Deepak Maganlal Fulwani

List of Publications by Year
in descending order

107 papers	13,055 citations	159358 30 h-index	118652 62 g-index
108 all docs	108 docs citations	108 times ranked	6584 citing authors

#	Article	IF	Citations
1	Hierarchical Control of Droop-Controlled AC and DC Microgridsâ€"A General Approach Toward Standardization. IEEE Transactions on Industrial Electronics, 2011, 58, 158-172.	5.2	3,811
2	Advanced Control Architectures for Intelligent Microgridsâ€"Part I: Decentralized and Hierarchical Control. IEEE Transactions on Industrial Electronics, 2013, 60, 1254-1262.	5.2	1,562
3	DC Microgridsâ€"Part II: A Review of Power Architectures, Applications, and Standardization Issues. IEEE Transactions on Power Electronics, 2016, 31, 3528-3549.	5.4	974
4	Distributed Secondary Control for Islanded Microgridsâ€"A Novel Approach. IEEE Transactions on Power Electronics, 2014, 29, 1018-1031.	5.4	854
5	An Improved Droop Control Method for DC Microgrids Based on Low Bandwidth Communication With DC Bus Voltage Restoration and Enhanced Current Sharing Accuracy. IEEE Transactions on Power Electronics, 2014, 29, 1800-1812.	5.4	837
6	Advanced Control Architectures for Intelligent Microgridsâ€"Part II: Power Quality, Energy Storage, and AC/DC Microgrids. IEEE Transactions on Industrial Electronics, 2013, 60, 1263-1270.	5.2	759
7	Supervisory Control of an Adaptive-Droop Regulated DC Microgrid With Battery Management Capability. IEEE Transactions on Power Electronics, 2014, 29, 695-706.	5.4	636
8	Distributed Adaptive Droop Control for DC Distribution Systems. IEEE Transactions on Energy Conversion, 2014, 29, 944-956.	3.7	366
9	Hierarchical Control for Multiple DC-Microgrids Clusters. IEEE Transactions on Energy Conversion, 2014, 29, 922-933.	3.7	338
10	Review on Control of DC Microgrids. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, , 1-1.	3.7	289
11	Double-Quadrant State-of-Charge-Based Droop Control Method for Distributed Energy Storage Systems in Autonomous DC Microgrids. IEEE Transactions on Smart Grid, 2015, 6, 147-157.	6.2	282
12	Stability Enhancement Based on Virtual Impedance for DC Microgrids With Constant Power Loads. IEEE Transactions on Smart Grid, 2015, 6, 2770-2783.	6.2	250
13	Robust slidingâ€mode control of dc/dc boost converter feeding a constant power load. IET Power Electronics, 2015, 8, 1230-1237.	1.5	168
14	Intelligent DC Homes in Future Sustainable Energy Systems: When efficiency and intelligence work together. IEEE Consumer Electronics Magazine, 2016, 5, 74-80.	2.3	166
15	Constant power loads and their effects in DC distributed power systems: A review. Renewable and Sustainable Energy Reviews, 2017, 72, 407-421.	8.2	163
16	Sliding Mode Control Using Novel Sliding Surfaces. Lecture Notes in Control and Information Sciences, 2009, , .	0.6	141
17	Power Oscillations Damping in DC Microgrids. IEEE Transactions on Energy Conversion, 2016, 31, 970-980.	3.7	115
18	Tertiary and Secondary Control Levels for Efficiency Optimization and System Damping in Droop Controlled DCâ€"DC Converters. IEEE Transactions on Smart Grid, 2015, 6, 2615-2626.	6.2	110

#	Article	IF	Citations
19	High-Performance Tracking Controller for Discrete Plant Using Nonlinear Sliding Surface. IEEE Transactions on Industrial Electronics, 2009, 56, 3628-3637.	5.2	93
20	Power Management Strategy Based on Virtual Inertia for DC Microgrids. IEEE Transactions on Power Electronics, 2020, 35, 12472-12485.	5.4	93
21	Modeling, stability analysis and active stabilization of multiple DC-microgrid clusters. , 2014, , .		60
22	A Review of DC Shipboard Microgridsâ€"Part II: Control Architectures, Stability Analysis, and Protection Schemes. IEEE Transactions on Power Electronics, 2022, 37, 4105-4120.	5.4	54
23	Compromised Controller Design for Current Sharing and Voltage Regulation in DC Microgrid. IEEE Transactions on Power Electronics, 2019, 34, 8045-8061.	5.4	52
24	Energy management of controllable loads in multi-area power systems with wind power penetration based on new supervisor fuzzy nonlinear sliding mode control. Energy, 2021, 221, 119867.	4.5	52
25	Power management techniques for grid-connected DC microgrids: A comparative evaluation. Applied Energy, 2020, 269, 115057.	5.1	47
26	Non-linear sliding surface: towards high performance robust control. IET Control Theory and Applications, 2012, 6, 235.	1.2	45
27	Ripple Mitigation With Improved Line-Load Transients Response in a Two-Stage DCâ€"DCâ€"AC Converter: Adaptive SMC Approach. IEEE Transactions on Industrial Electronics, 2018, 65, 3125-3135.	5.2	44
28	Control Strategies and Power Decoupling Topologies to Mitigate 2Ï‰-Ripple in Single-Phase Inverters: A Review and Open Challenges. IEEE Access, 2020, 8, 147533-147559.	2.6	43
29	Reactive Power Strategy of Cascaded Delta-Connected STATCOM Under Asymmetrical Voltage Conditions. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, 5, 784-795.	3.7	37
30	Event-Triggered Composite Control of a Two Time Scale System. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 471-475.	2.2	35
31	Mitigation of destabilising effect of CPLs in island DC microâ€grid using nonâ€linear control. IET Power Electronics, 2017, 10, 387-397.	1.5	32
32	Sliding mode control of a bidirectional DC/DC converter with constant power load. , 2015, , .		31
33	Three-Phase Single-Stage-Isolated Cuk-Based PFC Converter. IEEE Transactions on Power Electronics, 2019, 34, 1798-1808.	5.4	30
34	Adaptive-SMC Based Output Impedance Shaping in DC Microgrids Affected by Inverter Loads. IEEE Transactions on Sustainable Energy, 2020, 11, 2940-2949.	5.9	28
35	Second Ripple Current Suppression by Two Bandpass Filters and Current Sharing Method for Energy Storage Converters in DC Microgrid. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, 5, 1031-1044.	3.7	26
36	Virtual impedance based stability improvement for DC microgrids with constant power loads. , 2014, , .		22

#	Article	IF	Citations
37	Constant power loads: A solution using sliding mode control. , 2014, , .		20
38	Adaptive SMC for the Second-Order Harmonic Ripple Mitigation: A Solution for the Micro-Inverter Applications. IEEE Transactions on Power Electronics, 2019, 34, 8254-8264.	5.4	16
39	Voltage regulation of buck converter with constant power load: An adaptive power shaping control. Control Engineering Practice, 2021, 115, 104891.	3.2	15
40	A robust tracking controller for uncertain MIMO plant using non-linear sliding surface. , 2009, , .		14
41	Event-triggered Sliding Mode Control for light load efficiency improvement in Power Converters. Control Engineering Practice, 2020, 100, 104429.	3.2	14
42	Interval Type2 Fuzzy Logic-Based Power Sharing Strategy for Hybrid Energy Storage System in Solar Powered Charging Station. IEEE Transactions on Vehicular Technology, 2021, 70, 12450-12461.	3.9	14
43	Voltage regulation and stabilization of DC/DC buck converter under constant power loading. , 2014, , .		13
44	Robust Frequency Control in Interconnected Microgrids: An H_2/H_{infty} Control Approach. IEEE Systems Journal, 2022, 16, 2044-2055.	2.9	13
45	Cyber-Resilient Cooperative Control of DC Microgrid Clusters. IEEE Systems Journal, 2022, 16, 1996-2007.	2.9	13
46	An adaptive backstepping control to ensure the stability and robustness for boost power converter in DC microgrids. Energy Reports, 2022, 8, 1110-1124.	2.5	13
47	DC bus voltage regulation in the presence of constant power load using sliding mode controlled dc-dc Bi-directional converter interfaced storage unit. , 2015, , .		12
48	Mitigation of Negative Impedance Instabilities in a DC/DC Buck-Boost Converter with Composite Load. Journal of Power Electronics, 2016, 16, 1046-1055.	0.9	12
49	On design of a robust controller to mitigate CPL effect &#x2014; A DC micro-grid application. , 2014, , .		11
50	Constant power load instability mitigation in DC shipboard power systems using negative series virtual inductor method. , 2017, , .		11
51	Design of Sliding Mode Controller with Actuator Saturation. Lecture Notes in Control and Information Sciences, 2013, , 207-219.	0.6	10
52	Adaptive Sliding Mode Based Loss-Free Resistor for Power-Factor Correction Application. IEEE Transactions on Industry Applications, 2019, 55, 4332-4343.	3.3	10
53	A Power Calculation Algorithm for Single-Phase Droop-Operated-Inverters Considering Linear and Nonlinear Loads HIL-Assessed. Electronics (Switzerland), 2019, 8, 1366.	1.8	10
54	HIL-Assessed Fast and Accurate Single-Phase Power Calculation Algorithm for Voltage Source Inverters Supplying to High Total Demand Distortion Nonlinear Loads. Electronics (Switzerland), 2020, 9, 1643.	1.8	10

#	Article	IF	Citations
55	Adaptive Voltage Tuning Based Load Sharing in DC Microgrid. IEEE Transactions on Industry Applications, 2021, 57, 977-986.	3.3	10
56	A nonlinear sliding surface to improve performance of a discrete-time input-delay system. International Journal of Control, 2010, 83, 1895-1906.	1.2	9
57	Design and Implementation of a Smart Wheelchair. , 2013, , .		9
58	Discontinuous conduction mode three phase buck-boost derived PFC converter for more electric aircraft with reduced switching, sensing and control requirements. , 2018, , .		9
59	Synchronization and Current Sharing for Nonlinear-oscillator-based Inverters in Islanded Three-phase Microgrid. , 2019, , .		9
60	ISMC for Boost-Derived DC–DC–AC Converter: Mitigation of 2ω-Ripple and Uncertainty, and Improvement in Dynamic Performance. IEEE Transactions on Power Electronics, 2020, 35, 4353-4364.	5.4	9
61	Design of Space Microgrid for Manned Lunar Base: Spinning-in Terrestrial Technologies. , 2019, , .		8
62	Emulation of Loss Free Resistor for Single-Stage Three-Phase PFC Converter in Electric Vehicle Charging Application. IEEE Transactions on Transportation Electrification, 2020, 6, 334-345.	5.3	8
63	Dynamic Virtual Impedance-Based Second-Order Ripple Regulation in DC Microgrids. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 1075-1083.	3.7	8
64	A tutorial on implementation of sliding mode observer for DC/DC power converters using FPGA. , 2014, , .		6
65	Towards characterization of driver nodes in complex network with actuator saturation. Neurocomputing, 2016, 201, 104-111.	3.5	6
66	Emulating DC constant power load: a robust sliding mode control approach. International Journal of Electronics, 2017, 104, 1447-1464.	0.9	6
67	Model‐based event‐triggered control of singularly perturbed system with dual event‐triggering mechanism. International Journal of Robust and Nonlinear Control, 2022, 32, 4055-4071.	2.1	6
68	A novel continuous control set model predictive control to guarantee stability and robustness for buck power converter in DC microgrids. Energy Reports, 2021, 7, 1400-1415.	2.5	6
69	Event triggered control scheme for power converters. , 2016, , .		5
70	Adaptive synchronization of grid-connected three-phase inverters by using virtual oscillator control. , 2018, , .		5
71	Identification of Optimal Set of Driver Nodes in Complex Networked Systems Using Region of Attraction. International Journal of Control, Automation and Systems, 2018, 16, 97-107.	1.6	5
72	Event triggered control of two time scale system. , 2017, , .		4

#	Article	IF	Citations
73	Regulation of Electric Vehicle Speed Oscillations Due to Uneven Drive Surfaces Using ISMDTC. IEEE Transactions on Vehicular Technology, 2021, 70, 12506-12516.	3.9	4
74	A robust passivity based model predictive control for buck converter suppling constant power load. Energy Reports, 2021, 7, 792-813.	2.5	4
75	Algorithms to select right driver nodes for multi-agent systems. , 2015, , .		3
76	Grid voltage modulated control of grid-connected voltage source inverters under unbalanced grid conditions. , 2017, , .		3
77	An Alternative Realization of Droop Control and Virtual Impedance for Paralleled Converters in DC Microgrid. , 2018, , .		3
78	A Novel Coordinated Control of Renewable Energy Sources and Energy Storage System in Islanded Microgrid. , 2018, , .		3
79	A nonlinear sliding surface for discrete-time uncertain systems. , 2010, , .		2
80	A PWM based sliding-mode control for negative impedance stabilization in DC Micro-girds. , 2014, , .		2
81	Characterization of driver nodes: Network of discrete-time agents. , 2015, , .		2
82	On Some Input–Output Dynamic Properties of Complex Networks. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 216-220.	2.2	2
83	A Synchronous-Reference-Frame I-V Droop Control Method for Parallel-Connected Inverters. , 2018, , .		2
84	Second Order Ripple Reduction in Switched Boost Inverter For Standalone Nanogrid Applications. , 2019, , .		2
85	Adaptive Voltage Tuning Based Load Sharing in DC Microgrid. , 2019, , .		2
86	Stability Analysis Considering Dual Physical Constraints of Parallel-connected Virtual Synchronous Generators forming Microgrids. , 2019, , .		2
87	Reduced–order event–triggered controller for a singularly perturbed system: An active suspension case. IET Control Theory and Applications, 2020, 14, 2703-2713.	1.2	2
88	Integral Sliding Mode Control to Compensate Parametric Asymmetry and Modeling Errors in Z-Source Converter. , 2021, , .		2
89	A Generalized Harmonic Compensation Control Strategy for Mitigating Subsynchronous Oscillation in Synchronverter Based Wind Farm Connected to Series Compensated Transmission Line. IEEE Transactions on Power Systems, 2023, 38, 2610-2620.	4.6	2
90	Sliding surface design with saturated actuator. , 2012, , .		1

#	Article	IF	Citations
91	Second order harmonic ripple reduction in DC microgrid using sliding mode control approach. , 2016, , .		1
92	Selection of driver nodes based on region of attraction for single-input complex networks. , 2016, , .		1
93	Adaptive Sliding mode based Loss Free resistor for Power Factor Correction Application. , 2018, , .		1
94	Periodic Event triggered Control of Singularly Perturbed systems. , 2019, , .		1
95	Control of Single Stage Inverters and Second-Order Ripple Regulation Using Sliding Mode Control. Studies in Systems, Decision and Control, 2021, , 305-324.	0.8	1
96	A PWM based sliding-mode control for negative impedance stabilization in DC Micro-girds. , 2014, , .		0
97	A comprehensive study and analysis of second order harmonic ripple in DC microgrid feeding single phase PWM inverter loads. , 2016, , .		0
98	Selection of optimal set of driver nodes based on networked sensitivity in complex networked systems. , 2017, , .		0
99	Event triggered control of singularly perturbec linear system based on its slow and fast model. , 2017, , .		0
100	Second-order Harmonic Ripple Mitigation: A Solution for the Micro-Inverter Applications. , 2018, , .		0
101	Enhanced Power Management System for Droop Control in a Grid Connected DC Microgrid. , 2019, , .		0
102	Event-trigger Control of Discrete Two-time Scale System by Leveraging its Intrinsic Properties. , 2019, , .		0
103	Equal Load Sharing in DC Microgrid Using Line Resistance Estimation. Lecture Notes in Electrical Engineering, 2020, , 87-96.	0.3	0
104	Integral Sliding Mode Control for Uncertainty Mitigation in Switched Boost Inverters. , 2020, , .		0
105	Discrete-Time Sliding Mode Control Using Output Feedback and Nonlinear Surface. Lecture Notes in Control and Information Sciences, 2011, , 381-405.	0.6	0
106	Virtual Impedance based Second Order Ripple Control For Non-Inverting Buck-boost Converter. , 2020, , .		0
107	Event-triggered control for a linear continuous-time system under resource-constrained environment. , 2021, , , .		0