Ruben Garcia Alia

List of Publications by Year
in descending order

94 papers	2,463 citations	331670 21 h-index	214800 47 g-index
94 all docs	94 docs citations	94 times ranked	1692 citing authors

#	Article	IF	Citations
1	FCC-ee: The Lepton Collider. European Physical Journal: Special Topics, 2019, 228, 261-623.	2.6	424
2	FCC-hh: The Hadron Collider. European Physical Journal: Special Topics, 2019, 228, 755-1107.	2.6	367
3	FCC Physics Opportunities. European Physical Journal C, 2019, 79, 1.	3.9	346
4	New Capabilities of the FLUKA Multi-Purpose Code. Frontiers in Physics, 2022, 9, .	2.1	127
5	HE-LHC: The High-Energy Large Hadron Collider. European Physical Journal: Special Topics, 2019, 228, 1109-1382.	2.6	108
6	CHARM: A Mixed Field Facility at CERN for Radiation Tests in Ground, Atmospheric, Space and Accelerator Representative Environments. IEEE Transactions on Nuclear Science, 2016, 63, 2106-2114.	2.0	88
7	A New RadMon Version for the LHC<newline/> and its Injection Lines. IEEE Transactions on Nuclear Science, 2014, 61, 3424-3431.	2.0	67
8	LHC and HL-LHC: Present and Future Radiation Environment in the High-Luminosity Collision Points and RHA Implications. IEEE Transactions on Nuclear Science, 2018, 65, 448-456.	2.0	43
9	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
10	Single event effects in high-energy accelerators. Semiconductor Science and Technology, 2017, 32, 034003.	2.0	33
11	Current Transport Mechanism for Heavy-Ion Degraded SiC MOSFETs. IEEE Transactions on Nuclear Science, 2019, 66, 1702-1709.	2.0	31
12	SEL Hardness Assurance in a Mixed Radiation Field. IEEE Transactions on Nuclear Science, 2015, 62, 2555-2562.	2.0	30
13	Radiation Effects on Deep Submicrometer SRAM-Based FPGAs Under the CERN Mixed-Field Radiation Environment. IEEE Transactions on Nuclear Science, 2018, 65, 1511-1518.	2.0	30
14	Ultrahigh Energy Heavy Ion Test Beam on Xilinx Kintex-7 SRAM-Based FPGA. IEEE Transactions on Nuclear Science, 2019, 66, 1813-1819.	2.0	29
15	SEU Measurements and Simulations in a Mixed Field Environment. IEEE Transactions on Nuclear Science, 2013, 60, 2469-2476.	2.0	26
16	Simplified SEE Sensitivity Screening for COTS Components in Space. IEEE Transactions on Nuclear Science, 2017, 64, 882-890.	2.0	26
17	Energy Dependence of Tungsten-Dominated SEL Cross Sections. IEEE Transactions on Nuclear Science, 2014, 61, 2718-2726.	2.0	25
18	Qualification and Characterization of SRAM Memories Used as Radiation Sensors in the LHC. IEEE Transactions on Nuclear Science, 2014, 61, 3458-3465.	2.0	25

#	Article	IF	Citations
19	Impact of Terrestrial Neutrons on the Reliability of SiC VD-MOSFET Technologies. IEEE Transactions on Nuclear Science, 2021, 68, 634-641.	2.0	24
20	SEL Cross Section Energy Dependence Impact on the High Energy Accelerator Failure Rate. IEEE Transactions on Nuclear Science, 2014, 61, 2936-2944.	2.0	22
21	The Effect of Proton Energy on SEU Cross Section of a 16ÂMbit TFT PMOS SRAM with DRAM Capacitors. IEEE Transactions on Nuclear Science, 2014, 61, 3074-3079.	2.0	21
22	High-energy Electron Induced SEUs and Jovian Environment Impact. IEEE Transactions on Nuclear Science, 2017, , 1-1.	2.0	20
23	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
24	Impact of Thermal and Intermediate Energy Neutrons on SRAM SEE Rates in the LHC Accelerator. IEEE Transactions on Nuclear Science, 2018, 65, 1800-1806.	2.0	19
25	0.1â€“10 MeV Neutron Soft Error Rate in Accelerator and Atmospheric Environments. IEEE Transactions on Nuclear Science, 2021, 68, 873-883.	2.0	18
26	Monte Carlo Evaluation of Single Event Effects in a Deep-Submicron Bulk Technology: Comparison Between Atmospheric and Accelerator Environment. IEEE Transactions on Nuclear Science, 2017, 64, 596-604.	2.0	17
27	System Level Radiation Characterization of a 1U CubeSat Based on CERN Radiation Monitoring Technology. IEEE Transactions on Nuclear Science, 2018, 65, 1694-1699.	2.0	17
28	Ultraenergetic Heavy-Ion Beams in the CERN Accelerator Complex for Radiation Effects Testing. IEEE Transactions on Nuclear Science, 2019, 66, 458-465.	2.0	17
29	SEE Measurements and Simulations Using Mono-Energetic GeV-Energy Hadron Beams. IEEE Transactions on Nuclear Science, 2013, 60, 4142-4149.	2.0	15
30	SEE Tests With Ultra Energetic Xe Ion Beam in the CHARM Facility at CERN. IEEE Transactions on Nuclear Science, 2019, 66, 1523-1531.	2.0	14
31	Thermal Neutron-Induced SEUs in the LHC Accelerator Environment. IEEE Transactions on Nuclear Science, 2020, 67, 1412-1420.	2.0	14
32	Study of SEU Sensitivity of SRAM-Based Radiation Monitors in 65-nm CMOS. IEEE Transactions on Nuclear Science, 2021, 68, 913-920.	2.0	14
33	Sub-LET Threshold SEE Cross Section Dependency With Ion Energy. IEEE Transactions on Nuclear Science, 2015, 62, 2797-2806.	2.0	13
34	A Mixed Field Facility at CERN for Radiation Test: CHARM. , 2015, , .		12
35	CERN IRRADIATION FACILITIES. Radiation Protection Dosimetry, 2018, 180, 120-124.	0.8	12
36	SEE Flux and Spectral Hardness Calibration of Neutron Spallation and Mixed-Field Facilities. IEEE Transactions on Nuclear Science, 2019, 66, 1532-1540.	2.0	12

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37	Direct Ionization Impact on Accelerator Mixed-Field Soft-Error Rate. IEEE Transactions on Nuclear Science, 2020, 67, 345-352.	2.0	12
38	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
39	X-Rays, <inline-formula> <tex-math notation="LaTeX">$gamma$ </tex-math> </inline-formula>-Rays, and Proton Beam Monitoring With Multimode Nitrogen-Doped Optical Fiber. IEEE Transactions on Nuclear Science, 2019, 66, 306-311.	2.0	11
40	Single Event Effects Characterization of the Programmable Logic of Xilinx Zynq-7000 FPGA Using Very/Ultra High-Energy Heavy Ions. IEEE Transactions on Nuclear Science, 2021, 68, 36-45.	2.0	11
41	Proton Dominance of Sub-LET Threshold GCR SEE Rate. IEEE Transactions on Nuclear Science, 2017, 64, 388-397.	2.0	10
42	Study of the Deposited Energy Spectra in Silicon by High-Energy Neutron and Mixed Fields. IEEE Transactions on Nuclear Science, 2020, 67, 175-180.	2.0	10
43	Single Event Effect Testing With Ultrahigh Energy Heavy Ion Beams. IEEE Transactions on Nuclear Science, 2020, 67, 63-70.	2.0	10
44	Single-Event Characterization of Xilinx UltraScale+^{Â®} MPSOC under Standard and Ultra-High Energy Heavy-Ion Irradiation. , 2018, , .		9
45	Study of the Impact of the LHC Radiation Environments on the Synergistic Displacement Damage and Ionizing Dose Effect on Electronic Components. IEEE Transactions on Nuclear Science, 2019, 66, 1548-1556.	2.0	9
46	Heavy Ion Induced Single Event Effects Characterization on an RF-Agile Transceiver for Flexible Multi-Band Radio Systems in NewSpace Avionics. Aerospace, 2020, 7, 14.	2.2	9
47	SEU characterization of commercial and custom-designed SRAMs based on 90 nm technology and below. , 2020, , .		9
48	Analysis of SEL on Commercial SRAM Memories and Mixed-Field Characterization of a Latchup Detection Circuit For LEO Space Applications. IEEE Transactions on Nuclear Science, 2017, , 1-1.	2.0	8
49	SEE Testing in the 24-GeV Proton Beam at the CHARM Facility. IEEE Transactions on Nuclear Science, 2018, 65, 1750-1758.	2.0	8
50	Heavy Ion Nuclear Reaction Impact on SEE Testing: From Standard to Ultra-high Energies. IEEE Transactions on Nuclear Science, 2020, 67, 1590-1598.	2.0	8
51	G4SEE: A Geant4-Based Single Event Effect Simulation Toolkit and Its Validation Through Monoenergetic Neutron Measurements. IEEE Transactions on Nuclear Science, 2022, 69, 273-281.	2.0	8
52	Compendium of Radiation-Induced Effects for Candidate Particle Accelerator Electronics. , 2013, , .		7
53	Mechanisms of Electron-Induced Single-Event Latchup. IEEE Transactions on Nuclear Science, 2019, 66, 437-443.	2.0	7
54	Radiation Environment in the LHC Arc Sections During Run 2 and Future HL-LHC Operations. IEEE Transactions on Nuclear Science, 2020, 67, 1682-1690.	2.0	7

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55	Evaluation of an Alternative Low Cost Approach for SEE Assessment of a SoC. , 2017, , .		6
56	Single Event Effect cross section calibration and application to quasi-monoenergetic and spallation facilities. EPJ Nuclear Sciences & Technologies, 2018, 4, 1.	0.7	6
57	Comparison Between In-flight SEL Measurement and Ground Estimation Using Different Facilities. IEEE Transactions on Nuclear Science, 2019, 66, 1541-1547.	2.0	6
58	In-Situ Testing of a Multi-Band Software-Defined Radio Platform in a Mixed-Field Irradiation Environment. Aerospace, 2019, 6, 106.	2.2	6
59	Configuration Memory Scrubbing of SRAM-Based FPGAs Using a Mixed 2-D Coding Technique. IEEE Transactions on Nuclear Science, 2022, 69, 871-882.	2.0	6
60	FLUKA Monte Carlo assessment of the terrestrial muon flux at low energies and comparison against experimental measurements. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 838, 109-116.	1.6	5
61	Longitudinal Direct Ionization Impact of Heavy Ions on See Testing for Ultrahigh Energies. IEEE Transactions on Nuclear Science, 2020, 67, 1530-1539.	2.0	5
62	COTS Optocoupler Radiation Qualification Process for LHC Applications Based on Mixed-Field Irradiations. IEEE Transactions on Nuclear Science, 2020, 67, 1395-1403.	2.0	5
63	Characterizing High-Energy Ion Beams With PIPS Detectors. IEEE Transactions on Nuclear Science, 2020, 67, 1421-1427.	2.0	5
64	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
65	Analysis of Bipolar Integrated Circuit Degradation Mechanisms Against Combined TIDâ€“DD Effects. IEEE Transactions on Nuclear Science, 2021, 68, 1585-1593.	2.0	5
66	Temperature Effect on the Radioluminescence of Cu-, Ce-, and CuCe-Doped Silica-Based Fiber Materials. IEEE Transactions on Nuclear Science, 2021, 68, 1782-1787.	2.0	5
67	Testing and Validation Methodology for a Radiation Monitoring System for Electronics in Particle Accelerators. IEEE Transactions on Nuclear Science, 2022, 69, 1642-1650.	2.0	5
68	Benchmark Between Measured and Simulated Radiation Level Data at the Mixed-Field CHARM Facility at CERN. IEEE Transactions on Nuclear Science, 2022, 69, 1557-1564.	2.0	5
69	Impact of Energy Dependence on Ground Level and Avionic SEE Rate Prediction When Applying Standard Test Procedures. Aerospace, 2019, 6, 119.	2.2	4
70	Measurements of ultra-high energy lead ions using silicon and diamond detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 985, 164671.	1.6	4
71	Neutron-induced effects on a self-refresh DRAM. Microelectronics Reliability, 2022, 128, 114406.	1.7	4
72	Thermal-to-high-energy neutron SEU characterization of commercial SRAMs. , 2021, , .		4

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73	How the Analysis of Archival Data Could Provide Helpful Information About TID Degradation. Case Study: Bipolar Transistors. IEEE Transactions on Nuclear Science, 2022, 69, 1691-1699.	2.0	4
74	Analysis of SEL on commercial SRAM memories for latchup detection and protection in LEO space applications. , 2016, , .		3
75	RadFET dose response in the CHARM mixed-field: FLUKA MC simulations. EPJ Nuclear Sciences & Technologies, 2017, 3, 24.	0.7	3
76	Preliminary design of CERN Future Circular Collider tunnel: first evaluation of the radiation environment in critical areas for electronics. EPJ Web of Conferences, 2017, 153, 03004.	0.3	3
77	Mechanisms of Electron-Induced Single-Event Upsets in Medical and Experimental Linacs. IEEE Transactions on Nuclear Science, 2018, 65, 1715-1723.	2.0	3
78	Implementation of Optical-Fiber Postmortem Dose Measurements: A Proof of Concept. IEEE Transactions on Nuclear Science, 2020, 67, 140-145.	2.0	3
79	Effects of Thermal Neutron Irradiation on a Self-Refresh DRAM. , 2020, , .		3
80	FPGA Qualification and Failure Rate Estimation Methodology for LHC Environments Using Benchmarks Test Circuits. IEEE Transactions on Nuclear Science, 2022, 69, 1633-1641.	2.0	3
81	Mono-energetic electron induced single-event effects at the VESPER facility. , 2016, , .		2
82	Irradiation Facilities at CERN. , 2017, , .		2
83	SEE cross section calibration and application to quasi-monoenergetic and spallation facilities. EPJ Web of Conferences, 2017, 153, 08015.	0.3	2
84	CELESTA Demonstrator Radiation Characterization in a LEO Representative Environment at CHARM. , 2017, , .		2
85	FPGA SEE Test with Ultra-High Energy Heavy Ions. , 2018, , .		2
86	Analysis of the Photoneutron Field Near the THz Dump of the CLEAR Accelerator at CERN With SEU Measurements and Simulations. IEEE Transactions on Nuclear Science, 2022, 69, 1541-1548.	2.0	2
87	Mixed-Field Radiation Qualification of a COTS Space On-Board Computer along with its CMOS Camera Payload. , 2019, , .		2
88	Advanced In-Situ Instrumentation of RF Circuits for Mixed-Field Irradiation Testing Purpose. , 2017, , .		1
89	Circuit design for a radiation tolerant 2.4 GHz synthesizer based on COTS components. , 2018, , .		1
90	Qualification of Electronic Systems for Radiation Environments of High Energy Accelerator. , 2018, , .		1

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91	Fast neutron measurements with solid state detectors at pulsed spallation sources. Journal of Neutron Research, 2020, 22, 345-352.	1.1	1
92	On-line beam monitoring and dose profile measurements of a <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e186" altimg="si2.svg"><mml:msup><mml:mrow /><mml:mrow><mml:mn>208</mml:mn></mml:mrow></mml:msup></mml:math>Pb beam of 150 GeV/n with a liquid-filled ionization chamber array. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 987, 164831.	1.6	1
93	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
94	RadFET dose response in the CHARM mixed-field: FLUKA MC simulations. EPJ Web of Conferences, 2017, 153, 01006.	0.3	0