Abu Sebastian

List of Publications by Year
in descending order

202 papers	11,437 citations	47006 47 h-index	32842 100 g-index
207 all docs	207 docs citations	207 times ranked	6834 citing authors

#	Article	IF	Citations
1	Memory devices and applications for in-memory computing. Nature Nanotechnology, 2020, 15, 529-544.	31.5	968
2	Stochastic phase-change neurons. Nature Nanotechnology, 2016, 11, 693-699.	31.5	799
3	Parallel convolutional processing using an integrated photonic tensor core. Nature, 2021, 589, 52-58.	27.8	723
4	Neuromorphic computing using non-volatile memory. Advances in Physics: X, 2017, 2, 89-124.	4.1	629
5	Neuromorphic computing with multi-memristive synapses. Nature Communications, 2018, 9, 2514.	12.8	566
6	High bandwidth nano-positioner: A robust control approach. Review of Scientific Instruments, 2002, 73, 3232-3241.	1.3	384
7	Mixed-precision in-memory computing. Nature Electronics, 2018, 1, 246-253.	26.0	315
8	Design methodologies for robust nano-positioning. IEEE Transactions on Control Systems Technology, 2005, 13, 868-876.	5.2	274
9	Recent Progress in Phase-Change<?Pub _newline ?>Memory Technology. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2016, 6, 146-162.	3.6	273
10	Accurate deep neural network inference using computational phase-change memory. Nature Communications, 2020, 11, 2473.	12.8	263
11	In-memory computing on a photonic platform. Science Advances, 2019, 5, eaau5759.	10.3	238
12	Monatomic phase change memory. Nature Materials, 2018, 17, 681-685.	27.5	221
13	Memristive technologies for data storage, computation, encryption, and radio-frequency communication. Science, 2022, 376, .	12.6	220
14	2022 roadmap on neuromorphic computing and engineering. Neuromorphic Computing and Engineering, 2022, 2, 022501.	5.9	217
15	Ultralow nanoscale wear through atom-by-atom attrition in silicon-containing diamond-like carbon. Nature Nanotechnology, 2010, 5, 181-185.	31.5	212
16	Tutorial: Brain-inspired computing using phase-change memory devices. Journal of Applied Physics, 2018, 124, .	2.5	206
17	An overview of phase-change memory device physics. Journal Physics D: Applied Physics, 2020, 53, 213002.	2.8	202
18	Crystal growth within a phase change memory cell. Nature Communications, 2014, 5, 4314.	12.8	199

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19	Temporal correlation detection using computational phase-change memory. Nature Communications, 2017, 8, 1115.	12.8	188
20	In-memory hyperdimensional computing. Nature Electronics, 2020, 3, 327-337.	26.0	145
21	Memristorsâ€"From Inâ€Memory Computing, Deep Learning Acceleration, and Spiking Neural Networks to the Future of Neuromorphic and Bioâ€Inspired Computing. Advanced Intelligent Systems, 2020, 2, 2000085.	6.1	143
22	High-speed multiresolution scanning probe microscopy based on Lissajous scan trajectories. Nanotechnology, 2012, 23, 185501.	2.6	137
23	Probe-based ultrahigh-density storage technology. IBM Journal of Research and Development, 2008, 52, 493-511.	3.1	129
24	Projected phase-change memory devices. Nature Communications, 2015, 6, 8181.	12.8	121
25	Harmonic and power balance tools for tapping-mode atomic force microscope. Journal of Applied Physics, 2001, 89, 6473-6480.	2.5	98
26	A phase-change memory model for neuromorphic computing. Journal of Applied Physics, 2018, 124, .	2.5	96
27	Nanopositioning for probe-based data storage [Applications of Control]. IEEE Control Systems, 2008, 28, 26-35.	0.8	93
28	Low-Power Neuromorphic Hardware for Signal Processing Applications: A Review of Architectural and System-Level Design Approaches. IEEE Signal Processing Magazine, 2019, 36, 97-110.	5.6	88
29	Oxygenated amorphous carbon for resistive memory applications. Nature Communications, 2015, 6, 8600.	12.8	86
30	Signal and noise extraction from analog memory elements for neuromorphic computing. Nature Communications, 2018, 9, 2102.	12.8	83
31	Programming algorithms for multilevel phase-change memory. , 2011, , .		82
32	Evidence for thermally assisted threshold switching behavior in nanoscale phase-change memory cells. Journal of Applied Physics, 2016, 119, .	2.5	78
33	Compressed Sensing With Approximate Message Passing Using In-Memory Computing. IEEE Transactions on Electron Devices, 2018, 65, 4304-4312.	3.0	78
34	Computational phase-change memory: beyond von Neumann computing. Journal Physics D: Applied Physics, 2019, 52, 443002.	2.8	78
35	Achieving Subnanometer Precision in a MEMS-Based Storage Device During Self-Servo Write Process. IEEE Nanotechnology Magazine, 2008, 7, 586-595.	2.0	77
36	Control of MEMS-Based Scanning-Probe Data-Storage Devices. IEEE Transactions on Control Systems Technology, 2007, 15, 824-841.	5.2	75

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37	Resistance switching at the nanometre scale in amorphous carbon. New Journal of Physics, 2011, 13, 013020.	2.9	75
38	Transient-signal-based sample-detection in atomic force microscopy. Applied Physics Letters, 2003, 83, 5521-5523.	3.3	74
39	Collective Structural Relaxation in Phaseâ€Change Memory Devices. Advanced Electronic Materials, 2018, 4, 1700627.	5.1	67
40	Dual-Stage Nanopositioning for High-Speed Scanning Probe Microscopy. IEEE/ASME Transactions on Mechatronics, 2014, 19, 1035-1045.	5.8	65
41	Nanoscale PtSi Tips for Conducting Probe Technologies. IEEE Nanotechnology Magazine, 2009, 8, 128-131.	2.0	62
42	Mixed-Precision Deep Learning Based on Computational Memory. Frontiers in Neuroscience, 2020, 14, 406.	2.8	61
43	Detecting Correlations Using Phase-Change Neurons and Synapses. IEEE Electron Device Letters, 2016, 37, 1238-1241.	3.9	54
44	Modeling and Experimental Identification of Silicon Microheater Dynamics: A Systems Approach. Journal of Microelectromechanical Systems, 2008, 17, 911-920.	2.5	52
45	Non-resistance-based cell-state metric for phase-change memory. Journal of Applied Physics, 2011, 110, 084505.	2.5	52
46	Accumulation-Based Computing Using Phase-Change Memories With FET Access Devices. IEEE Electron Device Letters, 2015, 36, 975-977.	3.9	52
47	8-bit Precision In-Memory Multiplication with Projected Phase-Change Memory. , 2018, , .		52
48	A Review of the Systems Approach to the Analysis of Dynamic-Mode Atomic Force Microscopy. IEEE Transactions on Control Systems Technology, 2007, 15, 952-959.	5.2	51
49	Robust high-dimensional memory-augmented neural networks. Nature Communications, 2021, 12, 2468.	12.8	50
50	Phase-change memtransistive synapses for mixed-plasticity neural computations. Nature Nanotechnology, 2022, 17, 507-513.	31.5	50
51	HERMES-Coreâ€"A 1.59-TOPS/mm² PCM on 14-nm CMOS In-Memory Compute Core Using 300-ps/LSB Linearized CCO-Based ADCs. IEEE Journal of Solid-State Circuits, 2022, 57, 1027-1038.	5.4	49
52	Tracking of Triangular References Using Signal Transformation for Control of a Novel AFM Scanner Stage. IEEE Transactions on Control Systems Technology, 2012, 20, 453-464.	5.2	48
53	Experimental Demonstration of Supervised Learning in Spiking Neural Networks with Phase-Change Memory Synapses. Scientific Reports, 2020, 10, 8080.	3.3	48
54	HERMES Core â€“ A 14nm CMOS and PCM-based In-Memory Compute Core using an array of 300ps/LSB Linearized CCO-based ADCs and local digital processing. , 2021, , .		48

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55	A Flexible and Fast PyTorch Toolkit for Simulating Training and Inference on Analog Crossbar Arrays. , 2021, , .		48
56	Harnessing the transient signals in atomic force microscopy. International Journal of Robust and Nonlinear Control, 2005, 15, 805-820.	3.7	45
57	Subthreshold electrical transport in amorphous phase-change materials. New Journal of Physics, 2015, 17, 093035.	2.9	44
58	Encapsulated tips for reliable nanoscale conduction in scanning probe technologies. Nanotechnology, 2009, 20, 105701.	2.6	42
59	High-bandwidth nanopositioner with magnetoresistance based position sensing. Mechatronics, 2012, 22, 295-301.	3.3	42
60	Mixed-precision architecture based on computational memory for training deep neural networks. , 2018, , .		42
61	Multilevel phase-change memory. , 2010, , .		38
62	Massively Parallelized Pollen Tube Guidance and Mechanical Measurements on a Lab-on-a-Chip Platform. PLoS ONE, 2016, 11, e0168138.	2.5	36
63	Estimation of amorphous fraction in multilevel phase-change memory cells. Solid-State Electronics, 2010, 54, 991-996.	1.4	34
64	Thermally driven non-contact atomic force microscopy. Applied Physics Letters, 2005, 87, 111901.	3.3	33
65	Nanoscale phase transformation in Ge2Sb2Te5 using encapsulated scanning probes and retraction force microscopy. Review of Scientific Instruments, 2009, 80, 083701.	1.3	32
66	Robust control approach to atomic force microscopy. , 0, , .		31
67	Drift-resilient cell-state metric for multilevel phase-change memory. , 2011, , .		31
68	Scanning probe microscopy based on magnetoresistive sensing. Nanotechnology, 2011, 22, 145501.	2.6	27
69	Harmonic analysis based modeling of tapping-mode AFM. , 1999, , .		26
70	Fluxâ€"Charge Memristor Model for Phase Change Memory. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 111-114.	3.0	26
71	Write strategies for multiterabit per square inch scanned-probe phase-change memories. Applied Physics Letters, 2010, 97, 173104.	3.3	25
72	Optimal scan trajectories for high-speed scanning probe microscopy. , 2012, , .		25

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73	High-field electrical transport in amorphous phase-change materials. Journal of Applied Physics, 2015, 118, .	2.5	25
74	Signal transformation approach to fast nanopositioning. Review of Scientific Instruments, 2009, 80, 076101.	1.3	24
75	A collective relaxation model for resistance drift in phase change memory cells. , 2015, , .		24
76	Applications of Computation-In-Memory Architectures based on Memristive Devices. , 2019, , .		24
77	H/sub âˆž/ loop shaping design for nano-positioning. , 0, , .		22
78	An observer based sample detection scheme for atomic force microscopy. , 0, , .		21
79	Amorphous carbon active contact layer for reliable nanoelectromechanical switches. , 2014, , .		21
80	Projected Mushroom Type Phaseâ€Change Memory. Advanced Functional Materials, 2021, 31, 2106547.	14.9	21
81	Optimised weight programming for analogue memory-based deep neural networks. Nature Communications, 2022, 13, .	12.8	21
82	Impulsive control for fast nanopositioning. Nanotechnology, 2011, 22, 135501.	2.6	19
83	Inâ€Memory Database Query. Advanced Intelligent Systems, 2020, 2, 2000141.	6.1	19
84	Nanopositioning With Multiple Sensors: A Case Study in Data Storage. IEEE Transactions on Control Systems Technology, 2012, 20, 382-394.	5.2	18
85	Deep learning acceleration based on in-memory computing. IBM Journal of Research and Development, 2019, 63, 7:1-7:16.	3.1	18
86	Precision of bit slicing with in-memory computing based on analog phase-change memory crossbars. Neuromorphic Computing and Engineering, 2022, 2, 014009.	5.9	18
87	Precision of synaptic weights programmed in phase-change memory devices for deep learning inference. , 2020, , .		17
88	Inherent stochasticity in phase-change memory devices. , 2016, , .		16
89	Compressed sensing recovery using computational memory. , 2017, , .		16
90	Emerging materials in neuromorphic computing: Guest editorial. APL Materials, 2020, 8, .	5.1	16

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91	Jitter Investigation and Performance Evaluation of a Small-Scale Probe Storage Device Prototype. , 2007, , .		15
92	An analysis of signal transformation approach to triangular waveform tracking. Automatica, 2011, 47, 838-847.	5.0	15
93	A Framework for Reliability Assessment in Multilevel Phase-Change Memory. , 2012, , .		15
94	Nanopositioning With Impulsive State Multiplication: A Hybrid Control Approach. IEEE Transactions on Control Systems Technology, 2013, 21, 1352-1364.	5.2	15
95	Temperature Evolution in Nanoscale Carbon-Based Memory Devices Due to Local Joule Heating. IEEE Nanotechnology Magazine, 2017, 16, 806-811.	2.0	15
96	Stochastic weight updates in phase-change memory-based synapses and their influence on artificial neural networks. , 2017, , .		14
97	Reliability Challenges with Materials for Analog Computing. , 2019, , .		14
98	State dependence and temporal evolution of resistance in projected phase change memory. Scientific Reports, 2020, 10, 8248.	3.3	14
99	Ohm's Law + Kirchhoff's Current Law = Better AI: Neural-Network Processing Done in Memory with Analog Circuits will Save Energy. IEEE Spectrum, 2021, 58, 44-49.	0.7	14
100	Reliable MLC data storage and retention in phase-change memory after endurance cycling. , 2013, , .		13
101	The Role of Short-Term Plasticity in Neuromorphic Learning: Learning from the Timing of Rate-Varying Events with Fatiguing Spike-Timing-Dependent Plasticity. IEEE Nanotechnology Magazine, 2018, 12, 45-53.	1.3	13
102	Memristive effects in oxygenated amorphous carbon nanodevices. Nanotechnology, 2018, 29, 035201.	2.6	12
103	The amplitude phase dynamics and fixed points in tapping-mode atomic force microscopy. , 2004, , .		11
104	Nanopositioning for probe storage. , 0, , .		11
105	Comparison of two non-linear control approaches to fast nanopositioning: Impulsive control and signal transformation. Mechatronics, 2012, 22, 302-309.	3.3	11
106	Phase-Change Memory Models for Deep Learning Training and Inference. , 2019, , .		11
107	Mushroom-Type phase change memory with projection liner: An array-level demonstration of conductance drift and noise mitigation. , 2021, , .		11
108	Interconnects for DNA, Quantum, In-Memory, and Optical Computing: Insights From a Panel Discussion. IEEE Micro, 2022, 42, 40-49.	1.8	11

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109	Control of the nanopositioning devices. , 0, , .		10
110	Design of Power-Optimized Thermal Cantilevers for Scanning Probe Topography Sensing. , 2009, , .		10
111	Two-sensor-based H>inf<∞>/inf<control for nanopositioning in probe storage. , 0, , .		9
112	Dynamics of Silicon Micro-Heaters: Modelling and Experimental Identification. , 0, , .		9
113	Fabrication of conducting AFM cantilevers with AlN-based piezoelectric actuators. Procedia Engineering, 2011, 25, 665-668.	1.2	9
114	High-speed spiral nanopositioning. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 2018-2023.	0.4	9
115	A dual-stage nanopositioning approach to high-speed scanning probe microscopy. , 2012, , .		9
116	Computational memory-based inference and training of deep neural networks. , 2019, , .		9
117	Efficient Pipelined Execution of CNNs Based on In-Memory Computing and Graph Homomorphism Verification. IEEE Transactions on Computers, 2021, 70, 922-935.	3.4	9
118	Towards faster data access: Seek operations in MEMS-based storage devices. , 2006, , .		9
119	On-chip Phase Change Optical Matrix Multiplication Core. , 2020, , .		9
120	Neuromorphic computing: Challenges from quantum materials to emergent connectivity. Applied Physics Letters, 2022, 120, .	3.3	9
121	Modeling and identification of the dynamics of electrostatically actuated microcantilever with integrated thermal sensor. , 2008, , .		8
122	A Self Servo Writing Scheme for a MEMS Storage Device with Sub-nanometer Precision. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 9242-9247.	0.4	8
123	High-throughput intermittent-contact scanning probe microscopy. Nanotechnology, 2010, 21, 075701.	2.6	8
124	Impulsive control for nanopositioning. , 2011, , .		8
125	Supervised learning in spiking neural networks with MLC PCM synapses. , 2017, , .		8
126	Impact of conductance drift on multi-PCM synaptic architectures. , 2018, , .		8

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127	Multi-ReRAM Synapses for Artificial Neural Network Training. , 2019, , .		8
128	Measurement of Onset of Structural Relaxation in Meltâ€Quenched Phase Change Materials. Advanced Functional Materials, 2021, 31, 2104422.	14.9	8
129	Temperature sensitivity of analog in-memory computing using phase-change memory. , 2021, , .		8
130	Mechanism and Impact of Bipolar Current Voltage Asymmetry in Computational Phaseâ€Change Memory. Advanced Materials, 2023, 35, e2201238.	21.0	8
131	An integrated photonics engine for unsupervised correlation detection. Science Advances, 2022, 8, .	10.3	8
132	Scanning Thermal Microscopy for Fast Multiscale Imaging and Manipulation. IEEE Nanotechnology Magazine, 2010, 9, 745-753.	2.0	7
133	Channel Modeling and Signal Processing for Probe Storage Channels. IEEE Journal on Selected Areas in Communications, 2010, 28, 143-157.	14.0	7
134	Note: Micro-cantilevers with AlN actuators and PtSi tips for multi-frequency atomic force microscopy. Review of Scientific Instruments, 2012, 83, 096107.	1.3	7
135	Fatiguing STDP: Learning from spike-timing codes in the presence of rate codes. , 2017, , .		7
136	Role of resistive memory devices in brain-inspired computing. , 2020, , 3-16.		7
137	MNEMOSENE: Tile Architecture and Simulator for Memristor-based Computation-in-memory. ACM Journal on Emerging Technologies in Computing Systems, 2022, 18, 1-24.	2.3	7
138	On intermittent-contact mode sensing using electrostatically-actuated micro-cantilevers with integrated thermal sensors. , 2008, , .		6
139	Tracking of high frequency piecewise affine signals using impulsive control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 90-95.	0.4	6
140	Carbon-Based Resistive Memories. , 2016, , .		6
141	The complete time/temperature dependence of I-V drift in PCM devices. , 2016, , .		6
142	Probing the micromechanics of the fastest growing plant cell â€" The pollen tube. , 2016, 2016, 461-464.		6
143	Energy Efficient In-Memory Hyperdimensional Encoding for Spatio-Temporal Signal Processing. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 1725-1729.	3.0	6
144	Ultra High Density Scanning Electrical Probe Phase-Change Memory for Archival Storage. Japanese Journal of Applied Physics, 2011, 50, 09MD04.	1.5	6

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145	Real-Time Models of Electrostatically Actuated Cantilever Probes With Integrated Thermal Sensor for Nanoscale Interrogation. Journal of Microelectromechanical Systems, 2010, 19, 83-98.	2.5	5
146	A high-bandwidth spintronic position sensor. Nanotechnology, 2014, 25, 375501.	2.6	5
147	A finite-element thermoelectric model for phase-change memory devices. , 2015, , .		5
148	Spiking Neural Networks Enable Two-Dimensional Neurons and Unsupervised Multi-Timescale Learning. , 2018, , .		5
149	Computational memory-based inference and training of deep neural networks. , 2019, , .		5
150	Localised states and their capture characteristics in amorphous phase-change materials. Scientific Reports, 2019, 9, 6592.	3.3	5
151	Experimental validation of state equations and dynamic route maps for phase change memristive devices. Scientific Reports, 2022, 12, 6488.	3.3	5
152	Estimation of amorphous fraction in multilevel phase change memory cells. , 2009, , .		4
153	Systems and Control Approach to Electro-Thermal Sensing. Lecture Notes in Control and Information Sciences, 2011, , 137-152.	1.0	4
154	Force modulation for enhanced nanoscale electrical sensing. Nanotechnology, 2011, 22, 355706.	2.6	4
155	Nonvolatile resistive memory devices based on hydrogenated amorphous carbon. , 2013, , .		4
156	Thermal noise response based control of tip-sample separation in AFM. , 2004, , .		4
157	High-Bandwidth Intermittent-Contact Mode Scanning Probe Microscopy Using Electrostatically-Actuated Microcantilevers. Lecture Notes in Control and Information Sciences, 2011, , 119-135.	1.0	4
158	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
159	Scanning Probes Entering Data Storage: From Promise to Reality. , 0, , .		3
160	Tracking Control of a Novel AFM Scanner using Signal Transformation Method. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 84-89.	0.4	3
161	High Speed Nanopositioner with Magneto Resistance-Based Position Sensing. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 306-310.	0.4	3
162	A high-speed electromagnetically-actuated scanner for dual-stage nanopositioning. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 125-130.	0.4	3

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163	Analysis and design of multiresolution scan trajectories for high-speed scanning probe microscopy. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 138-144.	0.4	3
164	Multi-frequency atomic force microscopy: A system-theoretic approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 7499-7504.	0.4	3
165	Phase-change memory. , 2020, , 63-96.		3
166	A Multi-Memristive Unit-Cell Array With Diagonal Interconnects for In-Memory Computing. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 3522-3526.	3.0	3
167	Towards faster data access: Seek operations in MEMS-based storage devices. , 2006, , .		2
168	Feedback enhanced thermo-electric topography sensing. , 2009, , .		2
169	File Classification Based on Spiking Neural Networks. , 2020, , .		2
170	Temperature Compensation Schemes for In-Memory Computing using Phase-Change Memory. , 2020, , .		2
171	Real-time Language Recognition using Hyperdimensional Computing on Phase-change Memory Array. , 2021, , .		2
172	Structural Assessment of Interfaces in Projected Phase-Change Memory. Nanomaterials, 2022, 12, 1702.	4.1	2
173	Force modulation for improved conductive-mode atomic force microscopy. , 2010, , .		1
174	Nanopositioning with multiple sensors: MISO control and inherent sensor fusion. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 2012-2017.	0.4	1
175	Ultra High Density Scanning Electrical Probe Phase-Change Memory for Archival Storage. Japanese Journal of Applied Physics, 2011, 50, 09MD04.	1.5	1
176	Micro-cantilever design and modeling framework for quantitative multi-frequency AFM. , 2012, , .		1
177	Joule heating effects in nanoscale carbon-based memory devices. , 2016, , .		1
178	Exploiting the non-linear current-voltage characteristics for resistive memory readout. , 2018, , .		1
179	Training Neural Networks using Memristive Devices with Nonlinear Accumulative Behavior. , 2019, , .		1
180	Building Next-Generation AI systems: Co-Optimization of Algorithms, Architectures, and Nanoscale Memristive Devices. , 2019, , .		1

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181	In-Memory Computing using Electrical and Photonic Memory Devices. , 2019, , .		1
182	Memristive devices for spiking neural networks. , 2020, , 399-405.		1
183	Accurate Weight Mapping in a Multi-Memristive Synaptic Unit. , 2021, , .		1
184	A Hybrid Control Approach to Nanopositioning. , 2013, , 89-120.		1
185	Track-follow Control for High-density Probe-based Storage Devices. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 9236-9241.	0.4	0
186	High-speed intermittent-contact mode scanning probe microscopy using cantilevers with integrated electrostatic actuator and thermoelectric sensor. , 2009, , .		0
187	2009 IEEE Transactions on Control Systems Technology Outstanding Paper Award. IEEE Transactions on Control Systems Technology, 2010, 18, 251-251.	5.2	0
188	Scanning Probe Microscopy using Higher-Mode Electrostatically-Actuated Microcantilevers. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 212-219.	0.4	0
189	Stability of signal transformation method for triangular waveform tracking. , 2010, , .		0
190	High-Speed, Ultra-High-Precision Nanopositioning: A Signal Transformation Approach. Lecture Notes in Control and Information Sciences, 2011, , 47-65.	1.0	0
191	Special issue on â€œMechatronic systems for micro- and nanoscale applicationsâ€. Mechatronics, 2012, 22, 239-240.	3.3	0
192	An efficient synaptic architecture for artificial neural networks. , 2017, , .		0
193	Phase-change memory enables energy-efficient brain-inspired computing. , 2019, , .		0
194	Accurate Emulation of Memristive Crossbar Arrays for In-Memory Computing. , 2020, , .		0
195	ESSOP: Efficient and Scalable Stochastic Outer Product Architecture for Deep Learning. , 2020, , .		0
196	Memristive devices for deep learning applications. , 2020, , 313-327.		0
197	Memristive devices as computational memory. , 2020, , 167-174.		0
198	Control Systems for Nanopositioning. , 2021, , 401-409.		0

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199	Architecting more than Moore. , 2021, , .		0
200	Nanopatterning of Phase-Change Material Thin Films For Tunable Photonics. , 2021, , .		0
201	All-photonic in-memory computing based on phase-change materials. , 2019, , .		0
202	Accelerating Inference of Convolutional Neural Networks Using In-memory Computing. Frontiers in Computational Neuroscience, 2021, 15, 674154.	2.1	0