Sourav Dutta

List of Publications by Year in descending order

37 papers	834 citations	687363 13 h-index	677142 22 g-index
37 all docs	37 docs citations	37 times ranked	941 citing authors

#	Article	IF	Citations
1	BEOL-Compatible Superlattice FEFET Analog Synapse With Improved Linearity and Symmetry of Weight Update. IEEE Transactions on Electron Devices, 2022, 69, 2094-2100.	3.0	22
2	Logic Compatible High-Performance Ferroelectric Transistor Memory. IEEE Electron Device Letters, 2022, 43, 382-385.	3.9	33
3	Neural sampling machine with stochastic synapse allows brain-like learning and inference. Nature Communications, 2022, 13, 2571.	12.8	26
4	A Compute-in-Memory Hardware Accelerator Design With Back-End-of-Line (BEOL) Transistor Based Reconfigurable Interconnect. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2022, 12, 445-457.	3.6	5
5	Experimental Demonstration of Gate-Level Logic Camouflaging and Run-Time Reconfigurability Using Ferroelectric FET for Hardware Security. IEEE Transactions on Electron Devices, 2021, 68, 516-522.	3.0	14
6	An Ising Hamiltonian solver based on coupled stochastic phase-transition nano-oscillators. Nature Electronics, 2021, 4, 502-512.	26.0	57
7	BEOL Compatible Superlattice FerroFET-based High Precision Analog Weight Cell with Superior Linearity and Symmetry. , 2021, , .		18
8	Understanding the Switching Mechanisms of the Antiferromagnet/Ferromagnet Heterojunction. Nano Letters, 2020, 20, 7919-7926.	9.1	11
9	Ferroelectrics: From Memory to Computing. , 2020, , .		14
10	Supervised Learning in All FeFET-Based Spiking Neural Network: Opportunities and Challenges. Frontiers in Neuroscience, 2020, 14, 634.	2.8	58
11	Monolithic 3D Integration of High Endurance Multi-Bit Ferroelectric FET for Accelerating Compute-In-Memory. , 2020, , .		56
12	Double-Gate W-Doped Amorphous Indium Oxide Transistors for Monolithic 3D Capacitorless Gain Cell eDRAM. , 2020, , .		32
13	Simulation of the Magnetization Dynamics of a Single-Domain BiFeOâ‚ƒ Nanoisland. IEEE Transactions on Magnetics, 2020, 56, 1-9.	2.1	7
14	Understanding the Continuous-Time Dynamics of Phase-Transition Nano-Oscillator-Based Ising Hamiltonian Solver. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2020, 6, 155-163.	1.5	9
15	Spoken vowel classification using synchronization of phase transition nano-oscillators. , 2019, , .		1
16	Temperature Dependent Variability Analysis of Threshold Voltage and On-Current for Optimum Switching Performance by Gallium Nitride-based Junctionless FinFET. , 2019, , .		10
17	Programmable coupled oscillators for synchronized locomotion. Nature Communications, 2019, 10, 3299.	12.8	52
18	Steep Slope Ferroelectric Field Effect Transistor. , 2019, , .		3

#	Article	IF	Citations
19	Energy-Efficient Edge Inference on Multi-Channel Streaming Data in 28nm HKMG FeFET Technology. , 2019, , .		2
20	Spoken vowel classification using synchronization of phase transition nano-oscillators. , 2019, , .		3
21	Biologically Plausible Ferroelectric Quasi-Leaky Integrate and Fire Neuron. , 2019, , .		13
22	Phase field modeling of domain dynamics and polarization accumulation in ferroelectric HZO. Applied Physics Letters, 2019, 114, .	3.3	60
23	Experimental Demonstration of Phase Transition Nano-Oscillator Based Ising Machine. , 2019, , .		29
24	Hysteresis-free negative capacitance in the multi-domain scenario for logic applications. , 2019, , .		11
25	Clocked Magnetostriction-Assisted Spintronic Device Design and Simulation. IEEE Transactions on Electron Devices, 2018, 65, 2040-2046.	3.0	7
26	A ferroelectric field effect transistor based synaptic weight cell. Journal Physics D: Applied Physics, 2018, 51, 434001.	2.8	113
27	Non-volatile spin wave majority gate at the nanoscale. AIP Advances, 2017, 7, .	1.3	31
28	Overcoming thermal noise in non-volatile spin wave logic. Scientific Reports, 2017, 7, 1915.	3.3	6
29	Proposal for nanoscale cascaded plasmonic majority gates for non-Boolean computation. Scientific Reports, 2017, 7, 17866.	3.3	19
30	Impact of spintronics transducers on the performance of spin wave logic circuit. , 2016, , .		5
31	Spin-based interconnect technology and design. , 2016, , .		0
32	A Model Study of an Error-Free Magnetization Reversal Through Dipolar Coupling in a Two-Magnet System. IEEE Transactions on Magnetics, 2016, 52, 1-12.	2.1	8
33	Analysis of coupling strength in multi-domain magneto-systems. , 2015, , .		5
34	Phase-dependent deterministic switching of magnetoelectric spin wave detector in the presence of thermal noise via compensation of demagnetization. Applied Physics Letters, 2015, 107, 192404.	3.3	8
35	Non-volatile Clocked Spin Wave Interconnect for Beyond-CMOS Nanomagnet Pipelines. Scientific Reports, 2015, 5, 9861.	3.3	61
36	Compact Physical Model for Crosstalk in Spin-Wave Interconnects. IEEE Transactions on Electron Devices, 2015, 62, 3863-3869.	3.0	3

#	Article	IF	Citations
37	SPICE Circuit Modeling of PMA Spin Wave Bus Excited Using Magnetoelectric Effect. IEEE Transactions on Magnetics, 2014, 50, 1-11.	2.1	22