

# Terence O'Donnell

## List of Publications by Year in descending order

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79  
papers

2,900  
citations

331670

21  
h-index

175258

52  
g-index

79  
all docs

79  
docs citations

79  
times ranked

2559  
citing authors

#	ARTICLE	IF	CITATIONS
1	Modeling of Smart Transformers for Power System Transient Stability Analysis. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 3759-3770.	5.4	2
2	Buck-Boost Common Ground Bridgeless PFC (CGBPFC) Rectifies With Positive/Negative Output. IEEE Transactions on Power Electronics, 2022, 37, 1272-1282.	7.9	16
3	Pseudo DC-Link EV Home Charger With a High Semiconductor Device Utilization Factor. IEEE Transactions on Industrial Electronics, 2022, 69, 2459-2469.	7.9	25
4	A Wide-Range High-Voltage-Gain Bidirectional DC-DC Converter for V2G and G2V Hybrid EV Charger. IEEE Transactions on Industrial Electronics, 2022, 69, 4718-4729.	7.9	60
5	Three-Switch Common Ground Step-Down and Step-Up Single-Stage Grid-Connected PV Inverter. IEEE Transactions on Power Electronics, 2022, 37, 7577-7589.	7.9	13
6	Impact of PLL Frequency Limiter on Synchronization Stability of Grid Feeding Converter. IEEE Transactions on Power Systems, 2022, 37, 2487-2490.	6.5	21
7	Neutral Current Optimization Control for Smart Transformer-Fed Distribution System Under Unbalanced Loads. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 1696-1707.	5.4	11
8	Architectures for frequency control in modern power systems. , 2021, , 149-191.		0
9	Hybrid Power Electronic Transformer Model for System-Level Benefits Quantification in Energy Distribution Systems. Frontiers in Electronics, 2021, 2, .	3.2	2
10	Co-ordinated grid forming control of AC-side-connected energy storage systems for converter-interfaced generation. International Journal of Electrical Power and Energy Systems, 2021, 133, 107201.	5.5	17
11	On the Synchronization Stability of Converters connected to Weak Resistive Grids. , 2021, , .		1
12	Impact of Current Transients on the Synchronization Stability Assessment of Grid-Feeding Converters. IEEE Transactions on Power Systems, 2020, 35, 4131-4134.	6.5	35
13	100% Converter-Interfaced generation using virtual synchronous generator control: A case study based on the irish system. Electric Power Systems Research, 2020, 187, 106475.	3.6	26
14	Virtual Inertia Control of Variable Speed Heat Pumps for the Provision of Frequency Support. Energies, 2020, 13, 1863.	3.1	10
15	Assessment of Grid-Feeding Converter Voltage Stability. IEEE Transactions on Power Systems, 2019, 34, 3980-3982.	6.5	29
16	Virtual synchronous machine-controlled grid-connected power electronic converter as a ROCOF control device for power system applications. Electrical Engineering, 2019, 101, 983-993.	2.0	6
17	A comprehensive state-space model of two-stage grid-connected PV systems in transient network analysis. International Journal of Electrical Power and Energy Systems, 2019, 110, 441-453.	5.5	11
18	Parameter Constraints for Virtual Synchronous Generator Considering Stability. IEEE Transactions on Power Systems, 2019, 34, 2479-2481.	6.5	99

#	ARTICLE	IF	CITATIONS
19	Methodology for Assessment of the Impact of Smart Transformers on Power System Reliability. , 2019, , .		0
20	Smart transformer Modelling in Optimal Power Flow Analysis. , 2019, , .		3
21	Analysis of virtual synchronous generator control and its response based on transfer functions. IET Power Electronics, 2019, 12, 2965-2977.	2.1	34
22	Smart Transformer Modelling and Hardware in-the-loop Validation. , 2019, , .		4
23	Neutral Current Minimization Control for Solid State Transformers Under Unbalanced Loads in Distribution Systems. IEEE Transactions on Industrial Electronics, 2019, 66, 8253-8262.	7.9	12
24	An Enhanced Two-Stage Grid-Connected Linear Parameter Varying Photovoltaic System Model for Frequency Support Strategy Evaluation. Energies, 2019, 12, 4739.	3.1	1
25	Design of VSC Connected Low Frequency AC Offshore Transmission With Long HVAC Cables. IEEE Transactions on Power Delivery, 2018, 33, 960-970.	4.3	13
26	Smart Transformer for the Provision of Coordinated Voltage and Frequency Support in the Grid. , 2018, , .		9
27	Neutral current reduction control for smart transformer under the imbalanced load in distribution system. , 2018, , .		6
28	Variable AC transmission frequencies for offshore wind farm interconnection. Renewable Energy, 2017, 103, 321-332.	8.9	19
29	Genetic algorithm based PI tuning of VSC-HVDC system and implementation using OPAL-RT. , 2017, , .		2
30	Dynamic demand minimization using a smart transformer. , 2017, , .		9
31	Control strategies for automatic generation control over MTDC grids. Control Engineering Practice, 2016, 54, 129-139.	5.5	9
32	Performance of solid state transformers under imbalanced loads in distribution systems. , 2016, , .		6
33	Low Frequency AC transmission for offshore wind power: A review. Renewable and Sustainable Energy Reviews, 2016, 56, 75-86.	16.4	61
34	Electrochemical Fabrication of Multi-Nanolayers. , 2016, , 355-387.		0
35	The evaluation of a modular solid state transformer and low-frequency distribution transformer under daily loading profile. , 2015, , .		5
36	A Comparison of VSC-HVDC with Low Frequency AC for Offshore Wind Farm Design and Interconnection. Energy Procedia, 2015, 80, 185-192.	1.8	13

#	ARTICLE	IF	CITATIONS
37	Low Frequency AC transmission as an alternative to VSC-HVDC for grid interconnection of offshore wind. , 2015, , .		14
38	Electrochemical Fabrication of Multi-Nanolayers. , 2015, , 1-27.		0
39	Electrochemical Fabrication of Multi-Nanolayers. , 2015, , 1-27.		0
40	PI-Fuzzy rule based controller for Analysis and performance evaluation of dc motor speed control. , 2014, , .		3
41	Performance of 3-phase 4-wire solid state transformer under imbalanced loads. , 2014, , .		1
42	Investigation of modularity in DC-DC converters for solid state transformers. , 2014, , .		2
43	Variable Frequency Operation for Future Offshore Wind Farm Design: A Comparison with Conventional Wind Turbines. Energy Procedia, 2014, 53, 280-289.	1.8	10
44	Distributed MPC for Frequency Regulation in Multi-Terminal HVDC Grids. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 11141-11146.	0.4	10
45	Comparison of wind turbine/generator configurations for future offshore wind farms. , 2013, , .		0
46	An Improved Calculation of Copper Losses in Integrated Power Inductors on Silicon. IEEE Transactions on Power Electronics, 2013, 28, 3641-3647.	7.9	28
47	Magnetic-Core and Air-Core Inductors on Silicon: A Performance Comparison up to 100 MHz. IEEE Transactions on Magnetics, 2011, 47, 4429-4432.	2.1	53
48	Electrodeposited anisotropic NiFe 45/55 thin films for high-frequency micro-inductor applications. Journal of Magnetism and Magnetic Materials, 2010, 322, 1690-1693.	2.3	37
49	Spin dynamics of polycrystalline Ni films on Si substrate. Journal of Magnetism and Magnetic Materials, 2010, 322, 1686-1689.	2.3	2
50	Magnetic properties of Ni nanoparticles on microporous silica spheres. Journal of Magnetism and Magnetic Materials, 2010, 322, 1269-1274.	2.3	13
51	Electrodeposited amorphous Co <sup>42</sup> P based alloy with improved thermal stability. Journal of Magnetism and Magnetic Materials, 2010, 322, 1536-1539.	2.3	11
52	Optimization of magnetic enhancement layers for high-frequency stripline micro-inductors. Journal of Magnetism and Magnetic Materials, 2010, 322, 1527-1531.	2.3	10
53	Precessional dynamics of Ni <sub>45</sub> Fe <sub>55</sub> thin films for ultrahigh frequency integrated magnetics. Journal of Applied Physics, 2010, 107, 033907.	2.5	17
54	Shape-independent permeability model for uniaxially-anisotropic ferromagnetic thin films. Applied Physics Letters, 2010, 96, .	3.3	15

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55	Integrated magnetics on silicon for power supply in package (PSiP) and power supply on chip (PwrSoC). , 2010, , .		17
56	Electromagnetic Energy Harvesting. , 2009, , 129-161.		59
57	Analysis of Microinductor Performance in a 20-100 MHz DC/DC Converter. IEEE Transactions on Power Electronics, 2009, 24, 2212-2218.	7.9	35
58	Triaxial Fluxgate Sensor Excitation and Core Shape Study. IEEE Sensors Journal, 2009, 9, 1971-1978.	4.7	1
59	Comparison of Test Methods for Characterization of High-Leakage Two-Winding Transformers. IEEE Transactions on Industry Applications, 2009, 45, 1729-1741.	4.9	20
60	Design, fabrication and test of integrated micro-scale vibration-based electromagnetic generator. Sensors and Actuators A: Physical, 2008, 145-146, 336-342.	4.1	118
61	High-frequency permeability of electroplated CoNiFe and CoNiFeFe <sup>2+</sup> C alloys. Journal of Magnetism and Magnetic Materials, 2008, 320, e819-e822.	2.3	12
62	High-frequency nanostructured magnetic materials for integrated inductors. Journal of Magnetism and Magnetic Materials, 2008, 320, 2509-2512.	2.3	18
63	Energy scavenging for long-term deployable wireless sensor networks. Talanta, 2008, 75, 613-623.	5.5	215
64	Thin-Film-Integrated Power Inductor on Si and Its Performance in an 8-MHz Buck Converter. IEEE Transactions on Magnetics, 2008, 44, 4096-4099.	2.1	49
65	Power Management, Energy Conversion and Energy Scavenging for Smart Systems. Microsystems, 2008, , 241-266.	0.3	5
66	Fabrication and Test of Integrated Micro-Scale Vibration Based Electromagnetic Generator. , 2007, , .		11
67	Design considerations for high frequency buck converter. , 2007, , .		1
68	Series-Coupling Test Characterization of On-chip Silicon-Integrated and PWB-Integrated Transformers. IEEE Applied Power Electronics Conference and Exposition, 2007, , .	0.0	4
69	A micro electromagnetic generator for vibration energy harvesting. Journal of Micromechanics and Microengineering, 2007, 17, 1257-1265.	2.6	1,203
70	Micro-inductors integrated on silicon for power supply on chip. Journal of Magnetism and Magnetic Materials, 2007, 316, e233-e237.	2.3	84
71	Thin Film Microtransformer Integrated on Silicon for Signal Isolation. IEEE Transactions on Magnetics, 2007, 43, 2719-2721.	2.1	31
72	Scaling effects for electromagnetic vibrational power generators. Microsystem Technologies, 2007, 13, 1637-1645.	2.0	51

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73	Vibration based electromagnetic micropower generator on silicon. Journal of Applied Physics, 2006, 99, 08P511.	2.5	66
74	Planar fluxgate current sensor integrated in printed circuit board. Sensors and Actuators A: Physical, 2006, 129, 20-24.	4.1	10
75	Microfabricated coupled inductors for integrated power converters. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 1343-1346.	2.3	16
76	Excitation and temperature stability of PCB fluxgate sensor. IEEE Sensors Journal, 2005, 5, 1264-1269.	4.7	14
77	PCB technology used in fluxgate sensor construction. Sensors and Actuators A: Physical, 2004, 115, 286-292.	4.1	28
78	Integrated passives in advanced printed wiring boards. Circuit World, 2001, 27, 22-25.	0.9	6
79	Characterisation of embedded filters in advanced printed wiring boards. Microelectronics Reliability, 2001, 41, 781-788.	1.7	10