Jan M Rabaey

List of Publications by Year
in descending order

65	4,171	279798	243625
papers	citations	23 h-index	44 g-index

65	65	65	3711
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Generalized Key-Value Memory to Flexibly Adjust Redundancy in Memory-Augmented Networks. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 10993-10998.	11.3	4
2	Impact of Forward Body-Biasing on Ultra-Low Voltage Switched-Capacitor RF Power Amplifier in 28 nm FD-SOI. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 50-54.	3.0	4
3	Surface-Mounted Parallel-Plate Coupler for Cylindric Dielectric Waveguides. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 2098-2107.	4.6	1
4	A Sub-100-Î¼W 0.1-to-27-Mb/s Pulse-Based Digital Transmitter for the Human Intranet in 28-nm FD-SOI CMOS. IEEE Journal of Solid-State Circuits, 2022, 57, 1409-1420.	5.4	5
5	Analysis of Ultralow Power Radio Frequency Beamforming Using Transmission-Line Transformers and Tunable Passives. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 2473-2488.	4.6	2
6	A Highly Energy-Efficient Hyperdimensional Computing Processor for Biosignal Classification. IEEE Transactions on Biomedical Circuits and Systems, 2022, 16, 524-534.	4.0	4
7	On the Role of Hyperdimensional Computing for Behavioral Prioritization in Reactive Robot Navigation Tasks. , 2022, , .		4
8	Efficient emotion recognition using hyperdimensional computing with combinatorial channel encoding and cellular automata. Brain Informatics, 2022, 9, .	3.0	8
9	A wearable biosensing system with in-sensor adaptive machine learning for hand gesture recognition. Nature Electronics, 2021, 4, 54-63.	26.0	317
10	Analyzing the Performance of WBAN Links during Physical Activity Using Real Multi-Band Sensor Nodes. Applied Sciences (Switzerland), 2021, 11, 2920.	2.5	5
11	Generalized Learning Vector Quantization for Classification in Randomized Neural Networks and Hyperdimensional Computing. , 2021, , .		7
12	Architecting the Human Intranet. , 2021, , .		1
13	Architecting the Human Intranet. , 2021, , .		0
14	Hyperdimensional Computing for Blind and One-Shot Classification of EEG Error-Related Potentials. Mobile Networks and Applications, 2020, 25, 1958-1969.	3.3	30
15	Human-Centric Computing. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2020, 28, 3-11.	3.1	11
16	Printed, flexible, compact UHF-RFID sensor tags enabled by hybrid electronics. Scientific Reports, 2020, 10, 16543.	3.3	54
17	Energy Efficient Heartbeat-Based MAC Protocol for WBAN Employing Body Coupled Communication. IEEE Access, 2020, 8, 182966-182983.	4.2	12
18	Towards Wireless Flexible Printed Wearable Sensors. , 2019, , .		2

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19	A Programmable Hyper-Dimensional Processor Architecture for Human-Centric IoT. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2019, 9, 439-452.	3.6	40
20	A 200-Mb/s Energy Efficient Transcranial Transmitter Using Inductive Coupling. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 435-443.	4.0	13
21	Towards Wireless Flexible Printed Wearable Sensors. , 2019, , .		0
22	Wireless Power Transfer to Randomly Distributed Implants via Homogeneous Magnetic Fields. , 2019, , .		1
23	A wireless and artefact-free 128-channel neuromodulation device for closed-loop stimulation and recording in non-human primates. Nature Biomedical Engineering, 2019, 3, 15-26.	22.5	164
24	Ultralow-Power Radio Frequency Beamformer Using Transmission-Line Transformers and Tunable Passives. IEEE Microwave and Wireless Components Letters, 2019, 29, 158-160.	3.2	3
25	Efficient Biosignal Processing Using Hyperdimensional Computing: Network Templates for Combined Learning and Classification of ExG Signals. Proceedings of the IEEE, 2019, 107, 123-143.	21.3	82
26	Capacitive Body-Coupled Communication in the 400â€“500ÂMHz Frequency Band. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2019, , 218-235.	0.3	7
27	Classification and Recall With Binary Hyperdimensional Computing: Tradeoffs in Choice of Density and Mapping Characteristics. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 5880-5898.	11.3	64
28	Brain-inspired computing exploiting carbon nanotube FETs and resistive RAM: Hyperdimensional computing case study. , 2018, , .		84
29	A Dual-Resolution Wavelet-Based Energy Detection Spectrum Sensing for UWB-Based Cognitive Radios. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 2279-2292.	5.4	19
30	A 2.7-mu W Neuromodulation AFE With 200 mV_{pp} Differential-Mode Stimulus Artifact Canceler Including On-Chip LMS Adaptation. IEEE Solid-State Circuits Letters, 2018, 1, 194-197.	2.0	9
31	A Comparative Study of On-Body Radio-Frequency Links in the 420 MHzâ€“2.4 GHz Range. Sensors, 2018, 18, 4165.	3.8	23
32	Hyperdimensional Computing Exploiting Carbon Nanotube FETs, Resistive RAM, and Their Monolithic 3D Integration. IEEE Journal of Solid-State Circuits, 2018, 53, 3183-3196.	5.4	49
33	Isolator-Less Near-Field RFID Reader for Sub-Cranial Powering/Data Link of Millimeter-Sized Implants. IEEE Journal of Solid-State Circuits, 2018, 53, 2032-2042.	5.4	7
34	A 3.1â€“10.6-GHz 57-Bands CMOS Frequency Synthesizer for UWB-Based Cognitive Radios. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 4134-4146.	4.6	18
35	A 213-nW/Channel Analog Euclidian Vector Normalizer. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 1909-1913.	3.0	0
36	An EMG Gesture Recognition System with Flexible High-Density Sensors and Brain-Inspired High-Dimensional Classifier. , 2018, , .		65

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37	A Neuro-Inspired Spike Pattern Classifier. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018, 8, 555-565.	3.6	2
38	Far-Field RF Wireless Power Transfer with Blind Adaptive Beamforming for Internet of Things Devices. IEEE Access, 2017, 5, 1743-1752.	4.2	91
39	Optimized Design of a Human Intranet Network. , 2017, , .		8
40	High-Dimensional Computing as a Nanoscalable Paradigm. IEEE Transactions on Circuits and Systems I: Regular Papers, 2017, 64, 2508-2521.	5.4	92
41	Reliable Next-Generation Cortical Interfaces for Chronic Brainâ€“Machine Interfaces and Neuroscience. Proceedings of the IEEE, 2017, 105, 73-82.	21.3	44
42	A Bio-Inspired Analog Gas Sensing Front End. IEEE Transactions on Circuits and Systems I: Regular Papers, 2017, 64, 2611-2623.	5.4	12
43	An implantable 700Î¼W 64-channel neuromodulation IC for simultaneous recording and stimulation with rapid artifact recovery. , 2017, , .		39
44	Blind parallel interrogation of ultrasonic neural dust motes based on canonical polyadic decomposition: A simulation study. , 2017, , .		0
45	Hyperdimensional computing with 3D VRRAM in-memory kernels: Device-architecture co-design for energy-efficient, error-resilient language recognition. , 2016, , .		95
46	Wireless Recording in the Peripheral Nervous System with Ultrasonic Neural Dust. Neuron, 2016, 91, 529-539.	8.1	417
47	A Robust and Energy-Efficient Classifier Using Brain-Inspired Hyperdimensional Computing. , 2016, , .		160
48	Hyperdimensional biosignal processing: A case study for EMG-based hand gesture recognition. , 2016, , .		103
49	The Human Intranet--Where Swarms and Humans Meet. IEEE Pervasive Computing, 2015, 14, 78-83.	1.3	25
50	A 4.78 mm 2 Fully-Integrated Neuromodulation SoC Combining 64 Acquisition Channels With Digital Compression and Simultaneous Dual Stimulation. IEEE Journal of Solid-State Circuits, 2015, 50, 1038-1047.	5.4	75
51	A Minimally Invasive 64-Channel Wireless Î¼ECoG Implant. IEEE Journal of Solid-State Circuits, 2015, 50, 344-359.	5.4	295
52	Model validation of untethered, ultrasonic neural dust motes for cortical recording. Journal of Neuroscience Methods, 2015, 244, 114-122.	2.5	140
53	Design and optimization of mm-size implantable and wearable on-body antennas for biomedical systems. , 2014, , .		13
54	Electromagnetic modelling and measurement of antennas for wireless brain-machine interface systems. , 2013, , .		5

#	Article	IF	Citations
55	The path toward energy-efficient inference engine architectures on scaled and beyond-CMOS fabrics. , 2013, , .		0
56	A Fully-Integrated, Miniaturized (0.125 mmÂ²) 10.5 ÂµW Wireless Neural Sensor. IEEE Journal of Solid-State Circuits, 2013, 48, 960-970.	5.4	154
57	A 0.013 ${hbox {mm}}^{2}$, 5 $muhbox{W}$, DC-Coupled Neural Signal Acquisition IC With 0.5 V Supply. IEEE Journal of Solid-State Circuits, 2012, 47, 232-243.	5.4	285
58	A Fully Integrated, 290 pJ/bit UWB Dual-Mode Transceiver for cm-Range Wireless Interconnects. IEEE Journal of Solid-State Circuits, 2012, 47, 586-598.	5.4	30
59	An information-theoretic framework for joint architectural and circuit level optimization for olfactory recognition processing. , 2011, , .		0
60	Ultralow-Power Design in Near-Threshold Region. Proceedings of the IEEE, 2010, 98, 237-252.	21.3	309
61	Low Power Design Essentials. Integrated Circuits and Systems, 2009, , .	0.2	308
62	A 52 muW Wake-Up Receiver With $-$72 dBm Sensitivity Using an Uncertain-IF Architecture. IEEE Journal of Solid-State Circuits, 2009, 44, 269-280.	5.4	253
63	Content Management and Replication in the SNSP: A Distributed Service-Based OS for Sensor Networks. , 2008, , .		1
64	Low-Power Successive Approximation Converter With 0.5 V Supply in 90 nm CMOS. IEEE Journal of Solid-State Circuits, 2007, 42, 2348-2356.	5.4	53
65	Design Methodology of a Low-Energy Reconfigurable Single-Chip DSP System. Journal of Signal Processing Systems, 2001, 28, 47-61.	1.0	43