Kea-Tiong Tang

List of Publications by Year
in descending order

105 papers	2,570 citations	304743 22 h-index	254184 43 g-index
105 all docs	105 docs citations	105 times ranked	2867 citing authors

#	ARTICLE	IF	CITATIONS
1	Two-Way Transpose Multibit 6T SRAM Computing-in-Memory Macro for Inference-Training AI Edge Chips. IEEE Journal of Solid-State Circuits, 2022, 57, 609-624.	5.4	18
2	MARS: Multimacro Architecture SRAM CIM-Based Accelerator With Co-Designed Compressed Neural Networks. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 1550-1562.	2.7	8
3	Low-Voltage Implementation of Neuromorphic Circuits for a Spike-Based Learning Control Module. IEEE Access, 2022, 10, 2619-2630.	4.2	1
4	0.4-V Tail-Less Quasi-Two-Stage OTA Using a Novel Self-Biasing Transconductance Cell. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 2805-2818.	5.4	5
5	A 0.8V Intelligent Vision Sensor with Tiny Convolutional Neural Network and Programmable Weights Using Mixed-Mode Processing-in-Sensor Technique for Image Classification. , 2022, , .		10
6	Incoming Editorial. IEEE Transactions on Biomedical Circuits and Systems, 2022, 16, 2-2.	4.0	0
7	A Transferable Feature-Based Classifier to Improve Transferability of Electronic Nose Systems. , 2022, 6, 1-4.		1
8	Using a Hybrid Deep Neural Network for Gas Classification. IEEE Sensors Journal, 2021, 21, 6401-6407.	4.7	37
9	A CMOS-integrated compute-in-memory macro based on resistive random-access memory for AI edge devices. Nature Electronics, 2021, 4, 81-90.	26.0	66
10	POPPINS: A Population-Based Digital Spiking Neuromorphic Processor with Integer Quadratic Integrate-and-Fire Neurons. , 2021, , .		5
11	A 0.5-V Real-Time Computational CMOS Image Sensor With Programmable Kernel for Feature Extraction. IEEE Journal of Solid-State Circuits, 2021, 56, 1588-1596.	5.4	35
12	An Adjustable Dual-Output Current Mode MOSFET-Only Filter. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 1817-1821.	3.0	5
13	An adjustable 0.3 V current winner–take–all circuit for analogue neural networks. Electronics Letters, 2021, 57, 685-687.	1.0	6
14	A 0.8 V Multimode Vision Sensor for Motion and Saliency Detection With Ping-Pong PWM Pixel. IEEE Journal of Solid-State Circuits, 2021, 56, 2516-2524.	5.4	11
15	An Enhanced Input Differential Pair for Low-Voltage Bulk-Driven Amplifiers. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2021, 29, 1601-1611.	3.1	20
16	A Local Computing Cell and 6T SRAM-Based Computing-in-Memory Macro With 8-b MAC Operation for Edge AI Chips. IEEE Journal of Solid-State Circuits, 2021, 56, 2817-2831.	5.4	52
17	A 0.3-V Conductance-Based Silicon Neuron in 0.18 Î¼m CMOS Process. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 3209-3213.	3.0	9
18	A four-megabit compute-in-memory macro with eight-bit precision based on CMOS and resistive random-access memory for AI edge devices. Nature Electronics, 2021, 4, 921-930.	26.0	36

#	ARTICLE	IF	CITATIONS
19	Embedded 1-Mb ReRAM-Based Computing-in- Memory Macro With Multibit Input and Weight for CNN-Based AI Edge Processors. IEEE Journal of Solid-State Circuits, 2020, 55, 203-215.	5.4	62
20	A Twin-8T SRAM Computation-in-Memory Unit-Macro for Multibit CNN-Based AI Edge Processors. IEEE Journal of Solid-State Circuits, 2020, 55, 189-202.	5.4	108
21	A 4-Kb 1-to-8-bit Configurable 6T SRAM-Based Computation-in-Memory Unit-Macro for CNN-Based AI Edge Processors. IEEE Journal of Solid-State Circuits, 2020, 55, 2790-2801.	5.4	50
22	A Fully Integrated High-Power-Supply-Rejection Linear Regulator With an Output-Supplied Voltage Reference. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 3828-3838.	5.4	5
23	A Minimum Distance Inlier Probability (MDIP) Feature Selection Method to Improve Gas Classification for Electronic Nose Systems. IEEE Access, 2020, 8, 133928-133935.	4.2	5
24	A Concentration-Based Drift Calibration Transfer Learning Method for Gas Sensor Array Data. , 2020, 4, 1-4.		14
25	15.5 A 28nm 64Kb 6T SRAM Computing-in-Memory Macro with 8b MAC Operation for AI Edge Chips. , 2020, , .		99
26	A Relaxed Quantization Training Method for Hardware Limitations of Resistive Random Access Memory (ReRAM)-Based Computing-in-Memory. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2020, 6, 45-52.	1.5	8
27	An Electronic Nose System for Rapid Detection of Ketamine Smoke. , 2019, 3, 1-4.		5
28	On-chip Learning of Multilayer Perceptron Based on Memristors with Limited Multilevel States. , 2019, , .		6
29	A Gas Mixture Prediction Model Based on the Dynamic Response of a Metal-Oxide Sensor. Micromachines, 2019, 10, 598.	2.9	11
30	Detection of Cigarette Smoke Using a Surface-Acoustic-Wave Gas Sensor with Non-Polymer-Based Oxidized Hollow Mesoporous Carbon Nanospheres. Micromachines, 2019, 10, 276.	2.9	8
31	24.1 A 1Mb Multibit ReRAM Computing-In-Memory Macro with 14.6ns Parallel MAC Computing Time for CNN Based AI Edge Processors. , 2019, , .		162
32	24.5 A Twin-8T SRAM Computation-In-Memory Macro for Multiple-Bit CNN-Based Machine Learning. , 2019, , .		173
33	An Energy-Efficient SAR ADC With Event-Triggered Error Correction. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 723-727.	3.0	5
34	A 0.5V Real-Time Computational CMOS Image Sensor with Programmable Kernel for Always-On Feature Extraction. , 2019, , .		13
35	A CMOS compatible miniature gas sensing system. , 2019, , 237-252.		1
36	AI Edge Devices Using Computing-In-Memory and Processing-In-Sensor: From System to Device. , 2019, , .		21

#	ARTICLE	IF	CITATIONS
37	CMOS-integrated memristive non-volatile computing-in-memory for AI edge processors. Nature Electronics, 2019, 2, 420-428.	26.0	161
38	A 0.65-V 10-bit 320-kS/s SAR-ADC with Charge Average and Skip Switching Algorithm. , 2018, , .		0
39	An Area-Efficient Differential Serial DAC with Mismatch Compensation Scheme. , 2018, , .		0
40	Development of a Dual MOS Electronic Nose/Camera System for Improving Fruit Ripeness Classification. Sensors, 2018, 18, 3256.	3.8	33
41	Development of an electronic-nose system for fruit maturity and quality monitoring. , 2018, , .		26
42	Development of a breath detection method based E-nose system for lung cancer identification. , 2018, , .		8
43	A fast gas concentration estimation method based on metal-oxide-semiconductor gas sensors. , 2018, , .		0
44	A 1-V 2.6-mW Environmental Compensated Fully Integrated Nose-on-a-Chip. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 1365-1369.	3.0	5
45	A Batteryless and Single-Inductor DC-DC Boost Converter for Thermoelectric Energy Harvesting Application with 190mV Cold-Start Voltage. , 2018, , .		12
46	A high learning capability probabilistic spiking neural network chip. , 2018, , .		2
47	Extraction of EEG signals during L/R hand motor imagery based on ERD/S. , 2017, , .		1
48	A 0.7 V Capacitance-To-Digital Converter for Interdigitated Electrode Capacitive Vapor Sensors. , 2017, , .		1
49	An automatic gain control amplifier for high voltage spindle recording. , 2017, , .		0
50	A Low Noise CMOS Readout Based on a Polymer-Coated SAW Array for Miniature Electronic Nose. Sensors, 2016, 16, 1777.	3.8	3
51	Design of a 0.5 V 1.68mW nose-on-a-chip for rapid screen of chronic obstructive pulmonary disease. , 2016, , .		2
52	Detection of third-hand smoke on clothing fibers with a surface acoustic wave gas sensor. Biomicrofluidics, 2016, 10, 011907.	2.4	12
53	Highly sensitive and portable gas sensing system based on reduced graphene oxide. Tsinghua Science and Technology, 2016, 21, 435-441.	6.1	5
54	An Inductive Power and Data Telemetry Subsystem With Fast Transient Low Dropout Regulator for Biomedical Implants. IEEE Transactions on Biomedical Circuits and Systems, 2016, 10, 435-444.	4.0	29

#	Article	IF	Citations
55	A Battery-Less, Implantable Neuro-Electronic Interface for Studying the Mechanisms of Deep Brain Stimulation in Rat Models. IEEE Transactions on Biomedical Circuits and Systems, 2016, 10, 98-112.	4.0	75
56	A wireless power transmission subsystem with capacitor-less high PSR LDO and thermal protection mechanism for artificial retina application. , 2015, , .		5
57	A scalable and adaptable probabilistic model embedded in an electronic nose for intelligent sensor fusion. , 2015, , .		6
58	A Bio-Inspired Two-Layer Sensing Structure of Polypeptide and Multiple-Walled Carbon Nanotube to Sense Small Molecular Gases. Sensors, 2015, 15, 5390-5401.	3.8	7
59	A 0.5-V 1.28-MS/s 10-bit SAR ADC with switching detect logic. , 2015, , .		7
60	Handheld Gas Sensing System. , 2015, , 155-190.		3
61	Improving classification accuracy of SSVEP based BCI using RBF SVM with signal quality evaluation. , 2014, , .		15
62	A Fully Integrated Nose-on-a-Chip for Rapid Diagnosis of Ventilator-Associated Pneumonia. IEEE Transactions on Biomedical Circuits and Systems, 2014, 8, 765-778.	4.0	22
63	A signal acquisition and processing chip with built-in cluster for chemiresistive gas sensor array. , 2014, , .		1
64	A miniature electronic nose system based on an MWNTâ€"polymer microsensor array and a low-power signal-processing chip. Analytical and Bioanalytical Chemistry, 2014, 406, 3985-3994.	3.7	11
65	A swept-field multi-channel aspiration condenser for low-ppm level detection. , 2014, , .		0
66	A pulse oximetry system with motion artifact reduction based on Fourier analysis. , 2014, , .		4
67	Guest Editorial Microwatts Wireless Technologies. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2014, 4, 245-247.	3.6	0
68	Hardware Friendly Probabilistic Spiking Neural Network With Long-Term and Short-Term Plasticity. IEEE Transactions on Neural Networks and Learning Systems, 2013, 24, 2063-2074.	11.3	16
69	Challenges in circuits for visual prostheses. , 2013, , .		0
70	A 10-bit 1kS/s-30kS/s successive approximation register analog-to-digital converter for biological signal acquisition. , 2013, , .		7
71	A SAR ADC with energy-efficient DAC and tri-level switching scheme. , 2013, , .		2
72	Towards a Chemiresistive Sensor-Integrated Electronic Nose: A Review. Sensors, 2013, 13, 14214-14247.	3.8	173

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73	An Analog Multilayer Perceptron Neural Network for a Portable Electronic Nose. Sensors, 2013, 13, 193-207.	3.8	23
74	An embedded probabilistic neural network with on-chip learning capability. , 2013, , .		5
75	An on-chip learning, low-power probabilistic spiking neural network with long-term memory. , 2013, , .		1
76	An implantable microsystem for long-term study on the mechanism of deep brain stimulation. , 2013, , .		2
77	Cholesteric liquid crystal-carbon nanotube hybrid architectures for gas detection. Applied Physics Letters, 2012, 100, .	3.3	28
78	Gas sensor array based on surface acoustic wave devices for rapid multi-detection. , 2012, , .		5
79	CMOS surface acoustic wave oscillator with low noise synchronous type readout circuits. , 2012, , .		0
80	Live demonstration: A smart portable electronic nose system for fruity odors identification. , 2012, , .		1
81	A 90 nm CMOS low noise readout front-end for portable biopotential signal acquisition. , 2012, , .		2
82	An implantable microsystem for studying the Parkinson's Disease. , 2012, , .		0
83	A digitally trimmable low-noise low-power analog front-end for EEG signal acquisition. , 2012, , .		4
84	A wireless pulse oximetry system with active noise cancellation of motion artifacts. , 2012, , .		1
85	Polymer/Ordered Mesoporous Carbon Nanocomposite Platelets as Superior Sensing Materials for Gas Detection with Surface Acoustic Wave Devices. Langmuir, 2012, 28, 11639-11645.	3.5	24
86	VLSI Implementation of a Bio-Inspired Olfactory Spiking Neural Network. IEEE Transactions on Neural Networks and Learning Systems, 2012, 23, 1065-1073.	11.3	55
87	A review of sensor-based methods for monitoring hydrogen sulfide. TrAC - Trends in Analytical Chemistry, 2012, 32, 87-99.	11.4	310
88	Polymer-coated surface acoustic wave sensor array for low concentration NH_3 detection. , 2011, , .		0
89	Wireless data and power transmission circuits in biomedical implantable applications. , 2011, , .		7
90	A 12V-500µA neuron stimulator with current calibration mechanism in 0.18µm standard CMOS process. , 2011, , .		1

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91	A Low-Power Electronic Nose Signal-Processing Chip for a Portable Artificial Olfaction System. IEEE Transactions on Biomedical Circuits and Systems, 2011, 5, 380-390.	4.0	56
92	A wearable Electronic Nose SoC for healthier living. , 2011, , .		7
93	Optical detection of organic vapors using cholesteric liquid crystals. Applied Physics Letters, 2011, 99, 073504.	3.3	51
94	A physiological valence/arousal model from musical rhythm to heart rhythm. , 2011, , .		1
95	Active noise cancellation of motion artifacts in pulse oximetry using isobestic wavelength light source. , 2011, , .		9
96	An Electronic-Nose Sensor Node Based on a Polymer-Coated Surface Acoustic Wave Array for Wireless Sensor Network Applications. Sensors, 2011, 11, 4609-4621.	3.8	19
97	A Single-Walled Carbon Nanotube Network Gas Sensing Device. Sensors, 2011, 11, 7763-7772.	3.8	49
98	A Local Weighted Nearest Neighbor Algorithm and a Weighted and Constrained Least-Squared Method for Mixed Odor Analysis by Electronic Nose Systems. Sensors, 2010, 10, 10467-10483.	3.8	13
99	Development of a portable electronic nose based on chemical surface acoustic wave array with multiplexed oscillator and readout electronics. Sensors and Actuators B: Chemical, 2010, 146, 545-553.	7.8	42
100	An electronic-nose sensor node based on polymer-coated surface acoustic wave array for environmental monitoring. , 2010, , .		6
101	Development of a Portable Electronic Nose System for the Detection and Classification of Fruity Odors. Sensors, 2010, 10, 9179-9193.	3.8	99
102	Wireless power and data transmission with ASK demodulator and power regulator for a biomedical implantable SOC. , 2009, , .		6
103	Multi-input silicon neuron with weighting adaptation. , 2009, , .		0
104	An 8&#x03BC;W 100kS/s successive approximation ADC for biomedical applications. , 2009, , .		6
105	A portable electronic nose system that can detect fruity odors. , 2009, , .		2