Sheng Chang

List of Publications by Citations

80 papers	907 citations	16 h-index	25 g-index
92 ext. papers	1,240 ext. citations	3.8 avg, IF	4.65 L-index

#	Paper	IF	Citations
80	Real-Time Multilead Convolutional Neural Network for Myocardial Infarction Detection. *IEEE Journal of Biomedical and Health Informatics*, **2018**, 22, 1434-1444	7.2	77
79	Multiple-feature-branch convolutional neural network for myocardial infarction diagnosis using electrocardiogram. *Biomedical Signal Processing and Control*, **2018**, 45, 22-32	4.9	66
78	Three-Channel Metasurfaces for Simultaneous Meta-Holography and Meta-Nanoprinting: A Single-Cell Design Approach. *Laser and Photonics Reviews*, **2020**, 14, 2000032	8.3	57
77	A Novel Barrier Controlled Tunnel FET. *IEEE Electron Device Letters*, **2014**, 35, 798-800	4.4	45
76	A Single-Celled Tri-Functional Metasurface Enabled with Triple Manipulations of Light. *Advanced Functional Materials*, **2020**, 30, 2003990	15.6	43
75	MFB-CBRNN: A Hybrid Network for MI Detection Using 12-Lead ECGs. *IEEE Journal of Biomedical and Health Informatics*, **2020**, 24, 503-514	7.2	31
74	Effects of vacancy defects on graphene nanoribbon field effect transistor. *Micro and Nano Letters*, **2013**, 8, 816-821	0.9	27
73	. *IEEE Transactions on Electron Devices*, **2012**, 59, 1131-1136	2.9	25
72	Energy gap tunable graphene antidot nanoribbon MOSFET: A uniform multiscale analysis from band structure to transport properties. *Carbon*, **2016**, 101, 143-151	10.4	24
71	Gas sensing properties of buckled bismuthene predicted by first-principles calculations. *Physical Chemistry Chemical Physics*, **2019**, 21, 11455-11463	3.6	23
70	A Numerical Study on Graphene Nanoribbon Heterojunction Dual-Material Gate Tunnel FET. *IEEE Electron Device Letters*, **2016**, 37, 1354-1357	4.4	23
69	Monitor-Based Spiking Recurrent Network for the Representation of Complex Dynamic Patterns. *International Journal of Neural Systems*, **2019**, 29, 1950006	6.2	21
68	Band Structure Effects in Extremely Scaled Silicon Nanowire MOSFETs With Different Cross Section Shapes. *IEEE Transactions on Electron Devices*, **2015**, 62, 3547-3553	2.9	20
67	Multi-information fusion neural networks for arrhythmia automatic detection. *Computer Methods and Programs in Biomedicine*, **2020**, 193, 105479	6.9	20
66	A novel ECG signal compression method using spindle convolutional auto-encoder. *Computer Methods and Programs in Biomedicine*, **2019**, 175, 139-150	6.9	19
65	A hardware friendly unsupervised memristive neural network with weight sharing mechanism. *Neurocomputing*, **2019**, 332, 193-202	5.4	19
64	Graphene Nanoribbon Tunnel Field-Effect Transistor via Segmented Edge Saturation. *IEEE Transactions on Electron Devices*, **2017**, 64, 2694-2701	2.9	16

63	Fully memristive spiking-neuron learning framework and its applications on pattern recognition and edge detection. *Neurocomputing*, **2020**, 403, 80-87	5.4	16
62	A Multilayer Neural Network Merging Image Preprocessing and Pattern Recognition by Integrating Diffusion and Drift Memristors. *IEEE Transactions on Cognitive and Developmental Systems*, **2020**, 1-1	3	16
61	Novel Near-Lossless Compression Algorithm for Medical Sequence Images with Adaptive Block-Based Spatial Prediction. *Journal of Digital Imaging*, **2016**, 29, 706-715	5.3	13
60	Three-dimensional separate descendant-based SPIHT algorithm for fast compression of high-resolution medical image sequences. *IET Image Processing*, **2017**, 11, 80-87	1.7	12
59	Influence of Compact Memristors Stability on Machine Learning. *IEEE Access*, **2019**, 7, 47472-47478	3.5	12
58	Highly Sensitive Bilayer Phosphorene Nanoribbon Pressure Sensor Based on the Energy Gap Modulation Mechanism: A Theoretical Study. *IEEE Electron Device Letters*, **2017**, 38, 1313-1316	4.4	12
57	Effects of Fin shape on sub-10 nm FinFETs. *Journal of Computational Electronics*, **2015**, 14, 515-523	1.8	11
56	The Dual Effects of Gate Dielectric Constant in Tunnel FETs. *IEEE Journal of the Electron Devices Society*, **2016**, 4, 445-450	2.3	10
55	Scaling Effect of Phosphorene Nanoribbon - Uncovering the Origin of Asymmetric Current Transport. *Scientific Reports*, **2016**, 6, 38009	4.9	10
54	Adaptive digital ridgelet transform and its application in image denoising **2016**, 52, 45-54		9
53	Restraining Strategy of the Stone Wales Defect Effect on Graphene Nanoribbon MOSFETs. *IEEE Electron Device Letters*, **2018**, 39, 1092-1095	4.4	9
52	A ${K}$ -Band High-Gain and Low-Noise Folded CMOS Mixer Using Current-Reuse and Cross-Coupled Techniques. *IEEE Access*, **2019**, 7, 133218-133226	3.5	9
51	A Real Time QRS Detection Algorithm Based on ET and PD Controlled Threshold Strategy. *Sensors*, **2020**, 20,	3.8	9
50	Efficient Multispike Learning for Spiking Neural Networks Using Probability-Modulated Timing Method. *IEEE Transactions on Neural Networks and Learning Systems*, **2019**, 30, 1984-1997	10.3	9
49	Lossless medical image compression using geometry-adaptive partitioning and least square-based prediction. *Medical and Biological Engineering and Computing*, **2018**, 56, 957-966	3.1	9
48	Prediction of Stable and High-Performance Charge Transport in Zigzag Tellurene Nanoribbons. *IEEE Transactions on Electron Devices*, **2019**, 66, 2365-2369	2.9	8
47	Negative differential resistance in graphene nanoribbon superlattice field-effect transistors. *Micro and Nano Letters*, **2015**, 10, 400-403	0.9	8
46	Classification of VLF/LF Lightning Signals Using Sensors and Deep Learning Methods. *Sensors*, **2020**, 20,	3.8	8

45	A 28 GHz LNA using defected ground structure for 5G application. *Microwave and Optical Technology Letters*, **2018**, 60, 1067-1072	1.2	8
44	Acceleration of LSTM With Structured Pruning Method on FPGA. *IEEE Access*, **2019**, 7, 62930-62937	3.5	8
43	A Versatile and Accurate Compact Model of Memristor With Equivalent Resistor Topology. *IEEE Electron Device Letters*, **2017**, 38, 1367-1370	4.4	8
42	Novel Strategy of Edge Saturation Hamiltonian for Graphene Nanoribbon Devices. *IEEE Transactions on Electron Devices*, **2016**, 63, 4514-4520	2.9	8
41	Machine learning method for tight-binding Hamiltonian parameterization from ab-initio band structure. *Npj Computational Materials*, **2021**, 7,	10.9	8
40	The MBPEP: a deep ensemble pruning algorithm providing high quality uncertainty prediction. *Applied Intelligence*, **2019**, 49, 2942-2955	4.9	7
39	Band-Offset Degradation in van der Waals Heterojunctions. *Physical Review Applied*, **2019**, 12,	4.3	7
38	Ensemble echo network with deep architecture for time-series modeling. *Neural Computing and Applications*, **2021**, 33, 4997-5010	4.8	7
37	Interface Coupling as a Crucial Factor for Spatial Localization of Electronic States in a Heterojunction of Graphene Nanoribbons. *Physical Review Applied*, **2019**, 11,	4.3	6
36	Activating impurity effect in edge nitrogen-doped chevron graphene nanoribbons. *Journal of Physics Communications*, **2018**, 2, 045028	1.2	6
35	SpikeCD: a parameter-insensitive spiking neural network with clustering degeneracy strategy. *Neural Computing and Applications*, **2019**, 31, 3933-3945	4.8	6
34	High-Order Element Effects of the Green's Function in Quantum Transport Simulation of Nanoscale Devices. *IEEE Transactions on Electron Devices*, **2009**, 56, 3106-3114	2.9	5
33	Strain engineering of chevron graphene nanoribbons. *Journal of Applied Physics*, **2019**, 125, 082501	2.5	5
32	DMMAN: A two-stage audio-visual fusion framework for sound separation and event localization. *Neural Networks*, **2021**, 133, 229-239	9.1	5
31	Memristor-Based Image Enhancement: High Efficiency and Robustness. *IEEE Transactions on Electron Devices*, **2021**, 68, 602-609	2.9	5
30	Asia-Pacific Lightning Location Network (APLLN) and Preliminary Performance Assessment. *Remote Sensing*, **2020**, 12, 1537	5	4
29	Fast reconstruction with adaptive sampling in block compressed imaging. *IEICE Electronics Express*, **2014**, 11, 20140056-20140056	0.5	4
28	Effect of silicon window polarity on partial-SOI LDMOSFETs. *Micro and Nano Letters*, **2012**, 7, 628	0.9	4

27	High-Performance FPGA Implementation of Discrete Wavelet Transform for Image Processing **2011** ,		4
26	SVM-based synthetic fingerprint discrimination algorithm and quantitative optimization strategy. *PLoS ONE*, **2014**, 9, e111099	3.7	4
25	Dielectric Engineering With the Environment Material in 2-D Semiconductor Devices. *IEEE Journal of the Electron Devices Society*, **2018**, 6, 325-331	2.3	3
24	Prior knowledge input neural network method for GFET description. *Journal of Computational Electronics*, **2016**, 15, 911-918	1.8	3
23	Thin-film LDMOS on partial SOI with improved breakdown voltage and suppressed kink effect. *International Journal of Electronics*, **2014**, 101, 37-49	1.2	3
22	Multi-valued logic design methodology with double negative differential resistance transistors. *Micro and Nano Letters*, **2017**, 12, 738-743	0.9	3
21	A Novel PNIN Barrier Controlled Tunnel FET. *Advanced Materials Research*, **2015**, 1096, 497-502	0.5	2
20	The reconstruction of the symmetry between sublattices: a strategy to improve the transport properties of edge-defective graphene nanoribbon transistors. *Physical Chemistry Chemical Physics*, **2020**, 22, 18265-18271	3.6	2
19	Wave-Function Symmetry Mechanism of Quantum-Well States in Graphene Nanoribbon Heterojunctions. *Physical Review Applied*, **2019**, 12,	4.3	2
18	Artificial Neural Network Based CNTFETs Modeling. *Applied Mechanics and Materials*, **2014**, 667, 390-395	0.3	2
17	An Implementation of SOPC-Based Neural Monitoring System. *IEEE Transactions on Instrumentation and Measurement*, **2012**, 61, 2469-2475	5.2	2
16	A K-band high-gain power amplifier with slow-wave transmission-line transformer in 130-nm RF CMOS. *International Journal of Circuit Theory and Applications*, **2021**, 49, 1347-1357	2	2
15	Steep-Slope Transistors Based on Chiral Graphene Nanoribbons With Intrinsic Cold Source. *IEEE Transactions on Electron Devices*, **2021**, 68, 4123-4128	2.9	2
14	A Multi-Classification Hybrid Quantum Neural Network Using an All-Qubit Multi-Observable Measurement Strategy.. *Entropy*, **2022**, 24,	2.8	2
13	Micro-Strip Line 90? Phase Shifter with Double Ground Slots for D-Band Applications. *Journal of Circuits, Systems and Computers*, **2018**, 27, 1850192	0.9	1
12	Hardware efficient architecture for compressed imaging. *IEICE Electronics Express*, **2014**, 11, 20140562-20140562	0.5	1
11	The effects of elliptical gate cross section on carbon nanotube gate-all-around field effect transistor **2013**,		1
10	Confined state energies in AGNR semiconductor semiconductor heterostructure. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2017**, 381, 319-322	2.3	1

9	High Precision Multicolorimetric Pyrometer With a Novel Photoelectric MOSFET. *IEEE Transactions on Instrumentation and Measurement*, **2014**, 63, 680-686	5.2	1
8	A novel photoelectric MOSFET with AC output under constant illumination. *Optical and Quantum Electronics*, **2009**, 41, 795-803	2.4	1
7	A K-Band Active Up/Down Bidirectional Mixer in 130-nm CMOS **2021**,		1
6	The effect of Ag atoms diffusion into □phase CsPbI3-based memory device. *Microelectronic Engineering*, **2022**, 251, 111668	2.5	1
5	A K-Band High-Gain LNA in 0.13-□m RF CMOS **2019**,		1
4	A transport isolation by orbital hybridization transformation toward graphene nanoribbon-based nanostructure integration. *Nanotechnology*, **2018**, 29, 455704	3.4	1
3	Micron channel length ZnO thin film transistors using bilayer electrodes.. *Journal of Colloid and Interface Science*, **2022**, 622, 769-779	9.3	0
2	A 2.5-Gb/s CMOS optical receiver with wide dynamic range using dual AGCs. *Analog Integrated Circuits and Signal Processing*, **2019**, 101, 229-235	1.2	
1	Cross-Sectional Shape Effects of Gate-All-Around Nanowire Field-Effect Transistors. *Journal of Computational and Theoretical Nanoscience*, **2015**, 12, 5171-5178	0.3	