Alex Pappachen James

List of Publications by Year in Descending Order

140	1,760	17	38
papers	citations	h-index	g-index
196	2,410	2.9	6
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
140	Chuas Oscillator with OTA based Memcapacitor Emulator. *IEEE Nanotechnology Magazine*, **2022**, 1-1	2.6	0
139	Variability-aware Memristive Crossbars -A Tutorial. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2022**, 1-1	3.5	
138	TMS-Crossbars with Tactile Sensing. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2021**, 1-1	3.5	2
137	**2021**,		2
136	. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2021**, 68, 1133-1137	3.5	6
135	The Why, What and How of Artificial General Intelligence Chip Development. *IEEE Transactions on Cognitive and Developmental Systems*, **2021**, 1-1	3	3
134	Neuromorphic vision networks for face recognition **2021**, 361-381		
133	Learning memristive spiking neurons and beyond **2021**, 517-528		
132	Analog Neural Computing With Super-Resolution Memristor Crossbars. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2021**, 1-12	3.9	8
131	Analog circuit integration of backpropagation learning in memristive HTM architecture **2021**, 427-438		
130	Guidelines for benchmarking non-ideal analog memristive crossbars for neural networks **2021**, 287-298		
129	Generalised Analog LSTMs Recurrent Modules for Neural Computing. *Frontiers in Computational Neuroscience*, **2021**, 15, 705050	3.5	1
128	Edge to quantum: hybrid quantum-spiking neural network image classifier. *Neuromorphic Computing and Engineering*, **2021**, 1, 024001		1
127	Memristive GAN in Analog. *Scientific Reports*, **2020**, 10, 5838	4.9	17
126	Analogue neuro-memristive convolutional dropout nets. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2020**, 476, 20200210	2.4	3
125	Who is the Winner? Memristive-CMOS Hybrid Modules: CNN-LSTM Versus HTM. *IEEE Transactions on Biomedical Circuits and Systems*, **2020**, 14, 164-172	5.1	6
124	Towards Strong AI with Analog Neural Chips **2020**,		2

123	Recursive Threshold Logic-A Bioinspired Reconfigurable Dynamic Logic System With Crossbar Arrays. *IEEE Transactions on Biomedical Circuits and Systems*, **2020**, 14, 1311-1322	5.1	3
122	Automating Analogue AI Chip Design with Genetic Search. *Advanced Intelligent Systems*, **2020**, 2, 2000076		5
121	Vilokana - Lightweight COVID19 Document Analysis **2020**,		2
120	Memristors: Properties, Models, Materials. *Modeling and Optimization in Science and Technologies*, **2020**, 13-40	0.6	4
119	Memristive LSTM Architectures. *Modeling and Optimization in Science and Technologies*, **2020**, 155-167	0.6	
118	HTM Theory. *Modeling and Optimization in Science and Technologies*, **2020**, 169-180	0.6	2
117	Deep Neuro-Fuzzy Architectures. *Modeling and Optimization in Science and Technologies*, **2020**, 195-213	0.6	4
116	Getting Started with TensorFlow Deep Learning. *Modeling and Optimization in Science and Technologies*, **2020**, 57-67	0.6	3
115	Speech Recognition Application Using Deep Learning Neural Network. *Modeling and Optimization in Science and Technologies*, **2020**, 69-79	0.6	3
114	Learning Algorithms and Implementation. *Modeling and Optimization in Science and Technologies*, **2020**, 91-102	0.6	1
113	Memristive Deep Convolutional Neural Networks. *Modeling and Optimization in Science and Technologies*, **2020**, 131-137	0.6	1
112	Deep-Learning-Based Approach for Outdoor Electrical Insulator Inspection. *Modeling and Optimization in Science and Technologies*, **2020**, 81-88	0.6	1
111	Memristive Hierarchical Temporal Memory. *Modeling and Optimization in Science and Technologies*, **2020**, 181-194	0.6	
110	Memristive Threshold Logic Networks. *Modeling and Optimization in Science and Technologies*, **2020**, 117-130	0.6	1
109	Introduction to Neuro-Memristive Systems. *Modeling and Optimization in Science and Technologies*, **2020**, 3-12	0.6	1
108	Multi-level Memristive Memory for Neural Networks. *Modeling and Optimization in Science and Technologies*, **2020**, 103-116	0.6	
107	Overview of Long Short-Term Memory Neural Networks. *Modeling and Optimization in Science and Technologies*, **2020**, 139-153	0.6	11
106	Deep Learning Theory Simplified. *Modeling and Optimization in Science and Technologies*, **2020**, 41-55	0.6	1

105	Neuromemristive Circuits for Edge Computing: A Review. *IEEE Transactions on Neural Networks and Learning Systems*, **2020**, 31, 4-23	10.3 90
104	IN-YOLO: Real-Time Detection of Outdoor High Voltage Insulators Using UAV Imaging. *IEEE Transactions on Power Delivery*, **2020**, 35, 1599-1601	4.3 62
103	A Theoretical Analysis of the Peaking Phenomenon in Classification. *Journal of Classification*, **2020**, 37, 421-434	1.2 4
102	AMSNet: Analog Memristive System Architecture for Mean-Pooling with Dropout Convolutional Neural Network **2019**,	1
101	Probabilistic Neural Network with Memristive Crossbar Circuits **2019**,	4
100	Memristive Non-Idealities: Is there any Practical Implications for Designing Neural Network Chips? **2019**,	14
99	Generalized Bell-Shaped Membership Function Generation Circuit for Memristive Neural Networks **2019**,	4
98	Temporal G-Neighbor Filtering for Analog Domain Noise Reduction in Astronomical Videos. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2019**, 66, 868-872	3.5 1
97	AnalogHTM: Memristive Spatial Pooler Learning with Backpropagation **2019**,	2
96	An overview of memristive cryptography. *European Physical Journal: Special Topics*, **2019**, 228, 2301-2312	2.3 10
95	A survey on LSTM memristive neural network architectures and applications. *European Physical Journal: Special Topics*, **2019**, 228, 2313-2324	2.3 52
94	A Memristor-CMOS Braun Multiplier Array for Arithmetic Pipelining **2019**,	5
93	Variation-aware Binarized Memristive Networks **2019**,	4
92	Chaotic Oscillator Using Coupled Memristive Pairs **2019**,	1
91	High voltage outdoor insulator surface condition evaluation using aerial insulator images. *High Voltage*, **2019**, 4, 178-185	4.1 15
90	Learning in Memristive Neural Network Architectures Using Analog Backpropagation Circuits. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2019**, 66, 719-732	3.9 59
89	Hierarchical Temporal Memory Features with Memristor Logic Circuits for Pattern Recognition. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2018**, 37, 1143-1156	2.5 36
88	Edge-Aware Spatial Denoising Filtering Based on a Psychological Model of Stimulus Similarity. *IEEE Access*, **2018**, 6, 3433-3447	3.5 1

87	Engineering the Global University Rankings: Gold Standards, Limitations and Implications. *IEEE Access*, **2018**, 6, 6765-6776	3.5	16
86	Bit-Plane Extracted Moving-Object Detection Using Memristive Crossbar-CAM Arrays for Edge Computing Image Devices. *IEEE Access*, **2018**, 6, 18954-18966	3.5	17
85	Memristive system design for variable pixel G-neighbor denoising filter. *Journal of Intelligent and Fuzzy Systems*, **2018**, 34, 1653-1667	1.6	1
84	Oxford circuits and systems conference. *Analog Integrated Circuits and Signal Processing*, **2018**, 95, 373-374		1
83	A memristor-based long short term memory circuit. *Analog Integrated Circuits and Signal Processing*, **2018**, 95, 467-472	1.2	36
82	ANFIS based quadrotor drone altitude control implementation on Raspberry Pi platform. *Analog Integrated Circuits and Signal Processing*, **2018**, 95, 435-445	1.2	9
81	Neuron inspired data encoding memristive multi-level memory cell. *Analog Integrated Circuits and Signal Processing*, **2018**, 95, 429-434	1.2	11
80	On-chip face recognition system design with memristive Hierarchical Temporal Memory. *Journal of Intelligent and Fuzzy Systems*, **2018**, 34, 1393-1402	1.6	14
79	Feature extraction without learning in an analog spatial pooler memristive-CMOS circuit design of hierarchical temporal memory. *Analog Integrated Circuits and Signal Processing*, **2018**, 95, 457-465	1.2	13
78	M2CA: Modular Memristive Crossbar Arrays **2018**,		4
77	Discrete-level memristive circuits for HTM-based spatiotemporal data classification system. *IET Cyber-Physical Systems: Theory and Applications*, **2018**, 3, 34-43	2.5	4
76	Outdoor Insulator Surface Condition Evaluation using Image Classification **2018**,		1
75	Image Based HTM Word Recognizer for Language Processing **2018**,		1
74	Memristive LSTM network hardware architecture for time-series predictive modeling problems **2018**,		12
73	Real-Time Analog Pixel-to-Pixel Dynamic Frame Differencing with Memristive Sensing Circuits **2018**,		1
72	Programmable Memristive Threshold Logic Gate Array **2018**,		2
71	Approximate Probabilistic Neural Networks with Gated Threshold Logic **2018**,		4
70	Binary Weighted Memristive Analog Deep Neural Network for Near-Sensor Edge Processing **2018**,		12

51	Variable pixel G-neighbor filters **2017**,		2
50	Quality assessment metrics for edge detection and edge-aware filtering: A tutorial review **2017**,		9
49	Multi-level memristive memory with resistive networks **2017**,		7
48	Unmanned Aerial Vehicle (UAV) charging from powerlines **2017**,		7
47	Level-shifted neural encoded analog-to-digital converter **2017**,		4
46	Automated image segmentation for detecting cell spreading for metastasizing assessments of cancer development **2017**,		1
45	Facial emotion recognition using min-max similarity classifier **2017**,		9
44	Edge detection for pattern recognition: a survey. *International Journal of Applied Pattern Recognition*, **2016**, 3, 1	0.2	7
43	Speech signal analysis for the estimation of heart rates under different emotional states **2016**,		5
42	Threshold logic based low-level vision sparse object features. *International Journal of Intelligent Computing and Cybernetics*, **2016**, 9, 314-324	2.2	2
41	RFID-Cloud smart cart system **2016**,		7
40	A design of HTM spatial pooler for face recognition using memristor-CMOS hybrid circuits **2016**,		17
39	Bioinspired memory model for HTM face recognition **2016**,		2
38	Voltage controlled memristor threshold logic gates **2016**,		5
37	An efficient method to estimate the optimum regularization parameter in RLDA. *Bioinformatics*, **2016**, 32, 3461-3468	7.2	1
36	The Memristor Circuits and Applications **2015**,		2
35	Detection and Analysis of Emotion from Speech Signals. *Procedia Computer Science*, **2015**, 58, 91-96	1.6	39
34	Memristor pattern recogniser: isolated speech word recognition. *Electronics Letters*, **2015**, 51, 1370-1372	2.1	11

33	Sparse distributed localized gradient fused features of objects. *Pattern Recognition*, **2015**, 48, 1538-1546	7.7	5
32	Memristive Threshold Logic Circuit Design of Fast Moving Object Detection. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2015**, 23, 2337-2341	2.6	18
31	Heart rate monitoring using human speech spectral features. *Human-centric Computing and Information Sciences*, **2015**, 5,	5.4	13
30	Spatial Stimuli Gradient Sketch Model. *IEEE Signal Processing Letters*, **2015**, 22, 1336-1339	3.2	10
29	Adaptive digital scan variable pixels **2015**,		1
28	Memristor load current mirror circuit **2015**,		2
27	Threshold Logic Computing: Memristive-CMOS Circuits for Fast Fourier Transform and Vedic Multiplication. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2015**, 23, 2690-2694	2.6	16
26	Resistive Threshold Logic. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2014**, 22, 190-195	2.6	19
25	Medical image fusion: A survey of the state of the art. *Information Fusion*, **2014**, 19, 4-19	16.7	481
24	Discriminative histogram taxonomy features for snake species identification. *Human-centric Computing and Information Sciences*, **2014**, 4,	5.4	6
23	Edge detection using resistive threshold logic networks with CMOS flash memories. *International Journal of Intelligent Computing and Cybernetics*, **2014**, 7, 79-94	2.2	6
22	Resistive MOSFET brain-inspired threshold logic gates. *International Journal of Machine Intelligence and Sensory Signal Processing*, **2014**, 1, 192		
21	Ancient indian document analysis using cognitive memory network **2014**,		4
20	Threshnomics: An Introduction to Threshold Logic in Algorithms and Circuits. *Journal of Computer Science and Systems Biology*, **2014**, 07,	0	1
19	Memristive Operational Amplifiers. *Procedia Computer Science*, **2014**, 41, 114-119	1.6	3
18	Memristive Threshold Logic Face Recognition. *Procedia Computer Science*, **2014**, 41, 98-103	1.6	8
17	Irregular pixel imaging **2014**,		1
16	Mean-Variance Blind Noise Estimation for CT Images. *Advances in Intelligent Systems and Computing*, **2014**, 235-243	0.4	0

LIST OF PUBLICATIONS

15	On Design of Memristive Amplifier Circuits. *Circuits and Systems*, **2014**, 05, 265-273	0.6	4
14	Aggregate Metric Networks for Nearest Neighbour Classifiers. *Advances in Intelligent Systems and Computing*, **2014**, 13-22	0.4	
13	Directional edge detection using parallel cognitive logic cells **2013**,		1
12	Biologically inspired features used for robust phoneme recognition. *International Journal of Machine Intelligence and Sensory Signal Processing*, **2013**, 1, 46		3
11	One-sample face recognition with local similarity decisions. *International Journal of Applied Pattern Recognition*, **2013**, 1, 61	0.2	8
10	Machine Intelligence Using Hierarchical Memory Networks **2013**, 62-74		
9	Ranked selection of nearest discriminating features. *Human-centric Computing and Information Sciences*, **2012**, 2, 12	5.4	9
8	Nearest Neighbor Classifier Based on Nearest Feature Decisions. *Computer Journal*, **2012**, 55, 1072-1087	1.3	20
7	An Artificial Cellular Convolution Architecture for Real-Time Image Processing **2012**, 2012, 1-7		2
6	Improving feature selection algorithms using normalised feature histograms. *Electronics Letters*, **2011**, 47, 490	1.1	4
5	Cognitive memory network. *Electronics Letters*, **2010**, 46, 677	1.1	10
4	Inter-image outliers and their application to image classification. *Pattern Recognition*, **2010**, 43, 4101-4112	7.7	27
3	Role of Resolution in Noisy Pattern Matching. *Communications in Computer and Information Science*, **2010**, 120-124	0.3	
2	Face Recognition Using Local Binary Decisions. *IEEE Signal Processing Letters*, **2008**, 15, 821-824	3.2	14
1	Snake classification from images		2