

# Arto Javanainen

## List of Publications by Year in descending order

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62  
papers

1,018  
citations

430874

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477307

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63  
all docs

63  
docs citations

63  
times ranked

509  
citing authors

#	ARTICLE	IF	CITATIONS
1	Single-Event Burnout Mechanisms in SiC Power MOSFETs. IEEE Transactions on Nuclear Science, 2018, 65, 1951-1955.	2.0	94
2	Ion-Induced Energy Pulse Mechanism for Single-Event Burnout in High-Voltage SiC Power MOSFETs and Junction Barrier Schottky Diodes. IEEE Transactions on Nuclear Science, 2020, 67, 22-28.	2.0	67
3	Heavy Ion Induced Degradation in SiC Schottky Diodes: Bias and Energy Deposition Dependence. IEEE Transactions on Nuclear Science, 2017, 64, 415-420.	2.0	63
4	Single-Event Burnout of SiC Junction Barrier Schottky Diode High-Voltage Power Devices. IEEE Transactions on Nuclear Science, 2018, 65, 256-261.	2.0	63
5	Linear Energy Transfer of Heavy Ions in Silicon. IEEE Transactions on Nuclear Science, 2007, 54, 1158-1162.	2.0	40
6	Estimating Terrestrial Neutron-Induced SEB Cross Sections and FIT Rates for High-Voltage SiC Power MOSFETs. IEEE Transactions on Nuclear Science, 2019, 66, 337-343.	2.0	37
7	Heavy-Ion Microbeam Studies of Single-Event Leakage Current Mechanism in SiC VD-MOSFETs. IEEE Transactions on Nuclear Science, 2020, 67, 1381-1389.	2.0	36
8	Influence of Beam Conditions and Energy for SEE Testing. IEEE Transactions on Nuclear Science, 2012, 59, 1149-1160.	2.0	33
9	Current Transport Mechanism for Heavy-Ion Degraded SiC MOSFETs. IEEE Transactions on Nuclear Science, 2019, 66, 1702-1709.	2.0	31
10	Energy loss measurement of protons in liquid water. Physics in Medicine and Biology, 2011, 56, 2367-2374.	3.0	30
11	Upgrades for the RADEF Facility. , 2007, , .		29
12	Charge Transport Mechanisms in Heavy-Ion Driven Leakage Current in Silicon Carbide Schottky Power Diodes. IEEE Transactions on Device and Materials Reliability, 2016, 16, 208-212.	2.0	27
13	Dynamic Test Methods for COTS SRAMs. IEEE Transactions on Nuclear Science, 2014, 61, 3095-3102.	2.0	26
14	Impact of Terrestrial Neutrons on the Reliability of SiC VD-MOSFET Technologies. IEEE Transactions on Nuclear Science, 2021, 68, 634-641.	2.0	24
15	Failure Estimates for SiC Power MOSFETs in Space Electronics. Aerospace, 2018, 5, 67.	2.2	23
16	Heavy-Ion Induced Charge Yield in MOSFETs. IEEE Transactions on Nuclear Science, 2009, 56, 3367-3371.	2.0	22
17	Heavy Ion Induced Degradation in SiC Schottky Diodes: Incident Angle and Energy Deposition Dependence. IEEE Transactions on Nuclear Science, 2017, , 1-1.	2.0	20
18	Assessment of Proton Direct Ionization for the Radiation Hardness Assurance of Deep Submicron SRAMs Used in Space Applications. IEEE Transactions on Nuclear Science, 2021, 68, 937-948.	2.0	20

#	ARTICLE	IF	CITATIONS
19	Enhanced Charge Collection in SiC Power MOSFETs Demonstrated by Pulse-Laser Two-Photon Absorption SEE Experiments. IEEE Transactions on Nuclear Science, 2019, 66, 1694-1701.	2.0	19
20	Unifying Concepts for Ion-Induced Leakage Current Degradation in Silicon Carbide Schottky Power Diodes. IEEE Transactions on Nuclear Science, 2020, 67, 135-139.	2.0	19
21	Statistical Analysis of Heavy-Ion Induced Gate Rupture in Power MOSFETs—Methodology for Radiation Hardness Assurance. IEEE Transactions on Nuclear Science, 2012, 59, 2920-2929.	2.0	17
22	Impact of Electrical Stress and Neutron Irradiation on Reliability of Silicon Carbide Power MOSFET. IEEE Transactions on Nuclear Science, 2020, 67, 1365-1373.	2.0	16
23	Experimental Linear Energy Transfer of Heavy Ions in Silicon for RADEF Cocktail Species. IEEE Transactions on Nuclear Science, 2009, 56, 2242-2246.	2.0	15
24	Single Event Transients and Pulse Quenching Effects in Bandgap Reference Topologies for Space Applications. IEEE Transactions on Nuclear Science, 2016, 63, 2950-2961.	2.0	15
25	Low Energy Protons at RADEF - Application to Advanced eSRAMs. , 2014, , .		14
26	Heavy-ion induced single event effects and latent damages in SiC power MOSFETs. Microelectronics Reliability, 2022, 128, 114423.	1.7	13
27	Investigation on MCU Clustering Methodologies for Cross-Section Estimation of RAMs. IEEE Transactions on Nuclear Science, 2015, 62, 2620-2626.	2.0	12
28	Single-Event Effects in the Peripheral Circuitry of a Commercial Ferroelectric Random Access Memory. IEEE Transactions on Nuclear Science, 2018, 65, 1708-1714.	2.0	12
29	Molecular Dynamics Simulations of Heavy Ion Induced Defects in SiC Schottky Diodes. IEEE Transactions on Device and Materials Reliability, 2018, 18, 481-483.	2.0	12
30	Direct Ionization Impact on Accelerator Mixed-Field Soft-Error Rate. IEEE Transactions on Nuclear Science, 2020, 67, 345-352.	2.0	12
31	Radiation Hardness Assurance Through System-Level Testing: Risk Acceptance, Facility Requirements, Test Methodology, and Data Exploitation. IEEE Transactions on Nuclear Science, 2021, 68, 958-969.	2.0	12
32	Influence of beam conditions and energy for SEE testing. , 2011, , .		11
33	Heavy-Ion Radiation Impact on a 4 Mb FRAM Under Different Test Modes and Conditions. IEEE Transactions on Nuclear Science, 2016, 63, 2010-2015.	2.0	10
34	Electron-Induced Upsets and Stuck Bits in SDRAMs in the Jovian Environment. IEEE Transactions on Nuclear Science, 2021, 68, 716-723.	2.0	10
35	SEGR in SiO <sub>2</sub> —Si <sub>3</sub> N <sub>4</sub> Stacks. IEEE Transactions on Nuclear Science, 2014, 61, 1902-1908.	2.0	9
36	Low-Power, Subthreshold Reference Circuits for the Space Environment: Evaluated with $\beta$ -rays, X-rays, Protons and Heavy Ions. Electronics (Switzerland), 2019, 8, 562.	3.1	9

#	ARTICLE	IF	CITATIONS
37	SEU characterization of commercial and custom-designed SRAMs based on 90 nm technology and below. , 2020, , .		9
38	A simple expression for electronic stopping force of heavy ions in solids. Nuclear Instruments & Methods in Physics Research B, 2012, 285, 158-161.	1.4	8
39	Semi-Empirical Model for SEGR Prediction. IEEE Transactions on Nuclear Science, 2013, 60, 2660-2665.	2.0	8
40	SEE on Different Layers of Stacked-SRAMs. IEEE Transactions on Nuclear Science, 2015, 62, 2673-2678.	2.0	7
41	A subthreshold, low-power, RHBD reference circuit, for earth observation and communication satellites. , 2015, , .		7
42	Mechanisms of Electron-Induced Single-Event Latchup. IEEE Transactions on Nuclear Science, 2019, 66, 437-443.	2.0	7
43	Semi-Empirical LET Descriptions of Heavy Ions Used in the European Component Irradiation Facilities. IEEE Transactions on Nuclear Science, 2010, 57, 1946-1949.	2.0	5
44	Incident angle effect on heavy ion induced reverse leakage current in SiC Schottky diodes. , 2016, , .		5
45	Methodologies for the Statistical Analysis of Memory Response to Radiation. IEEE Transactions on Nuclear Science, 2016, 63, 2122-2128.	2.0	5
46	The Pion Single-Event Effect Resonance and its Impact in an Accelerator Environment. IEEE Transactions on Nuclear Science, 2020, 67, 1606-1613.	2.0	5
47	Radioluminescence Response of Ce-, Cu-, and Gd-Doped Silica Glasses for Dosimetry of Pulsed Electron Beams. Sensors, 2021, 21, 7523.	3.8	5
48	The first experimental values for the stopping power of 89Y ions in carbon, nickel and gold. Vacuum, 2009, 83, S73-S76.	3.5	4
49	New Insight into Single-Event Radiation Failure Mechanisms in Silicon Carbide Power Schottky Diodes and MOSFETs. Materials Science Forum, 0, 1004, 1066-1073.	0.3	4
50	Heavy-Ion Radiation Impact on a 4Mb FRAM under Different Test Conditions. , 2015, , .		3
51	Mechanisms of Electron-Induced Single-Event Upsets in Medical and Experimental Linacs. IEEE Transactions on Nuclear Science, 2018, 65, 1715-1723.	2.0	3
52	Application and development of ion-source technology for radiation-effects testing of electronics. Nuclear Instruments & Methods in Physics Research B, 2017, 406, 205-209.	1.4	2
53	Microbeam SEE Analysis of MIM Capacitors for GaN Amplifiers. IEEE Transactions on Nuclear Science, 2018, 65, 732-738.	2.0	2
54	Effects of Heavy Ion and Proton Irradiation on a SLC NAND Flash Memory. , 2019, , .		2

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55	Experimental Linear Energy Transfer of heavy ions in silicon for RADEF cocktail species. , 2008, , .		1
56	A Methodology for the Analysis of Memory Response to Radiation through Bitmap Superposition and Slicing. , 2015, , .		1
57	The Pion Single-Event Latch-Up Cross Section Enhancement: Mechanisms and Consequences for Accelerator Hardness Assurance. IEEE Transactions on Nuclear Science, 2021, 68, 1613-1622.	2.0	1
58	Proton Direct Ionization in Sub-Micron Technologies: Numerical Method for RPP Parameter Extraction. IEEE Transactions on Nuclear Science, 2022, 69, 254-263.	2.0	1
59	Isotopic Enriched and Natural SiC Junction Barrier Schottky Diodes Under Heavy Ion Irradiation. IEEE Transactions on Nuclear Science, 2022, 69, 1675-1682.	2.0	1
60	Semi-empirical LET descriptions of heavy ions used in the European Component Irradiation Facilities. , 2009, , .		0
61	SEGR in SiO <sub>2</sub> -Si <sub>3</sub> N <sub>4</sub> stacks. , 2013, , .		0
62	Parasitic Bipolar Action in SiC Power MOSFETs Demonstrated by Two-Photon Laser Experiment. , 2018, , .		0