

# Amir Sajjad Bahman

## List of Publications by Year in descending order

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44  
papers

994  
citations

567281

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580821

25  
g-index

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docs citations

44  
times ranked

789  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Lumped Thermal Model Including Thermal Coupling and Thermal Boundary Conditions for High-Power IGBT Modules. IEEE Transactions on Power Electronics, 2018, 33, 2518-2530.	7.9	172
2	Complete Loss and Thermal Model of Power Semiconductors Including Device Rating Information. IEEE Transactions on Power Electronics, 2015, 30, 2556-2569.	7.9	154
3	A 3-D-Lumped Thermal Network Model for Long-Term Load Profiles Analysis in High-Power IGBT Modules. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2016, 4, 1050-1063.	5.4	131
4	A Review on IGBT Module Failure Modes and Lifetime Testing. IEEE Access, 2021, 9, 9643-9663.	4.2	74
5	Mission-Profile-Based Lifetime Prediction for a SiC mosfet Power Module Using a Multi-Step Condition-Mapping Simulation Strategy. IEEE Transactions on Power Electronics, 2019, 34, 9698-9708.	7.9	54
6	Active Power Cycling Test Bench for SiC Power MOSFETsâ€™ Principles, Design, and Implementation. IEEE Transactions on Power Electronics, 2021, 36, 2661-2675.	7.9	33
7	Modeling of Short-Circuit-Related Thermal Stress in Aged IGBT Modules. IEEE Transactions on Industry Applications, 2017, 53, 4788-4795.	4.9	28
8	Mission-profile-based stress analysis of bond-wires in SiC power modules. Microelectronics Reliability, 2016, 64, 419-424.	1.7	27
9	Compact Sandwiched Press-Pack SiC Power Module With Low Stray Inductance and Balanced Thermal Stress. IEEE Transactions on Power Electronics, 2020, 35, 2237-2241.	7.9	24
10	Power electronic converter reliability and prognosis review focusing on power switch module failures. Journal of Power Electronics, 2021, 21, 865-880.	1.5	24
11	Lifetime Analysis of Metallized Polypropylene Capacitors in Modular Multilevel Converter Based on Finite Element Method. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 4248-4259.	5.4	20
12	Optimization tool for direct water cooling system of high power IGBT modules. , 2016, , .		18
13	A fast electro-thermal co-simulation modeling approach for SiC power MOSFETs. , 2017, , .		18
14	Lifetime Estimation and Failure Risk Analysis in a Power Stage Used in Wind-Fuel Cell Hybrid Energy Systems. Electronics (Switzerland), 2019, 8, 1412.	3.1	18
15	Frozen Leg Operation of a Three-Phase Dual Active Bridge Converter. IEEE Transactions on Power Electronics, 2019, 34, 4239-4248.	7.9	17
16	Electrical parasitics and thermal modeling for optimized layout design of high power SiC modules. , 2016, , .		16
17	General 3D lumped thermal model with various boundary conditions for high power IGBT modules. , 2016, , .		15
18	Thermal modeling of wire-bonded power modules considering non-uniform temperature and electric current interactions. Microelectronics Reliability, 2018, 88-90, 1135-1140.	1.7	15

#	ARTICLE	IF	CITATIONS
19	Impact of device aging in the compact electro-thermal modeling of SiC power MOSFETs. <i>Microelectronics Reliability</i> , 2019, 100-101, 113336.	1.7	15
20	Fuzzy-Logic-Based Mean Time to Failure (MTTF) Analysis of Interleaved Dc-Dc Converters Equipped with Redundant-Switch Configuration. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 88.	2.5	15
21	Evaluation of current stresses in nine-switch energy conversion systems. <i>IET Power Electronics</i> , 2014, 7, 2877-2886.	2.1	14
22	An Extended Multilayer Thermal Model for Multichip IGBT Modules Considering Thermal Aging. <i>IEEE Access</i> , 2021, 9, 84217-84230.	4.2	13
23	Reliability-oriented environmental thermal stress analysis of fuses in power electronics. <i>Microelectronics Reliability</i> , 2017, 76-77, 25-30.	1.7	9
24	Finite Element Modeling of IGBT Modules to Explore the Correlation between Electric Parameters and Damage in Bond Wires. , 2019, , .		9
25	Thermal Modeling of Large Electrolytic Capacitors Using FEM and Considering the Internal Geometry. <i>IEEE Journal of Emerging and Selected Topics in Power Electronics</i> , 2021, 9, 6315-6328.	5.4	9
26	Compact electro-thermal modeling of a SiC MOSFET power module under short-circuit conditions. , 2017, , .		7
27	Comparison between 9-level hybrid asymmetric and conventional multi-level inverters for medium voltage application. , 2013, , .		6
28	Fuse modeling for reliability study of power electronic circuits. , 2017, , .		5
29	Computer-aided engineering simulations. , 2018, , 199-223.		4
30	Reliability Analysis of a 3-leg 4-wire Inverter under Unbalanced Loads and Harmonic Injection. , 2019, , .		4
31	Wear-out evolution analysis of multiple-bond-wires power modules based on thermo-electro-mechanical FEM simulation. <i>Microelectronics Reliability</i> , 2019, 100-101, 113472.	1.7	4
32	Improved Temperature Monitoring and Protection Method of Three-Level NPC Application Based on Half-Bridge IGBT Modules. <i>IEEE Access</i> , 2022, 10, 35605-35619.	4.2	4
33	Prediction of short-circuit-related thermal stress in aged IGBT modules. , 2016, , .		3
34	Non-uniform Temperature Distribution Implications on Thermal Analysis Accuracy of Si IGBTs and SiC MOSFETs. , 2018, , .		3
35	Loss comparison of different nine-switch and twelve-switch energy conversion systems. , 2014, , .		2
36	Failure mechanism analysis of fuses subjected to manufacturing and operational thermal stresses. <i>Microelectronics Reliability</i> , 2018, 88-90, 304-308.	1.7	2

#	ARTICLE	IF	CITATIONS
37	Enhancement of Thermo-mechanical Behavior of IGBT Modules through Engineered Threshold Voltages. , 2019, , .		2
38	An Online Identification Method of Thermal Dissipation State for Forced Air-Cooled System of Power Converters. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 7677-7690.	5.4	2
39	Frozen leg operation of a three-phase dual active bridge DC/DC converter at light loads. , 2018, , .		1
40	Loss and Thermal Analysis of a 100 kW Converter Module Mounted on a Cold-Plate for Fast Charging Applications. , 2019, , .		1
41	A Busbar Integrated SiC-based Converter with Embedded Heat-pipes. , 2019, , .		1
42	Effect of Current Distortion and Unbalanced Loads on Semiconductors Reliability. IEEE Access, 2021, 9, 162660-162670.	4.2	1
43	A Methodology for Rapid Estimation of Junction Temperature of Power Semiconductors Considering Mission Profiles. , 2019, , .		0
44	Reliability analysis of sintered Cu joints under power cycle condition. , 2019, , .		0