mode Control for Islanded AC Microgrids. IEEE Transactions on Industrial Electronics, 2022, 69, 9700-9710.	5.2	15
51	Lyapunov-function based control approach with cascaded PR controllers for single-phase grid-tied LCL-filtered quasi-Z-source inverters. , 2017, , .		14
52	Three-phase three-level T-type grid-connected inverter with reduced number of switches. , 2018, , .		14
53	Low Complexity Model Predictive Control of PUC5 Based Dynamic Voltage Restorer. , 2018, , .		14
54	Time-varying sliding-coefficient-based terminal sliding mode control methods for a class of fourth-order nonlinear systems. Nonlinear Dynamics, 2013, 73, 1645-1657.	2.7	13

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55	Performance analysis of interleaved quadratic boost converter with coupled inductor for fuel cell applications. , 2016, , .		13
56	Passivity-Based Control Strategy With Improved Robustness for Single-Phase Three-Level T-Type Rectifiers. IEEE Access, 2021, 9, 59336-59344.	2.6	12
57	Sliding mode control strategy with maximized existence region for ‹scp›DCâ€“DC‹/scp› buck converters. International Transactions on Electrical Energy Systems, 2021, 31, e12764.	1.2	12
58	Lyapunov-based control strategy for power-factor preregulators. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2003, 50, 1226-1229.	0.1	11
59	Globally Stable Control of Three-phase Three-wire Shunt Active Power Filters. Electrical Engineering, 2007, 89, 411-418.	1.2	11
60	Sliding Mode Control of Three-Phase Three-Level Two-Leg NPC Inverter with LCL Filter for Distributed Generation Systems. , 2018, , .		11
61	Super-Twisting Sliding Mode Control for Grid-Tied T-Type qZSI with Reduced Capacitor Voltage. , 2020, , .		11
62	Super twisting sliding mode control of three-phase grid-tied neutral point clamped inverters. ISA Transactions, 2022, 125, 547-559.	3.1	11
63	Model Predictive Control Strategy for Induction Motor Drive Using Lyapunov Stability Objective. IEEE Transactions on Industrial Electronics, 2022, 69, 12119-12128.	5.2	11
64	Enhanced Quasi Type-1 PLL-Based Multi-Functional Control of Single-Phase Dynamic Voltage Restorer. Applied Sciences (Switzerland), 2022, 12, 146.	1.3	11
65	Control strategy for single-phase PWM ac/dc voltage-source converters based on Lyapunov's direct method. International Journal of Electronics, 2000, 87, 1485-1498.	0.9	10
66	Proportional-Integral and Proportional-Resonant Based Control Strategy for PUC Inverters. , 2018, , .		10
67	Controller-Based Periodic Disturbance Mitigation Techniques for Three-Phase Two-Level Voltage-Source Converters. IEEE Transactions on Industrial Informatics, 2021, 17, 6553-6568.	7.2	10
68	Sliding mode control strategy for three-phase DVR employing twelve-switch voltage source converter. , 2015, , .		9
69	Photovoltaic supplied grid-tie three-phase inverter with active power injection and reactive harmonic current compensation capability. , 2016, , .		9
70	A new sliding mode control for single-phase UPS inverters based on rotating sliding surface. , 2010, , .		8
71	Integral sliding-mode-based current-control strategy for single-phase current-source inverters. Electrical Engineering, 2011, 93, 127-136.	1.2	8
72	Nonlinear control methods for single-ended primary-inductor power converters. , 2017, , .		8

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73	Weighting Factor Free Lyapunov-Function-Based Model Predictive Control Strategy for Single-Phase T-Type Rectifiers. , 2020, , .		8
74	Sliding Mode Control of Single-Phase UPS Inverters Using a Three-Level Hysteresis Switching Function. Industrial Electronics Society (IECON), Annual Conference of IEEE, 2006, , .	0.0	7
75	Sliding-mode and proportional-resonant based control strategy for three-phase grid-connected LCL-filtered VSI. , 2016, , .		7
76	A modified Lyapunov-function based control strategy for three-phase grid-connected VSI with LCL filter. , 2016, , .		7
77	Three-phase three-level inverter with reduced number of switches for stand-alone PV systems. , 2017, , .		7
78	PI and Sliding Mode Based Control Strategy for Three-Phase Grid-Tied Three-Level T-Type qZSI. , 2019, , .		7
79	An enhanced finite control set model predictive control method with selfâ€balancing capacitor voltages for threeâ€level Tâ€type rectifiers. IET Power Electronics, 2022, 15, 504-514.	1.5	7
80	Variable sampling frequency PWM waveforms. IEEE Power Electronics Letters, 2003, 1, 14-16.	1.1	6
81	Hysteresis current-control strategy for single-phase half-bridge shunt active power filters. , 2013, , .		6
82	Sliding-Mode and Proportional-Resonant Based Control Strategy for Three-Phase Two-Leg T - Type Grid-Connected Inverters with LCL Filter. , 2018, , .		6
83	Lyapunov-Function-Based Control Approach for Three-Level Four-Leg Shunt Active Power Filters with Nonlinear and Unbalanced Loads. , 2018, , .		6
84	Fast terminal sliding mode control for single-phase UPS inverters. , 2011, , .		5
85	Mitigation of grid voltage disturbances using quasi-Z-source based dynamic voltage restorer. , 2018, , .		5
86	Operation of three-level single-phase half-bridge NPC inverter-based shunt active power filter under non-ideal grid voltage condition with sliding mode controller. , 2018, , .		5
87	Equal weighted cost function based weighting factor tuning method for model predictive control in power converters. IET Power Electronics, 2022, 15, 203-215.	1.5	5
88	A simplified slidingâ€mode control method for multiâ€level transformerless DVR. IET Power Electronics, 2022, 15, 764-774.	1.5	5
89	Nonlinear control strategy for single-phase PWM current-source inverters. , 2009, , .		4
90	Lyapunov-function-based control method for three-phase grid-tied quasi-Z-source inverter with LCL filter. , 2017, , .		4

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91	Guest Editorial Emerging Electric Machines and Drives for Smart Energy Conversion. IEEE Transactions on Energy Conversion, 2018, 33, 1931-1933.	3.7	4
92	Sliding Mode Control Strategy for Three-Phase Three-Level T-Type PWM Rectifiers with Capacitor Voltage Imbalance Compensation. , 2019, , .		4
93	Super Twisting Sliding-Mode Control Strategy for Three-Level Dynamic Voltage Restorers. , 2021, , .		4
94	A new current control strategy for three-phase three wire shunt active power filters. , 2008, , .		3
95	Control strategy for three-phase current-source inverters based on Lyapunovâ€™s direct method. , 2008, , .		3
96	Integral sliding mode control of a single-phase current-source inverter. , 2009, , .		3
97	Combined use of double-band hysteresis current and proportional resonant control methods for single-phase UPS inverters. , 2014, , .		3
98	Investigation of active damping methods for model-based-current-control scheme of single-phase grid-tied VSI with LCL filter. , 2017, , .		3
99	Fixed switching frequency sliding-mode control methodology for single-phase LCL-filtered quasi-Z-source grid-tied inverters. , 2018, , .		3
100	A Lyapunov-Function-Based Control Strategy for Distributed Generations in Hybrid AC/DC Microgrids. , 2019, , .		3
101	Sliding Mode Control Strategy for Three-Phase Three-Level T-Type Shunt Active Power Filters. , 2019, , .		3
102	Super Twisting Algorithm Based Sliding Mode Control Method for Single-Phase Dynamic Voltage Restorers. , 2019, , .		3
103	Current-Limiting Virtual Synchronous Control and Stability Analysis Considering DC-Link Dynamics Under Normal and Faulty Grid Conditions. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 2516-2527.	3.7	3
104	Second-Order Sliding Mode Control of Three-Phase Three-Level Grid-Connected Neutral Point Clamped Inverters. , 2021, , .		3
105	Deadbeat Control of a Three-Phase T-type Inverter with Output LC Filter for UPS Applications. , 2021, , .		3
106	Sliding Mode Current Observer for a Bidirectional Dual Active Bridge Converter. , 2021, , .		3
107	A PI-type self-tuning fuzzy controller for DC-DC boost converters. , 0, , .		2
108	A new control strategy for single-phase PWM boost-type inverters. , 2011, , .		2

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109	Modified MIMO Sliding-Mode Controller with Constant Switching Frequency for Grid-Connected LCL-Filtered Quasi-Z-Source Inverter. , 2018, , .		2
110	A Lyapunov Stability Theorem Based Control Strategy for Single-Phase Neutral-Paint-Clamped Quasi - Impedance Source Inverter with LCL Filter. , 2018, , .		2
111	A Modified Lyapunov-Function Based Control Scheme for Three-Phase Three-Level Two-Leg Grid-Tied NPC Inverter. , 2019, , .		2
112	Guest Editorial Special Section on Recent Advances on Sliding Mode Control and Its Applications in Modern Industrial Systems. IEEE Transactions on Industrial Informatics, 2020, 16, 1149-1152.	7.2	2
113	Passivity-Based Control Strategy for Single-Phase Three-Level T-Type PWM Rectifiers. , 2020, , .		2
114	Sliding Mode Controlled Three-Phase Two-Leg Grid-Connected T-Type qZSI. , 2020, , .		2
115	Super Twisting Sliding-Mode Control of Grid-Tied Quasi-Z-Source Inverters Under Distorted Grid Voltage. , 2021, , .		2
116	Model Predictive Sliding Surface Control of Voltage Source Inverter. , 2022, , .		2
117	Optimized sliding surface predictive control of a voltage source inverter with improved steady-state performance. ISA Transactions, 2022, 129, 460-471.	3.1	2
118	Fuzzy Moving Sliding Surface Approach to the Hierarchical Sliding Mode Control. , 2007, , .		1
119	Neutral-point-clamped and T-type multilevel inverters. , 2021, , 29-56.		1
120	Single Phase Active Power Filter Control Under Distorted Grid Voltage Using Quasi Open-Loop Grid-Synchronization Technique. , 2021, , .		1
121	Lyapunov-Function-Based Controller for Single-Phase NPC Quasi-Z-Source Inverter with 2Ï‰ Frequency Ripple Suppression. Energies, 2021, 14, 140.	1.6	1
122	<scp>Dualâ€sliding</scp> mode control of <scp>nineâ€switch</scp> inverter. International Transactions on Electrical Energy Systems, 2021, 31, e13185.	1.2	1
123	Current Sensorless Control Strategy for Nine-Level Packed-E-Cell Rectifier. , 2021, , .		1
124	Model predictive sliding mode control of sixâ€phase induction motor using nineâ€switch converter. International Journal of Circuit Theory and Applications, 0, , .	1.3	1
125	Predictive sliding surface control of squirrel cage induction motor fed by a voltage source inverter: experimental validation and analyses. Electrical Engineering, 0, , .	1.2	1
126	Time-varying sliding-coefficient-based approach to the decoupled terminal sliding mode controller design. , 2012, , .		0

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127	A double-band hysteresis control approach for three-phase four-switch active filters with switching frequency mitigation. , 2014, , .		0
128	Modeling, Analysis and Sliding Mode Controller Design of High Voltage Gain Switched-Z-Source Inverter. , 2019, , .		0
129	Guest Editorial: Special Section on Identification and Observation Informatics for Energy Generation, Conversion, and Applications. IEEE Transactions on Industrial Informatics, 2019, 15, 5999-6000.	7.2	0
130	Photovoltaic Supplied T-Type Three- Phase Inverter with Harmonic Current Compensation Capability. , 2019, , .		0
131	A Modified Lyapunov-Function Based Control Scheme for Two-Leg Three-Level T-Type Grid-Tied Inverter with LCL Filter. , 2019, , .		0
132	Sliding-Mode-Control Strategy for Single-Phase Grid-Connected Three-Level NPC Quasi-Z-Source Inverters with Constant Switching Frequency. , 2019, , .		0
133	Three-Phase Two-Leg T-Type Converter based Active Power Filter. , 2019, , .		0
134	An Effective Double Frequency Ripple Suppression Based on Sliding-Mode Control for Cascaded Multilevel Quasi-Z-Source Inverters. , 2020, , .		0
135	Sliding Mode Control of an Isolated Inverter Based on Active Clamped Flyback-Forward Converter. , 2021, , .		0
136	Current-Limiting VSG for Renewable Energy Applications. , 2021, , .		0
137	Model Predictive Sliding Surface Control of Induction Motor fed by Direct Matrix Converter. , 2022, , .		0
138	A Sliding-Mode Control with efficient chattering alleviation for Single-Phase Voltage Source Inverters. Gazi University Journal of Science, 0, , .	0.6	0
139	Sliding Mode Current Control Strategy for Nine-Switch Converter. , 2021, , .		0
140	Single-Inductor Buckâ€“Boost Inverter Based Transformerless Dynamic Voltage Restorer. , 2022, , .		0