Jawar Singh

List of Publications by Year
in descending order

97 papers	**1,321** citations	471371 **17** h-index	477173 **29** g-index
98 all docs	**98** docs citations	**98** times ranked	**820** citing authors

#	Article	IF	Citations
1	Charge-Plasma Based Process Variation Immune Junctionless Transistor. IEEE Electron Device Letters, 2014, 35, 411-413.	2.2	181
2	Potential Benefits and Sensitivity Analysis of Dopingless Transistor for Low Power Applications. IEEE Transactions on Electron Devices, 2015, 62, 729-735.	1.6	89
3	PVT-Aware Design of Dopingless Dynamically Configurable Tunnel FET. IEEE Transactions on Electron Devices, 2015, 62, 2404-2409.	1.6	63
4	Experimental demonstration of 100nm channel length In<inf>0.53</inf>Ga<inf>0.47</inf>As-based vertical inter-band tunnel field effect transistors (TFETs) for ultra low-power logic and SRAM applications. , 2009, , .		58
5	Blockchain-based Interoperable Healthcare using Zero-Knowledge Proofs and Proxy Re-Encryption. , 2020, , .		42
6	Electrically doped dynamically configurable field€effect transistor for low€power and high€performance applications. Electronics Letters, 2015, 51, 1284-1286.	0.5	39
7	Realization of efficient RF energy harvesting circuits employing different matching technique. , 2014, , .		38
8	Memristor based unbalanced ternary logic gates. Analog Integrated Circuits and Signal Processing, 2016, 87, 399-406.	0.9	38
9	A single ended 6T SRAM cell design for ultra-low-voltage applications. IEICE Electronics Express, 2008, 5, 750-755.	0.3	37
10	Dopingless ferroelectric tunnel FET architecture for the improvement of performance of dopingless n-channel tunnel FETs. Superlattices and Microstructures, 2016, 96, 16-25.	1.4	32
11	Design and performance projection of symmetric bipolar charge€plasma transistor on SOI. Electronics Letters, 2014, 50, 1461-1463.	0.5	30
12	Temperature sensitivity analysis of dopingless charge-plasma transistor. Solid-State Electronics, 2016, 117, 94-99.	0.8	30
13	Impact of Channel Hot Carrier Effect in Junction-and Doping-Free Devices and Circuits. IEEE Transactions on Electron Devices, 2016, 63, 5068-5071.	1.6	27
14	A Highly Scalable Junctionless FET Leaky Integrate-and-Fire Neuron for Spiking Neural Networks. IEEE Transactions on Electron Devices, 2021, 68, 1633-1638.	1.6	27
15	Influence of Germanium source on dopingless tunnel-FET for improved analog/RF performance. Superlattices and Microstructures, 2017, 101, 244-252.	1.4	26
16	Investigating the impact of NBTI on different power saving cache strategies. , 2010, , .		24
17	Simulation-Based Ultralow Energy and High-Speed LIF Neuron Using Silicon Bipolar Impact Ionization MOSFET for Spiking Neural Networks. IEEE Transactions on Electron Devices, 2020, 67, 2600-2606.	1.6	23
18	Computer aided analysis of phonocardiogram. Journal of Medical Engineering and Technology, 2007, 31, 319-323.	0.8	21

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19	A subthreshold single ended I/O SRAM cell design for nanometer CMOS technologies. , 2008, , .		21
20	A 0.6 V, low‑power and high‑gain ultra‑wideband low‑noise amplifier with forward‑body‑bias technique for low‑voltage operations. IET Microwaves, Antennas and Propagation, 2015, 9, 728-734.	0.7	20
21	A low power and high gain CMOS LNA for UWB applications in 90nm CMOS process. Microelectronics Journal, 2015, 46, 390-397.	1.1	18
22	Single Event Upset Detection and Correction. , 2007, , .		17
23	Device and circuit performance analysis of double gate junctionless transistors at L_g = 18Ânm. Journal of Engineering, 2014, 2014, 105-110.	0.6	17
24	Static and Quasi-Static Drain Current Modeling of Tri-Gate Junctionless Transistor With Substrate Bias-Induced Effects. IEEE Transactions on Electron Devices, 2019, 66, 2876-2883.	1.6	17
25	SiGe Source Charge Plasma TFET for Biosensing Applications. , 2017, , .		16
26	3-D Simulation of Junction- and Doping-Free Field-Effect Transistor Under Heavy Ion Irradiation. IEEE Transactions on Device and Materials Reliability, 2018, 18, 173-179.	1.5	16
27	Analog/RF Performance Investigation of Dopingless FET for Ultra-Low Power Applications. IEEE Access, 2019, 7, 141810-141816.	2.6	16
28	Single ended 6T SRAM with isolated read-port for low-power embedded systems. , 2009, , .		15
29	L-Shaped Tunnel Field-Effect Transistor-Based 1T DRAM With Improved Read Current Ratio, Retention Time, and Sense Margin. IEEE Transactions on Electron Devices, 2021, 68, 2705-2711.	1.6	15
30	Simulation and Analysis of Highly Sensitive MEMS Cantilever Designs for â€œin vivo Label Freeâ€ Biosensing. Procedia Technology, 2014, 14, 85-92.	1.1	14
31	Symmetric Lateral Doping-Free BJT: A Novel Design for Mixed Signal Applications. IEEE Transactions on Electron Devices, 2016, 63, 2684-2690.	1.6	14
32	Variable width based stepped MEMS cantilevers for micro or pico level biosensing and effective switching. Journal of Mechanical Science and Technology, 2015, 29, 4823-4832.	0.7	13
33	Process variation tolerant 9T SRAM bitcell design. , 2012, , .		12
34	An Efficient RF Energy Harvester with Tuned Matching Circuit. Communications in Computer and Information Science, 2013, , 138-145.	0.4	12
35	Symmetric bipolar charge‑plasma transistor with extruded base for enhanced performance. Electronics Letters, 2015, 51, 1027-1029.	0.5	12
36	Statistical DOEâ€"ILP based powerâ€"performanceâ€"process (P3) optimization of nano-CMOS SRAM. The Integration VLSI Journal, 2012, 45, 33-45.	1.3	11

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37	A 2-port 6T SRAM bitcell design with multi-port capabilities at reduced area overhead. , 2010, , .		10
38	Evaluation of Radiation Resiliency on Emerging Junctionless/Dopingless Devices and Circuits. IEEE Transactions on Device and Materials Reliability, 2019, 19, 728-732.	1.5	10
39	Fault Tolerant Reversible Finite Field Arithmetic Circuits. , 2008, , .		9
40	Improved dual sided doped memristor: modelling and applications. Journal of Engineering, 2014, 2014, 219-226.	0.6	9
41	Compact Behavioral Modeling and Time Dependent Performance Degradation Analysis of Junction and Doping Free Transistors. , 2016, , .		9
42	Two-zone SiGe base heterojunction bipolar charge plasma transistor for next generation analog and RF applications. Superlattices and Microstructures, 2017, 101, 200-208.	1.4	9
43	Improved performance of bipolar charge plasma transistor by reducing the horizontal electric field. Superlattices and Microstructures, 2017, 104, 215-221.	1.4	8
44	Capacitorless 2T-DRAM for Higher Retention Time and Sense Margin. IEEE Transactions on Electron Devices, 2020, 67, 902-906.	1.6	8
45	Design and analysis of high performance MEMS capacitive pressure sensor for TPMS. , 2013, , .		7
46	Secure Multi-key Generation Using Ring Oscillator Based Physical Unclonable Function. , 2016, , .		7
47	A highly linear RF mixer using gate-all-around junctionless transistor. International Journal of Electronics Letters, 2017, 5, 129-136.	0.7	7
48	Investigation of Ring-TFET for Better Electrostatics Control and Suppressed Ambipolarity. IEEE Nanotechnology Magazine, 2020, 19, 829-836.	1.1	7
49	Design Metrics of SRAM Bitcell. , 2013, , 31-56.		7
50	Fault tolerant bit parallel finite field multipliers using LDPC codes. , 2008, , .		6
51	Extended Base Schottky-Collector Bipolar Charge Plasma Transistor. , 2015, , .		6
52	Memristor Crossbar-Based Pattern Recognition Circuit Using Perceptron Learning Rule. , 2016, , .		6
53	Channel-hot-carrier degradation in the channel of junctionless transistors: a device- and circuit-level perspective. Journal of Computational Electronics, 2021, 20, 1196-1201.	1.3	6
54	Memristive Crossbar Circuits-Based Combinational Logic Classification Using Single Layer Perceptron Learning Rule. Journal of Nanoelectronics and Optoelectronics, 2017, 12, 47-58.	0.1	6

#	ARTICLE	IF	CITATIONS
55	Subthreshold Modeling of GAA MOSFET Including the Effect of Process-Induced Inclined Sidewalls. IEEE Transactions on Electron Devices, 2022, 69, 487-494.	1.6	6
56	Single Ended Static Random Access Memory for Low-Vdd, High-Speed Embedded Systems. , 2009, , .		5
57	A highly reliable NBTI Resilient 6T SRAM cell. Microelectronics Reliability, 2013, 53, 565-572.	0.9	5
58	Simplified drain current model for pinchâ€off double gate junctionless transistor. Electronics Letters, 2014, 50, 116-118.	0.5	5
59	Dopingless Transistor Based Hybrid Oscillator Arbiter Physical Unclonable Function. , 2017, , .		5
60	Reconfigurable Robust Hybrid Oscillator Arbiter PUF for IoT Security Based on DL-FET. , 2017, , .		5
61	Failure analysis for ultra low power nano-CMOS SRAM under process variations. , 2008, , .		4
62	Dual sided doped memristor and it's mathematical modelling. , 2013, , .		4
63	Hardware-Software Co-design Approach for Deep Learning Inference. , 2019, , .		4
64	Detection and Spread Prediction of COVID-19 from Chest X-ray Images using Convolutional Neural Network-Gaussian Mixture Model. , 2020, , .		4
65	Pseudo parallel architecture for AES with error correction. , 2008, , .		3
66	Modeling and simulation of variable thickness based stepped MEMS cantilever designs for biosensing and pull-in voltage optimization. , 2014, , .		3
67	Performance Enhancement of Dopingless Tunnel-FET Based on Ge-Source with High-k. , 2015, , .		3
68	Scalability and process induced variation analysis of polarity controlled silicon nanowire transistor. Journal of Computational Electronics, 2016, 15, 53-60.	1.3	3
69	Statistical analysis of steady state leakage currents in nano-CMOS devices. , 2007, , .		2
70	A nano-CMOS process variation induced read failure tolerant SRAM cell. , 2008, , .		2
71	SRAM Cells for Embedded Systems. , 0, , .		2
72	Electrical characteristics and short channel performance comparison of different gate junctionless transistors. , 2013, , .		2

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73	Linearly separable pattern classification using memristive crossbar circuits. , 2014, , .		2
74	Process variation immune dopingless dynamically reconfigurable FET. , 2015, , .		2
75	Proposal of Heterogate Technique for Performance Enhancement of DM-TFET. , 2016, , .		2
76	Impact of Temporal Variability on Dopingless and Junctionless FET based SRAM Cells. Silicon, 2021, 13, 4527-4533.	1.8	2
77	Introduction to SRAM. , 2013, , 1-29.		2
78	Characteristics of gate inside junctionless transistor with channel length and doping concentration. , 2013, , .		1
79	Subthreshold Analog/RF performance estimation of doping-less DGFET for ULP applications. , 2014, , .		1
80	Dual-sided doped memristor and it's SPICE modelling for improved electrical properties. , 2014, , .		1
81	A low power L-shaped gate bipolar impact ionization MOSFET based capacitorless one transistor dynamic random access memory cell. Japanese Journal of Applied Physics, 2021, 60, 064003.	0.8	1
82	Single-Ended SRAM Bitcell Design. , 2013, , 57-82.		1
83	Single Event Upset Detection and Correction. , 2007, , .		1
84	Investigation of ultra-thin BOX junctionless transistor at channel length of 20 nm. , 2013, , .		0
85	A 0.1dB NF, 2GHz low power CMOS low noise amplifier. , 2013, , .		0
86	High Performance Organic Field Effect Transistor with Tri-Gate. , 2013, , .		0
87	Performance comparison of bulk and SOI planar junctionless SONOS memory. , 2014, , .		0
88	Notice of Violation of IEEE Publication Principles: A wideband LNA design based on body bias suitable for low voltage and low power application. , 2014, , .		0
89	A Raised Source/Drain Dopingless Tunnel FET with Stacked Source: Design and Analysis. Silicon, 0, , 1.	1.8	0
90	Impact of Channel-Hot-Carrier Damage in Dopingless Devices at Elevated Temperature. Algorithms for Intelligent Systems, 2022, , 167-173.	0.5	0

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91	Comparative Performance and Reliability Analysis of Doping and Junction Free Devices with High-lᵒ/Vacuum Gate Dielectric. Silicon, 2022, 14, 5035-5039.	1.8	0
92	Fully Planar Impact Ionization (I 2)-RAM Cell With High-Performance and Nondestructive Readout. IEEE Transactions on Electron Devices, 2021, 68, 4350-4355.	1.6	0
93	2-Port SRAM Bitcell Design. , 2013, , 83-111.		0
94	NBTI and Its Effect on SRAM. , 2013, , 137-155.		0
95	SRAM Bitcell Design Using Unidirectional Devices. , 2013, , 113-136.		0
96	A Triple-Mode Sigma-Delta Modulator Design for Wireless Standards. , 2007, , .		0
97	Split-Gate Induced High-Field for Impact Ionization Triggered Bipolar Action and Sub-kT/q Switching in Junctionless FET. IEEE Nanotechnology Magazine, 2022, 21, 332-339.	1.1	0