Deepakraj Divan

List of Publications by Citations

111 papers	1,178 citations	17 h-index	29 g-index
145 ext. papers	1,659 ext. citations	4.9 avg, IF	5.31 L-index

#	Paper	IF	Citations
111	Distributed FACTS—A New Concept for Realizing Grid Power Flow Control. *IEEE Transactions on Power Electronics*, **2007**, 22, 2253-2260	7.2	109
110	Soft-Switching Solid-State Transformer (S4T). *IEEE Transactions on Power Electronics*, **2018**, 33, 2933-2947	7.2	73
109	A Survey on Technologies for Implementing Sensor Networks for Power Delivery Systems. *IEEE Power Engineering Society General Meeting*, **2007**,		57
108	Smart Stick-on Sensors for the Smart Grid. *IEEE Transactions on Smart Grid*, **2012**, 3, 241-252	10.7	52
107	Design Considerations for Series-Connected Distributed FACTS Converters. *IEEE Transactions on Industry Applications*, **2007**, 43, 1609-1618	4.3	52
106	Dyna-C: A Minimal Topology for Bidirectional Solid-State Transformers. *IEEE Transactions on Power Electronics*, **2017**, 32, 995-1005	7.2	47
105	Condition Monitoring of Power Electronic Circuits Using Artificial Neural Networks. *IEEE Transactions on Power Electronics*, **2009**, 24, 2363-2367	7.2	43
104	High speed switching issues of high power rated silicon-carbide devices and the mitigation methods **2015**,		39
103	Design of a 10-kV—A Soft-Switching Solid-State Transformer (S4T). *IEEE Transactions on Power Electronics*, **2018**, 33, 5724-5738	7.2	32
102	. *IEEE Transactions on Power Electronics*, **2021**, 36, 5236-5249	7.2	31
101	Controllable Network Transformers. *Power Electronics Specialist Conference (PESC), IEEE*, **2008**,		26
100	Modular Universal Converter for MVDC Applications **2018**,		23
99	Design and implementation of power line sensornet for overhead transmission lines **2009**,		22
98	Thin AC converters—A new approach for making existing grid assets smart and controllable. *Power Electronics Specialist Conference (PESC), IEEE*, **2008**,		22
97	SiC-Based 5-kV Universal Modular Soft-Switching Solid-State Transformer (M-S4T) for Medium-Voltage DC Microgrids and Distribution Grids. *IEEE Transactions on Power Electronics*, **2021**, 36, 11326-11343	7.2	21
96	Protection of meshed microgrids with communication overlay **2010**,		19
95	7.2 kV Three-Port Single-Phase Single-Stage Modular Soft-Switching Solid-State Transformer with Active Power Decoupling and Reduced DC-Link **2020**,		17

94	Distributed Power Electronics: An Enabler for the Future Grid. *CPSS Transactions on Power Electronics and Applications*, **2016**, 1, 57-65	3.5	16
93	Current-Source Solid-State DC Transformer Integrating LVDC Microgrid, Energy Storage, and Renewable Energy Into MVDC Grid. *IEEE Transactions on Power Electronics*, **2022**, 37, 1044-1058	7.2	16
92	Single-stage soft-switching solid-state transformer for bidirectional motor drives **2017**,		15
91	Voltage Synthesis Using Dual Virtual Quadrature Sources - A New Concept in AC Power Conversion **2007**,		15
90	Impact of Transformer Leakage Inductance on the Soft-Switching Solid-State Transformer **2018**,		15
89	Enabling a Decentralized Smart Grid Using Autonomous Edge Control Devices. *IEEE Internet of Things Journal*, **2019**, 6, 7406-7419	10.7	14
88	Reducing transmission investment to meet Renewable Portfolio Standards Using Smart Wires **2010** ,		14
87	Transient droop for improved transient load sharing in microgrids **2014**,		13
86	Stacked Low-Inertia Converter or Solid-State Transformer: Modeling and Model Predictive Priority-Shifting Control for Voltage Balance. *IEEE Transactions on Power Electronics*, **2021**, 36, 8934-8952	7.2	13
85	Soft-switching isolated tri-port converter for integration of PV, storage and single-phase AC grid **2017**,		12
84	Characterization of 3.3-kV Reverse-Blocking SiC Modules for Use in Current-Source Zero-Voltage-Switching Converters. *IEEE Transactions on Power Electronics*, **2021**, 36, 876-887	7.2	12
83	Loss comparison between SiC, hybrid Si/SiC, and Si devices in direct AC/AC converters **2012**,		11
82	New Single-Stage Soft-Switching Solid-State Transformer with Reduced Conduction Loss and Minimal Auxiliary Switch **2020**,		11
81	Fast Dynamic Control of Stacked Low Inertia Converters **2018**,		11
80	Turning Distribution Feeders Into STATCOMs. *IEEE Transactions on Industry Applications*, **2017**, 53, 1372-1380	4.3	10
79	Mitigating distribution transformer lifetime degradation caused by grid-enabled vehicle (GEV) charging **2011**,		10
78	Overhead conductor thermal dynamics identification by using Echo State Networks **2009**,		10
77	Managing distribution feeder voltage issues caused by high PV penetration **2016**,		9

76	Solid-State Transformer and Hybrid Transformer with Integrated Energy Storage in Active Distribution Grids: Technical and Economic Comparison, Dispatch, and Control. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2022**, 1-1	5.6	9
75	Systematic Study of Data Requirements and AMI Capabilities for Smart Meter Analytics **2019**,		9
74	Optimal Design of the Resonant Tank of the Soft-Switching Solid-State Transformer **2019**,		9
73	Robust Predictive Control for Modular Solid-State Transformer With Reduced DC Link and Parameter Mismatch. *IEEE Transactions on Power Electronics*, **2021**, 36, 14295-14311	7.2	9
72	New Modulation and Impact of Transformer Leakage Inductance on Current-Source Solid-State Transformer. *IEEE Transactions on Power Electronics*, **2022**, 37, 562-576	7.2	9
71	High-frequency transformer design for the soft-switching solid state transformer (S4T) **2017**,		8
70	Validation of the Plug-and-Play AC/AC Power Electronics Building Block (AC-PEBB) for Medium-Voltage Grid Control Applications. *IEEE Transactions on Industry Applications*, **2014**, 50, 3549-3557	4.3	8
69	Design and testing of a medium voltage Controllable Network Transformer Prototype with an integrated hybrid active filter **2011**,		8
68	Reducing transmission investment to meet Renewable Portfolio Standards using Controlled Energy Flows **2010**,		8
67	Soft-switching solid state transformer (S4T) **2016**,		8
66	Control of multilevel direct AC converters **2009**,		7
65	MLPN based Parameter Estimation to Evaluate Overhead Power Line Dynamic Thermal Rating **2009** ,		7
64	Inverter-less STATCOMs. *Power Electronics Specialist Conference (PESC), IEEE*, **2008**,		7
63	A Novel Approach to Implement Low-Cost AMI Functionality using Delay-Tolerant Communication **2019**,		6
62	Experimental validation of active snubber circuit for direct AC/AC converters **2012**,		6
61	Power flow controller for meshed systems with a fractionally rated BTB converter **2012**,		6
60	Zero Energy Storage Voltage Sag Correctors for Industrial Applications **2007**,		6
59	Smart tie-line control using Controllable Network Transformers **2010**,		5

58	Active AC snubber for direct AC/AC power converters **2011**,		5
57	Lightning Impulse Protection for Grid-connected Solid-state Transformers **2020**,		5
56	Reducing Energy Consumption in Industrial Plants Using Behind the Meter Conservation Voltage Reduction **2018**,		5
55	Distribution Transformer Health Monitoring using Smart Meter Data **2020**,		4
54	Decentralized Real-Time Pricing to Achieve Integrated Transactive and Physical Grids. *IEEE Access*, **2019**, 7, 132525-132541	3.5	4
53	Plug-and-play AC/AC power electronics building blocks (AC-PEBBs) for grid control **2012**,		4
52	A Practical Directional Third Harmonic Hybrid Active Filter for Medium-Voltage Utility Applications. *IEEE Transactions on Industry Applications*, **2013**, 49, 2674-2683	4.3	4
51	Evaluating the application of energy storage and day-ahead solar forecasting to firm the output of a photovoltaic plant **2011**,		4
50	An Edge-Intelligent, Clip-on Rogowski Current Sensor With Wide Dynamic Range. *IEEE Sensors Journal*, **2021**, 21, 1059-1071	4	4
49	7.2 kV Three-Port SiC Single-Stage Current-Source Solid-State Transformer with 90 kV Lightning Protection. *IEEE Transactions on Power Electronics*, **2022**, 1-1	7.2	4
48	Collaborative Volt-VAR Control Using Grid-Connected PV Inverters **2019**,		3
47	Improving Energy Efficiency and Productivity at Industrial Plants Using Dynamic Voltage Management. *IEEE Transactions on Industry Applications*, **2020**, 56, 1250-1257	4.3	3
46	Insulation Coordination Design for Grid-Connected Solid-State Transformers. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2021**, 1-1	5.6	3
45	Predictive Direct DC-Link Control for Active Power Decoupling of A Single-Phase Reduced DC-Link MV Solid-State Transformer **2020**,		3
44	Core Losses of Nanocrystalline Materials Under DC Bias Conditions **2020**,		3
43	Suppression of Device Voltage Stress from Ground Leakage Current for Soft-Switching Solid-State Transformer **2021**,		3
42	Flexible transformers for distribution grid control **2016**,		3
41	Asset Monitoring using Smart Sensing and Advanced Analytics for the Distribution Network **2019**,		3

40	Real-Time Modeling and HIL Simulation of Stacked Low-Inertia Converters with Soft-Switching and Fast Dynamic Control **2019**,		3
39	Soft-switching The Key to High Power WBG Converters **2018**,		3
38	Predictive Direct DC-Link Control for 7.2 kV Three-Port Low-Inertia Solid-State Transformer with Active Power Decoupling. *IEEE Transactions on Power Electronics*, **2022**, 1-1	7.2	3
37	A soft-switching dynamic VAr compensator **2017**,		2
36	Stable operation of multiple power routers **2013**,		2
35	Directional Triplen Hybrid Active Filter for radial systems **2011**,		2
34	Zero Energy Sag Correctors - Optimizing Dynamic Voltage Restorers for Industrial Applications. *Conference Record - IAS Annual Meeting (IEEE Industry Applications Society)*, **2007**,		2
33	Comparative Investigation of System-Level Optimized Power Conversion System Architectures to Reduce LCOE for Large-Scale PV-Plus-Storage Farms **2021**,		2
32	Intrinsically-Safe Modular Power Converters for Electric Transportation **2020**,		2
31	Layout, Packaging, and Efficiency Implications of a 1.7 kV Hybrid Si/SiC Reverse Blocking Switch Module in Soft-Switching Current Source Converters **2021**,		2
30	Improving Energy Efficiency and Productivity at Industrial Plants Using Dynamic Voltage Management **2019**,		2
29	Soft-Switching Characterization of 3.3 kV Reverse-blocking SiC Devices **2018**,		2
28	Grounded Controllable Network Transformer for Cost-Effective Grid Control **2018**,		2
27	Identifying and Avoiding Some Common Traps [Entrepreneur Viewpoint]. *IEEE Power Electronics Magazine*, **2016**, 3, 64-65	1.5	1
26	What's the Difference Between a US$0 Million and a US$0 Billion Company? [Entrepreneur Viewpoint]. *IEEE Power Electronics Magazine*, **2016**, 3, 69-70	1.5	1
25	A Novel Approach for Bump-less Connection of Microgrids with the Grid **2019**,		1
24	Scaling the Dynamic Capacitor (D-CAP) to medium voltages **2010**,		1
23	Integrated fault current limiter and power flow controller for grid tie-lines **2009**,		1

22	Laminated Permanent Magnets Enable Compact Magnetic Components in Current Source Converters **2021**,		1
21	Feed-Forward Compensation for Model Predictive Control in Tri-port Current-Source Medium-Voltage String Inverters for PV-Plus-Storage Farms **2021**,		1
20	A Multiport DC Transformer to Enable Flexible Scalable DC as a Service **2021**,		1
19	Unified Control (UniCon) Strategies for Grid-Connected Inverters **2021**,		1
18	A New Representation based on Virtual Capacitor for Virtual Synchronous Generators **2020**,		1
17	Novel Modulation Strategy to Eliminate Device Overvoltage Stress and Enable True ZVS Operation in the Soft-Switching Solid-State Transformer **2020**,		1
16	Dynamic DC-Link Current Minimization Control to Improve Current-Source Solid-State Transformer Efficiency **2020**,		1
15	Enabling High Efficiency in Low-Voltage Soft-Switching Current Source Converters **2020**,		1
14	Design of Control Architecture for Stacked Low-Inertia Converters with Fast Dynamic Control **2020**,		1
13	Estimation of Eddy Current Winding Losses in Soft-Switching Solid-State Transformer **2019**,		1
12	The Case for Soft Switching in Four-Quadrant Power Converters. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2021**, 1-1	5.6	1
11	Implementing Volt-Var Control in Meshed Low Voltage Grids **2018**,		1
10	Laminated Permanent Magnets Enable Compact Magnetic Components in Current-Source Converters. *IEEE Transactions on Power Electronics*, **2022**, 1-1	7.2	1
9	DC-Link Current Minimization Control for Current Source Converter-Based Solid-State Transformer. *IEEE Transactions on Power Electronics*, **2022**, 1-1	7.2	1
8	Online Detection of Inter-Turn Winding Faults in Single-Phase Distribution Transformers Using Smart Meter Data. *IEEE Transactions on Smart Grid*, **2021**, 1-1	10.7	0
7	Entrepreneurs Drive Creative Destruction [Entrepreneur Viewpoint]. *IEEE Power Electronics Magazine*, **2016**, 3, 38-39	1.5	
6	The IEEE Empower a Billion Lives Competition: Regional Round Results [Entrepreneur Viewpoint]. *IEEE Power Electronics Magazine*, **2019**, 6, 12-16	1.5	
5	You Have Decided to Take The Plunge - Now How Do You Fund It? [Entrepreneur Viewpoint]. *IEEE Power Electronics Magazine*, **2015**, 2, 54-55	1.5	

4	Slow and Steady Wins the Race: Other Models for Entrepreneurship [Entrepreneur Viewpoint]. *IEEE Power Electronics Magazine*, **2016**, 3, 16-17	1.5
3	Team SoULS Wins US$100,000 in the IEEE Empower a Billion Lives Global Competition [Entrepreneur Viewpoint]. *IEEE Power Electronics Magazine*, **2019**, 6, 12-16	1.5
2	Standards: Entrepreneurs' Friend or Foe? [Entrepreneur Viewpoint]. *IEEE Power Electronics Magazine*, **2018**, 5, 18-20	1.5
1	Update on the Empower a Billion Lives Initiative [Entrepreneur Viewpoint]. *IEEE Power Electronics Magazine*, **2018**, 5, 18-19	1.5