Khurram Afridi

List of Publications by Year in Descending Order

96 papers	1,264 citations	20 h-index	30 g-index
117 ext. papers	1,671 ext. citations	6.6 avg, IF	5.1 L-index

#	Paper	IF	Citations
96	Performance Enhancement of ICN-Based Single-Stage AC-DC Converters Using Reconfigurable Inverters. *IEEE Transactions on Power Electronics*, **2022**, 1-1	7.2	0
95	A High-Power-Density High-Efficiency Soft-Switched Single-Phase Universal Input to 28-V Isolated AC□DC Converter Module Designed for Paralleled Operation. *IEEE Transactions on Power Electronics*, **2022**, 37, 8262-8280	7.2	1
94	A Large Air-Gap Multi-MHz Capacitive Wireless Power Transfer System Using Compact Charging Pads **2021**,		1
93	A Single-Stage Isolated AC□DC Converter Based on the Impedance Control Network Architecture. *IEEE Transactions on Power Electronics*, **2021**, 36, 10366-10382	7.2	5
92	Beam power scale-up in micro-electromechanical systems based multi-beam ion accelerators. *Review of Scientific Instruments*, **2021**, 92, 103301	1.7	2
91	A New Approach to Steady-State Modeling, Analysis, and Design of Power Converters. *IEEE Transactions on Power Electronics*, **2021**, 36, 12746-12768	7.2	3
90	GaN-Based High-Power-Density AC□DC□AC Converter for Single-Phase Transformerless Online Uninterruptible Power Supply. *IEEE Transactions on Power Electronics*, **2021**, 36, 13968-13984	7.2	4
89	Broadly-Applicable Accurate Analytical Steady-State Model for Class-E Inverters **2021**,		1
88	Multi-MHz Multi-kV Power Amplifier for Compact Particle Accelerators **2020**,		2
87	High-Performance Megahertz-Frequency Resonant DC□DC Converter for Automotive LED Driver Applications. *IEEE Transactions on Power Electronics*, **2020**, 35, 10396-10412	7.2	14
86	Power Factor Enhancement of a Soft-Switched Common-Neutral Single-DC-Bus Power Converter **2020**,		1
85	Theoretical Limits of Power Transfer in Capacitive Wireless Charging Systems **2020**,		1
84	A 50-MHz Multi-kV Power Amplifier for Ion-Beam Accelerator Utilizing an Optimized Toroidal Inductor **2020**,		2
83	Active Variable Reactance Rectifier□A New Approach to Compensating for Coupling Variations in Wireless Power Transfer Systems. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2020**, 8, 2022-2040	5.6	13
82	Design of High-Efficiency Matching Networks for Capacitive Wireless Power Transfer Systems. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2020**, 1-1	5.6	14
81	A 3.75-kW High-Power-Transfer-Density Capacitive Wireless Charging System for EVs Utilizing Toroidal-Interleaved-Foil Coupled Inductors **2020**,		5
80	High-Performance Multi-MHz Capacitive Wireless Power Transfer System for EV Charging Utilizing Interleaved-Foil Coupled Inductors. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2020**, 1-1	5.6	9

79	A 27.12-MHz 10-kV Power Amplifier for Compact Particle Accelerators Utilizing an Optimized **2020**,		1
78	Challenges and Solutions to Passive Rectification in Multi-MHz Frequency Capacitive Wireless Power Transfer Systems for Electric Vehicle Charging **2020**,		4
77	Reduced-Fringing-Field Multi-MHz Capacitive Wireless Power Transfer System Utilizing a Metasurface-based Coupler **2020**,		4
76	Control of a Merged-Energy-Buffer based Two-Stage Electrolytic-Free Offline LED Driver **2019**,		2
75	A New Design Approach to Mitigating the Effect of Parasitics in Capacitive Wireless Power Transfer Systems for Electric Vehicle Charging. *IEEE Transactions on Transportation Electrification*, **2019**, 5, 1040-1059	7.6	33
74	Control of a GaN-Based High-Power-Density Single-Phase Online Uninterruptible Power Supply **2019**,		5
73	Closed-loop Control of a Dynamic Capacitive Wireless Power Transfer System **2019**,		2
72	High-Efficiency High-Power-Transfer-Density Capacitive Wireless Power Transfer System for Electric Vehicle Charging Utilizing Semi-Toroidal Interleaved-Foil Coupled Inductors **2019**,		13
71	A High-Power-Density Electrolytic-Free Offline LED Driver Utilizing a Merged Energy Buffer Architecture **2019**,		3
70	E-Mobility Advancements and Challenges. *IEEE Access*, **2019**, 7, 165226-165240	3.5	17
69	High-Power-Density GaN-Based Single-Phase Online Uninterruptible Power Supply **2019**,		1
68	A Multi-MHz Large Air-gap Capacitive Wireless Power Transfer System Utilizing an Active Variable Reactance Rectifier Suitable for Dynamic Electric Vehicle Charging **2019**,		1
67	Closed-Loop Control of LCL-T Resonant DC-DC Converter Operating as Automotive LED Driver **2019**,		3
66	Power Density and Efficiency Enhancement in ICN DC DC Converters Using Topology Morphing Control. *IEEE Transactions on Power Electronics*, **2019**, 34, 1881-1900	7.2	6
65	Improved design optimization of efficient matching networks for capacitive wireless power transfer systems **2018**,		14
64	Step-Down Impedance Control Network Resonant DC DC Converter Utilizing an Enhanced Phase-Shift Control for Wide-Input-Range Operation. *IEEE Transactions on Industry Applications*, **2018**, 54, 4523-4536	4.3	16
63	Design and Evaluation of a Reconfigurable Stacked Active Bridge DC DC Converter for Efficient Wide Load Range Operation. *IEEE Transactions on Power Electronics*, **2018**, 33, 10428-10448	7.2	9
62	**2018**,		14

61	A Compact Electrolytic-Free Two-Stage Universal Input Offline LED Driver With Volume-Optimized SSC Energy Buffer. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2018**, 6, 1116-1130	5.6	12
60	GaN-Based High-Power-Density Electrolytic-Free Universal Input LED Driver. *IEEE Transactions on Industry Applications*, **2018**, 54, 3890-3901	4.3	14
59	Improved Design Optimization for High-Efficiency Matching Networks. *IEEE Transactions on Power Electronics*, **2018**, 33, 37-50	7.2	32
58	A Step-Superposition-Based Analysis Approach to Modeling Resonant Converters. *IEEE Transactions on Power Electronics*, **2018**, 33, 7148-7165	7.2	5
57	High-Performance Single-Stage Isolated 48V-to-1.8V Point-of-Load Converter Utilizing Impedance Control Network and Distributed Transformer **2018**,		1
56	**2018**,		15
55	A High-Power-Density High-Efficiency Three-Level Buck Converter for Cellphone Battery Charging Applications **2018**,		2
54	**2018**,		5
53	A High-Frequency LCLC Network Based Resonant DC-DC Converter for Automotive LED Driver Applications **2018**,		3
52	High-Performance 13.56-MHz Large Air-Gap Capacitive Wireless Power Transfer System for Electric Vehicle Charging **2018**,		28
51	Kilowatt-scale large air-gap multi-modular capacitive wireless power transfer system for electric vehicle charging **2018**,		25
50	Multitrack Power Conversion Architecture. *IEEE Transactions on Power Electronics*, **2017**, 32, 325-340	7.2	45
49	A control architecture for low current distortion in bridgeless boost power factor correction rectifiers **2017**,		5
48	High-frequency ZVS k converter for automotive LED driver applications using planar integrated magnetics **2017**,		5
47	High-Efficiency Impedance Control Network Resonant DCDC Converter With Optimized Startup Control. *IEEE Transactions on Industry Applications*, **2017**, 53, 3880-3889	4.3	7
46	Multi-objective optimization of capacitive wireless power transfer systems for electric vehicle charging **2017**,		16
45	High-performance large air-gap capacitive wireless power transfer system for electric vehicle charging **2017**,		37
44	Energy Density Enhancement of Stacked Switched Capacitor Energy Buffers Through Capacitance Ratio Optimization. *IEEE Transactions on Power Electronics*, **2017**, 32, 6363-6380	7.2	17

43	High-power-transfer-density capacitive wireless power transfer system for electric vehicle charging **2017**,		33
42	GaN-based high-power-density electrolytic-free universal input LED driver **2017**,		6
41	Single-stage isolated 48V-to-1.8V point-of-load converter utilizing an impedance control network and integrated magnetic structures **2017**,		8
40	Capacitive wireless powering for electric vehicles with near-field phased arrays **2017**,		5
39	Active variable reactance rectifier A new approach to compensating for coupling variations in wireless power transfer systems **2017**,		17
38	A very-high-power-transfer-density GaN-based capacitive wireless power transfer system **2017**,		12
37	. *IEEE Transactions on Power Electronics*, **2016**, 31, 560-580	7.2	52
36	Design of efficient matching networks for capacitive wireless power transfer systems **2016**,		33
35	Near-field capacitive wireless power transfer array with external field cancellation **2016**,		26
34	A compact electrolytic-free two-stage universal input offline LED driver **2016**,		8
33	. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2016**, 4, 335-343	5.6	36
32	Improved design optimization approach for high efficiency matching networks **2016**,		5
31	High power density impedance control network DC-DC converter utilizing an integrated magnetic structure **2016**,		6
30	Step-down impedance control network resonant DC-DC converter utilizing an enhanced phase-shift control for wide-input-range operation **2016**,		2
29	Design tradeoffs in a multi-modular capacitive wireless power transfer system **2016**,		24
28	New design methdology for megahertz-frequency resonant dc-dc converters using impedance control network architecture **2016**,		4
27	A high power density single-phase inverter using stacked switched capacitor energy buffer **2016**,		10
26	Power density and efficiency enhancement in impedance control network resonant DC-DC converters using topology morphing control **2016**,		5

25	Improved capacitance ratio optimization methodology for stacked switched capacitor energy buffers **2015**,		9
24	Investigation of power transfer density enhancement in large air-gap capacitive wireless power transfer systems **2015**,		53
23	Impedance control network resonant dc-dc converter for wide-range high-efficiency operation **2015**,		9
22	Design of Class E Resonant Rectifiers and Diode Evaluation for VHF Power Conversion. *IEEE Transactions on Power Electronics*, **2015**, 30, 4960-4972	7.2	39
21	High efficiency impedance control network resonant DC-DC converter with optimized startup control **2015**,		8
20	High power transfer density and high efficiency 100 MHz capacitive wireless power transfer system **2015**,		15
19	Enhanced-accuracy augmented state-space approach to steady-state modeling of resonant converters **2015**,		5
18	A Multilevel Energy Buffer and Voltage Modulator for Grid-Interfaced Microinverters. *IEEE Transactions on Power Electronics*, **2015**, 30, 1203-1219	7.2	22
17	A step-superposition based analysis approach to modeling resonant converters **2015**,		5
16	Impedance control network resonant step-down DC-DC converter architecture **2015**,		13
15	Megahertz-frequency isolated resonant dc-dc converter using impedance control network for high-efficiency wide-range operation **2015**,		11
14	Impedance Control Network Resonant DC□DC Converter for Wide-Range High-Efficiency Operation. *IEEE Transactions on Power Electronics*, **2015**, 1-1	7.2	27
13	High Efficiency Resonant DC/DC Converter Utilizing a Resistance Compression Network. *IEEE Transactions on Power Electronics*, **2014**, 29, 4126-4135	7.2	41
12	Energy density enhancement of unipolar SSC energy buffers through capacitance ratio optimization **2014**,		9
11	. *IEEE Transactions on Industry Applications*, **2014**, 50, 1141-1149	4.3	20
10	An electrolytic-free offline LED driver with a ceramic-capacitor-based compact SSC energy buffer **2014**,		16
9	Design of Class E resonant rectifiers and diode evaluation for VHF power conversion **2014**,		4
8	Design of resistive-input class E resonant rectifiers for variable-power operation **2013**,		8

List of Publications

7	Optimal Design of Grid-Connected PEV Charging Systems With Integrated Distributed Resources. *IEEE Transactions on Smart Grid*, **2013**, 4, 956-967	10.7	33
6	Stacked Switched Capacitor Energy Buffer Architecture. *IEEE Transactions on Power Electronics*, **2013**, 28, 5183-5195	7.2	67
5	A multilevel energy buffer and voltage modulator for grid-interfaced micro-inverters **2013**,		7
4	High efficiency resonant dc/dc converter utilizing a resistance compression network **2013**,		7
3	Optimal design of grid-interfaced EV chargers with integrated generation **2012**,		4
2	An empirical analysis of the hydropower portfolio in Pakistan. *Energy Policy*, **2012**, 50, 228-241	7.2	27
1	Enhanced bipolar Stacked Switched Capacitor energy buffers **2012**,		4