Pinaki Mazumder

List of Publications by Citations

52 papers	3,471 citations	16 h-index	58 g-index
80 ext. papers	4,103 ext. citations	4 avg, IF	5.3 L-index

#	Paper	IF	Citations
52	Nanoscale memristor device as synapse in neuromorphic systems. *Nano Letters*, **2010**, 10, 1297-301	11.5	2772
51	CMOS and Memristor-Based Neural Network Design for Position Detection. *Proceedings of the IEEE*, **2012**, 100, 2050-2060	14.3	117
50	Self-Controlled Writing and Erasing in a Memristor Crossbar Memory. *IEEE Nanotechnology Magazine*, **2011**, 10, 1454-1463	2.6	53
49	Memristor-based RRAM with applications. *Science China Information Sciences*, **2012**, 55, 1446-1460	3.4	40
48	Evolution map of the memristor: from pure capacitive state to resistive switching state. *Nanoscale*, **2019**, 11, 17222-17229	7.7	32
47	Learning in Memristor Crossbar-Based Spiking Neural Networks Through Modulation of Weight-Dependent Spike-Timing-Dependent Plasticity. *IEEE Nanotechnology Magazine*, **2018**, 17, 520-532	2.6	30
46	Tunneling-Based Cellular Nonlinear Network Architectures for Image Processing. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2009**, 17, 487-495	2.6	30
45	Large phase modulation of THz wave via an enhanced resonant active HEMT metasurface. *Nanophotonics*, **2018**, 8, 153-170	6.3	30
44	Online Supervised Learning for Hardware-Based Multilayer Spiking Neural Networks Through the Modulation of Weight-Dependent Spike-Timing-Dependent Plasticity. *IEEE Transactions on Neural Networks and Learning Systems*, **2018**, 29, 4287-4302	10.3	26
43	Accelerated Chip-Level Thermal Analysis Using Multilayer Green's Function. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2007**, 26, 325-344	2.5	23
42	Spoof Surface Plasmon Polariton Beam Splitter. *IEEE Transactions on Terahertz Science and Technology*, **2016**, 6, 832-839	3.4	20
41	Bio-Sensing by Mach–Zehnder Interferometer Comprising Doubly-Corrugated Spoofed Surface Plasmon Polariton (DC-SSPP) Waveguide. *IEEE Transactions on Terahertz Science and Technology*, **2012**, 2, 460-466	3.4	19
40	Dual-band refractometric terahertz biosensing with intense wave-matter-overlap microfluidic channel. *Biomedical Optics Express*, **2019**, 10, 3789-3799	3.5	19
39	Analysis of Doubly Corrugated Spoof Surface Plasmon Polariton (DC-SSPP) Structure With Sub-Wavelength Transmission at THz Frequencies. *IEEE Transactions on Terahertz Science and Technology*, **2012**, 2, 345-354	3.4	18
38	Terahertz Dual-Polarization Beam Splitter Via an Anisotropic Matrix Metasurface. *IEEE Transactions on Terahertz Science and Technology*, **2019**, 9, 491-497	3.4	17
37	. *IEEE Journal on Selected Areas in Communications*, **2020**, 38, 483-495	14.2	16
36	Straintronics-based magnetic tunneling junction: Dynamic and static behavior analysis and material investigation. *Applied Physics Letters*, **2014**, 104, 162403	3.4	14

35	Electrodynamics of spoof plasmons in periodically corrugated waveguides. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2016**, 472, 20160616	2.4	13
34	Spoof Plasmon Interconnects Communications Beyond RC Limit. *IEEE Transactions on Communications*, **2019**, 67, 599-610	6.9	13
33	THz Polarizer Controller Based on Cylindrical Spoof Surface Plasmon Polariton (C-SSPP). *IEEE Transactions on Terahertz Science and Technology*, **2015**, 5, 556-563	3.4	12
32	Straintronics-Based True Random Number Generator for High-Speed and Energy-Limited Applications. *IEEE Transactions on Magnetics*, **2016**, 52, 1-9	2	12
31	Hardware-Friendly Actor-Critic Reinforcement Learning Through Modulation of Spike-Timing-Dependent Plasticity. *IEEE Transactions on Computers*, **2017**, 66, 299-311	2.5	12
30	A Drift-Tolerant Read/Write Scheme for Multilevel Memristor Memory. *IEEE Nanotechnology Magazine*, **2017**, 16, 1016-1027	2.6	12
29	Memristor based STDP learning network for position detection **2010**,		12
28	Fault Modeling and Parallel Testing for 1T1M Memory Array. *IEEE Nanotechnology Magazine*, **2018**, 17, 437-451	2.6	10
27	Terahertz Switch Based on Waveguide-Cavity-Waveguide Comprising Cylindrical Spoof Surface Plasmon Polariton. *IEEE Transactions on Electron Devices*, **2015**, 62, 1312-1318	2.9	10
26	Terahertz Beam Steering With Doped GaAs Phase Modulator and a Design of Spatial-Resolved High-Speed Terahertz Analog-to-Digital Converter. *IEEE Transactions on Electron Devices*, **2014**, 61, 2195-2202	2.9	9
25	Image Processing by a Programmable Grid Comprising Quantum Dots and Memristors. *IEEE Nanotechnology Magazine*, **2013**, 12, 879-887	2.6	9
24	An Equivalent Circuit Modeling of an Equispaced Metallic Nanoparticles (MNPs) Plasmon Wire. *IEEE Nanotechnology Magazine*, **2009**, 8, 412-418	2.6	9
23	Energy-Efficient Hardware Architecture of Self-Organizing Map for ECG Clustering in 65-nm CMOS. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2017**, 64, 1097-1101	3.5	7
22	A Low-Power Hardware Architecture for On-Line Supervised Learning in Multi-Layer Spiking Neural Networks **2018**,		7
21	A fractional phase-coding strategy for terahertz beam patterning on digital metasurfaces. *Optics Express*, **2020**, 28, 6395-6407	3.3	7
20	Effect of temperature variations and thermal noise on the static and dynamic behavior of straintronics devices. *Journal of Applied Physics*, **2015**, 118, 173902	2.5	5
19	Programmable quantum-dots memristor based architecture for image processing **2012**,		5
18	Metamaterial sensor platforms for Terahertz DNA sensing **2013**,		5

17	Efficient Modeling of Transmission Lines With Electromagnetic Wave Coupling by Using the Finite Difference Quadrature Method. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2007**, 15, 1289-1302	2.6	5
16	Towards developing a compact model for magnetization switching in straintronics magnetic random access memory devices. *Journal of Applied Physics*, **2016**, 120, 073901	2.5	5
15	Threshold Read Method for Multi-bit Memristive Crossbar Memory **2011**,		4
14	A Scalable Low-Power Reconfigurable Accelerator for Action-Dependent Heuristic Dynamic Programming. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2018**, 65, 1897-1908	3.9	3
13	Multi-purpose neuro-architecture with memristors **2011**,		3
12	A low-power reconfigurable CMOS power amplifier for wireless sensor network applications **2014**,		1
11	Ka-band relativistic diffraction generator with a tapered coaxial Bragg reflector. *AIP Advances*, **2017** , 7, 115020	1.5	1
10	Comparison of FFT/IFFT Designs Utilizing Different Low Power Techniques **2012**,		1
9	THz analog to digital converter using single sided spoof surface plasmon polariton waveguide **2016** ,		1
8	Dynamic Pinning Synchronization of Fuzzy-dependent-switched Coupled Memristive Neural Networks with Mismatched Dimensions on Time Scales. *IEEE Transactions on Fuzzy Systems*, **2021**, 1-1	8.3	1
7	Fundamentals and Learning of Artificial Neural Networks **2019**, 11-60		0
6	Hardware Implementations of Spiking Neural Networks **2019**, 173-246		
5	Artificial Neural Networks in Hardware **2019**, 61-118		
4	Operational Principles and Learning in Spiking Neural Networks **2019**, 119-171		
3	Guest EditorsUntroduction: Special Section on Chips and Architectures for Emerging Technologies and Applications. *IEEE Transactions on Computers*, **2011**, 60, 450-451	2.5	
2	One-Dimensional Surface Plasmon Photonic Crystal Slab (SPPCS) for a Nanophotodiode. *IEEE Nanotechnology Magazine*, **2010**, 9, 470-473	2.6	
1	Broadband Nonuniform Terahertz Multimode Conversion Series with Compactness and Pure Pattern. *Journal of Infrared, Millimeter, and Terahertz Waves*, **2022**, 43, 150	2.2	