Hao Yu

List of Publications by Citations

162	1,753	24	32
papers	citations	h-index	g-index
197	2,188	2.8	4.85
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
162	A Dual-Mode Large-Arrayed CMOS ISFET Sensor for Accurate and High-Throughput pH Sensing in Biomedical Diagnosis. *IEEE Transactions on Biomedical Engineering*, **2015**, 62, 2224-33	5	64
161	. *IEEE Nanotechnology Magazine*, **2015**, 14, 998-1012	2.6	56
160	Design Exploration of Hybrid CMOS and Memristor Circuit by New Modified Nodal Analysis. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2012**, 20, 1012-1025	2.6	56
159	A contact-imaging based microfluidic cytometer with machine-learning for single-frame super-resolution processing. *PLoS ONE*, **2014**, 9, e104539	3.7	47
158	An Energy-Efficient Digital ReRAM-Crossbar-Based CNN With Bitwise Parallelism. *IEEE Journal on Exploratory Solid-State Computational Devices and Circuits*, **2017**, 3, 37-46	2.4	46
157	On-chip sub-terahertz surface plasmon polariton transmission lines in CMOS. *Scientific Reports*, **2015**, 5, 14853	4.9	44
156	Analysis and Modeling of Internal State Variables for Dynamic Effects of Nonvolatile Memory Devices. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2012**, 59, 1906-1918	3.9	44
155	CMOS high density electrical impedance biosensor array for tumor cell detection. *Sensors and Actuators B: Chemical*, **2012**, 173, 903-907	8.5	40
154	A 239–281 GHz CMOS Receiver With On-Chip Circular-Polarized Substrate Integrated Waveguide Antenna for Sub-Terahertz Imaging. *IEEE Transactions on Terahertz Science and Technology*, **2014**, 4, 686-695	3.4	39
153	A 2-D Distributed Power Combining by Metamaterial-Based Zero Phase Shifter for 60-GHz Power Amplifier in 65-nm CMOS. *IEEE Transactions on Microwave Theory and Techniques*, **2013**, 61, 505-516	4.1	38
152	. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2014**, 61, 699-711	3.9	36
151	A Multiagent Minority-Game-Based Demand-Response Management of Smart Buildings Toward Peak Load Reduction. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2017**, 36, 573-585	2.5	35
150	Allocating power ground vias in 3D ICs for simultaneous power and thermal integrity. *ACM Transactions on Design Automation of Electronic Systems*, **2009**, 14, 1-31	1.5	35
149	DW-AES: A Domain-Wall Nanowire-Based AES for High Throughput and Energy-Efficient Data Encryption in Non-Volatile Memory. *IEEE Transactions on Information Forensics and Security*, **2016**, 11, 2426-2440	8	31
148	. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2008**, 16, 1609-1619	2.6	31
147	Machine Learning Based Single-Frame Super-Resolution Processing for Lensless Blood Cell Counting. *Sensors*, **2016**, 16,	3.8	29
146	Reliable 3-D Clock-Tree Synthesis Considering Nonlinear Capacitive TSV Model With Electrical-Thermal-Mechanical Coupling. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2013**, 32, 1734-1747	2.5	28

145	A Scalable Network-on-Chip Microprocessor With 2.5D Integrated Memory and Accelerator. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2017**, 64, 1432-1443	3.9	26
144	Distributed In-Memory Computing on Binary RRAM Crossbar. *ACM Journal on Emerging Technologies in Computing Systems*, **2017**, 13, 1-18	1.7	26
143	An ultra-low power CMOS image sensor with on-chip energy harvesting and power management capability. *Sensors*, **2015**, 15, 5531-54	3.8	26
142	Design of High-Q Millimeter-Wave Oscillator by Differential Transmission Line Loaded With Metamaterial Resonator in 65-nm CMOS. *IEEE Transactions on Microwave Theory and Techniques*, **2013**, 61, 1892-1902	4.1	26
141	Variability-Aware Parametric Yield Estimation for Analog/Mixed-Signal Circuits: Concepts, Algorithms, and Challenges. *IEEE Design and Test*, **2014**, 31, 6-15	1.4	25
140	Cyber-Physical Thermal Management of 3D Multi-Core Cache-Processor System with Microfluidic Cooling. *Journal of Low Power Electronics*, **2011**, 7, 110-121	1.2	25
139	An Energy-Efficient and Low-Crosstalk Sub-THz I/O by Surface Plasmonic Polariton Interconnect in CMOS. *IEEE Transactions on Microwave Theory and Techniques*, **2017**, 65, 2762-2774	4.1	24
138	An EScheduler-Based Data Dependence Analysis and Task Scheduling for Parallel Circuit Simulation. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2011**, 58, 702-706	3.5	24
137	On-chip sub-terahertz surface plasmon polariton transmission lines with mode converter in CMOS. *Scientific Reports*, **2016**, 6, 30063	4.9	22
136	Quantitative model for the interecho time dependence of the CPMG relaxation rate in iron-rich gray matter. *Magnetic Resonance in Medicine*, **2001**, 46, 159-65	4.4	21
135	QuickYield **2010**,		21
134	. *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, **2013**, 3, 355-366	5.2	20
133	Fast analysis of structured power grid by triangularization based structure preserving model order reduction **2006**,		18
132	Monolithic Semiconductor Lasers with Dynamically Tunable Linear-to-Circular Polarization. *ACS Photonics*, **2017**, 4, 517-524	6.3	17
131	. *IEEE Transactions on Electron Devices*, **2015**, 62, 3012-3018	2.9	17
130	. *IEEE Nanotechnology Magazine*, **2018**, 17, 645-656	2.6	16
129	Stochastic analog circuit behavior modeling by point estimation method **2011**,		16
128	A Microfluidic Cytometer for Complete Blood Count With a 3.2-Megapixel, 1.1-Ihn-Pitch Super-Resolution Image Sensor in 65-nm BSI CMOS. *IEEE Transactions on Biomedical Circuits and Systems*, **2017**, 11, 794-803	5.1	15

127	Portable resistive pulse-activated lens-free cell imaging system. *RSC Advances*, **2014**, 4, 56342-56345	3.7	15
126	Wideband passive multiport model order reduction and realization of RLCM circuits. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2006**, 25, 1496-1509	2.5	15
125	Nonvolatile CBRAM-Crossbar-Based 3-D-Integrated Hybrid Memory for Data Retention. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2014**, 22, 957-970	2.6	14
124	Design of Ultra-Low-Power 60-GHz Direct-Conversion Receivers in 65-nm CMOS. *IEEE Transactions on Microwave Theory and Techniques*, **2013**, 61, 3360-3372	4.1	14
123	Energy efficient in-memory machine learning for data intensive image-processing by non-volatile domain-wall memory **2014**,		14
122	80 GHz on-chip metamaterial resonator by differential transmission line loaded with split ring resonator. *Electronics Letters*, **2012**, 48, 1128-1130	1.1	14
121	A Single-Frame Superresolution Algorithm for Lab-on-a-Chip Lensless Microfluidic Imaging. *IEEE Design and Test*, **2015**, 32, 32-40	1.4	13
120	Stochastic Behavioral Modeling and Analysis for Analog/Mixed-Signal Circuits. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2013**, 32, 24-33	2.5	13
119	A 96-GHz Oscillator by High-Q Differential Transmission Line loaded with Complementary Split-Ring Resonator in 65-nm CMOS. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2013**, 60, 127-131	3.5	13
118	A Fast Non-Monte-Carlo Yield Analysis and Optimization by Stochastic Orthogonal Polynomials. *ACM Transactions on Design Automation of Electronic Systems*, **2012**, 17, 1-23	1.5	13
117	Simultaneous power and thermal integrity driven via stapling in 3D ICs. *IEEE/ACM International Conference on Computer-Aided Design, Digest of Technical Papers*, **2006**,		13
116	Minimal skew clock embedding considering time variant temperature gradient **2007**,		13
115	3D FEM Analysis of High-Frequency AlN-Based PMUT Arrays on Cavity SOI. *Sensors*, **2019**, 19,	3.8	12
114	An energy-efficient and high-throughput bitwise CNN on sneak-path-free digital ReRAM crossbar **2017**,		12
113	A 32.5-GS/s Sampler With Time-Interleaved Track-and-Hold Amplifier in 65-nm CMOS. *IEEE Transactions on Microwave Theory and Techniques*, **2014**, 62, 3500-3511	4.1	12
112	High-Sensitivity CMOS Super-Regenerative Receiver with Quench-Controlled High-Q Metamaterial Resonator for Millimeter-Wave Imaging at 96 and 135 GHz. *IEEE Transactions on Microwave Theory and Techniques*, **2014**, 62, 3095-3106	4.1	12
111	A fractional-order RLGC model for Terahertz transmission line **2013**,		11
110	A Nanoelectromechanical-Switch-Based Thermal Management for 3-D Integrated Many-Core Memory-Processor System. *IEEE Nanotechnology Magazine*, **2012**, 11, 588-600	2.6	11

109	Circuit simulation based obstacle-aware Steiner routing **2006**,		11
108	Millimeter-Wave Sources at 60 and 140 GHz by Magnetic-Plasmon-Waveguide-Based In-Phase Coupled Oscillator Network in 65-nm CMOS. *IEEE Transactions on Microwave Theory and Techniques*, **2016**, 64, 1560-1571	4.1	10
107	High density CMOS electrode array for high-throughput and automated cell counting. *Sensors and Actuators B: Chemical*, **2013**, 181, 842-849	8.5	10
106	An ultralow-power memory-based big-data computing platform by nonvolatile domain-wall nanowire devices **2013**,		10
105	An efficient channel clustering and flow rate allocation algorithm for non-uniform microfluidic cooling of 3D integrated circuits. *The Integration VLSI Journal*, **2013**, 46, 57-68	1.4	10
104	*. IEEE Transactions on Circuits and Systems I: Regular Papers*, **2013**, 60, 37-50	3.9	10
103	A Q-Learning Based Self-Adaptive I/O Communication for 2.5D Integrated Many-Core Microprocessor and Memory. *IEEE Transactions on Computers*, **2016**, 65, 1185-1196	2.5	9
102	3D Many-Core Microprocessor Power Management by Space-Time Multiplexing Based Demand-Supply Matching. *IEEE Transactions on Computers*, **2015**, 64, 3022-3036	2.5	9
101	*. IEEE Design and Test*, **2013**, 30, 26-35	1.4	9
100	Demand side management with consumer clusters in cyber-physical smart distribution system considering price-based and reward-based scheduling programs. *IET Cyber-Physical Systems: Theory and Applications*, **2017**, 2, 75-83	2.5	9
99	A 23mW face recognition accelerator in 40nm CMOS with mostly-read 5T memory **2015**,		9
98	Thermal-reliable 3D clock-tree synthesis considering nonlinear electrical-thermal-coupled TSV model **2013**,		9
97	Thermal Via Allocation for 3D ICs Considering Temporally and Spatially Variant Thermal Power **2006**,		9
96	A 2.5-D Memory-Logic Integration With Data-Pattern-Aware Memory Controller. *IEEE Design and Test*, **2015**, 32, 1-10	1.4	8
95	A robust recognition error recovery for micro-flow cytometer by machine-learning enhanced single-frame super-resolution processing. *The Integration VLSI Journal*, **2015**, 51, 208-218	1.4	8
94	SPICE simulator for hybrid CMOS memristor circuit and system **2012**,		8
93	Fast Analysis of a Large-Scale Inductive Interconnect by Block-Structure-Preserved Macromodeling. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2010**, 18, 1399-1411	2.6	8
92	Decentralized agent based re-clustering for task mapping of tera-scale network-on-chip system **2012**,		8

91	Indoor positioning by distributed machine-learning based data analytics on smart gateway network **2015**,		7
90	An energy-efficient 2.5D through-silicon interposer I/O with self-adaptive adjustment of output-voltage swing **2014**,		7
89	Design exploration of 3D stacked non-volatile memory by conductive bridge based crossbar **2012**,		7
88	A body-biasing of readout circuit for STT-RAM with improved thermal reliability **2015**,		6
87	A GPU-Accelerated Parallel Shooting Algorithm for Analysis of Radio Frequency and Microwave Integrated Circuits. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2015**, 23, 480-492	2.6	6
86	High-speed and low-power 2.5D I/O circuits for memory-logic-integration by through-silicon interposer **2013**,		6
85	A real-time cyber-physical energy management system for smart houses **2011**,		6
84	High-speed CMOS image sensor for high-throughput lensless microfluidic imaging system **2012**,		6
83	Block structure preserving model order reduction		6
82	Simultaneous Power and Thermal Integrity Driven Via Stapling in 3D ICs. *IEEE/ACM International Conference on Computer-Aided Design, Digest of Technical Papers*, **2006**,		6
81	Distributed-neuron-network based machine learning on smart-gateway network towards real-time indoor data analytics **2016**,		6
80	A 16-channel 24-V 1.8-mA power efficiency enhanced neural/muscular stimulator with exponentially decaying stimulation current **2015**,		5
79	A 53-to-73GHz power amplifier with 74.5mW/mm2 output power density by 2D differential power combining in 65nm CMOS **2013**,		5
78	SPECO: Stochastic Perturbation based Clock tree Optimization considering temperature uncertainty. *The Integration VLSI Journal*, **2013**, 46, 22-32	1.4	5
77	Fast timing analysis of clock networks considering environmental uncertainty. *The Integration VLSI Journal*, **2012**, 45, 376-387	1.4	5
76	A 60GHz VCO with 25.8% tuning range by switching return-path in 65nm CMOS **2012**,		5
75	A 75.7GHz to 102GHz rotary-traveling-wave VCO by tunable composite right /left hand T-line **2013**,		5
74	Peak power reduction and workload balancing by space-time multiplexing based demand-supply matching for 3D thousand-core microprocessor **2013**,		5

73	Thermal via allocation for 3D ICs considering temporally and spatially variant thermal power **2006**,		5
72	Off-chip decoupling capacitor allocation for chip package co-design. *Proceedings - Design Automation Conference*, **2007**,		5
71	A provably passive and cost-efficient model for inductive interconnects. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2005**, 24, 1283-1294	2.5	5
70	A 13.5-Gb/s 140-GHz Silicon Redriver Exploiting Metadevices for Short-Range OOK Communications. *IEEE Transactions on Microwave Theory and Techniques*, **2022**, 70, 239-253	4.1	5
69	A 510-Gb/s 12.5-mW Source Synchronous I/O Interface With 3-D Flip Chip Package. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2019**, 66, 555-568	3.9	5
68	**2018**,		5
67	A 64×64 1200fps dual-mode CMOS ion-image sensor for accurate DNA sequencing **2015**,		4
66	Reachability-Based Robustness Verification and Optimization of SRAM Dynamic Stability Under Process Variations. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2014**, 33, 585-598	2.5	4
65	A CMOS THz-sensing system towards label-free DNA sequencing **2015**,		4
64	CMOS sub-THz on-chip modulator by stacked split ring resonator with high-extinction ratio **2015**,		4
63	Reinforcement learning based self-adaptive voltage-swing adjustment of 2.5D I/Os for many-core microprocessor and memory communication **2014**,		4
62	A Parallel and Incremental Extraction of Variational Capacitance With Stochastic Geometric Moments. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2012**, 20, 1729-1737	2.6	4
61	An 8mW ultra low power 60GHz direct-conversion receiver with 55dB gain and 4.9dB noise figure in 65nm CMOS **2012**,		4
60	Fast non-monte-carlo transient noise analysis for high-precision analog/RF circuits by stochastic orthogonal polynomials **2011**,		4
59	An energy-efficient non-volatile in-memory accelerator for sparse-representation based face recognition **2015**,		4
58	On-line machine learning accelerator on digital RRAM-crossbar **2016**,		4
57	Optimizing Boolean embedding matrix for compressive sensing in RRAM crossbar **2015**,		3
56	An overview of new design techniques for high performance CMOS millimeter-wave circuits **2014**,		3

37	Fast simulation of hybrid CMOS and STT-MTJ circuits with identified internal state variables **2012**,		2
36	Stable backward reachability correction for PLL verification with consideration of environmental noise induced jitter **2013**,		2
35	A fast analog mismatch analysis by an incremental and stochastic trajectory piecewise linear macromodel **2010**,		2
34	NEMS based thermal management for 3D many-core system **2011**,		2
33	Dynamic power and thermal integrity in 3D integration **2009**,		2
32	A structured parallel periodic Arnoldi shooting algorithm for RF-PSS analysis based on GPU platforms **2011**,		2
31	Fast analysis of nontree-clock network considering environmental uncertainty by parameterized and incremental macromodeling **2009**,		2
30	Robust On-Chip Signaling by Staggered and Twisted Bundle. *IEEE Design and Test of Computers*, **2009**, 26, 92-104		2
29	**2016**,		2
28	An Energy-efficient Adaptive Sub-THz Wireless Interconnect with MIMO-Beamforming between Cores and DRAMs **2016**,		2
27	A 5-GS/s, 13-mW, 2-channel time-interleaved asynchronous ADC in 65nm CMOS **2016**,		2
26	A 7.52-dB Noise Figure 128.75132.25-GHz Super-Regenerative Receiver With 0.615-fW/$\sqrt{\mathrm{Hz}}$ NEP by Coupled Oscillator Networks for Portable Imaging System in 65-nm CMOS. *IEEE Transactions on Microwave Theory and Techniques*, **2018**, 66, 4095-4107	4.1	2
25	A 6464 1200fps CMOS ion-image sensor with suppressed fixed-pattern-noise for accurate high-throughput DNA sequencing **2014**,		1
24	A robustness optimization of SRAM dynamic stability by sensitivity-based reachability analysis **2014** ,		1
23	A 54 to 62.8GHz PA with 95.2mW/mm2 output power density by 44 distributed in-phase power combining in 65nm CMOS **2014**,		1
22	A 32.5-GS/s two-channel time-interleaved CMOS sampler with switched-source follower based track-and-hold amplifier **2014**,		1
21	A thermal resilient integration of many-core microprocessors and main memory by 2.5D TSI I/Os **2014**,		1
20	A high-sensitivity 135GHz millimeter-wave imager by compact split-ring-resonator in 65-nm CMOS. *Solid-State Electronics*, **2015**, 113, 54-60	1.7	1

19   A 201 mV/pH, 375 fps and 512⨯576 CMOS ISFET sensor in 65nm CMOS technology **2015**,   1

18   A 239⨯281GHz Sub-THz imager with 100MHz resolution by CMOS direct-conversion receiver with on-chip circular-polarized SIW antenna **2014**,   1

17   A 96⨯96 1V ultra-low power CMOS image sensor for biomedical application **2012**,   1

16   Real-time thermal management of 3D multi-core system with fine-grained cooling control **2010**,   1

15   A new model of stacked transformers considering skin and substrate effects **2012**,   1

14   A sparsified vector potential equivalent circuit model for massively coupled interconnects   1

13   A Fast Block Structure Preserving Model Order Reduction for Inverse Inductance Circuits. *IEEE/ACM International Conference on Computer-Aided Design, Digest of Technical Papers*, **2006**,   1

12   A wideband hierarchical circuit reduction for massively coupled interconnects   1

11   CMOS Terahertz Sensor **2018**, 76-105

10   CMOS Dual-mode pH-Image Sensor **2018**, 169-185

9   CMOS Impedance Sensor **2018**, 60-75

8   DNA Sequencing **2018**, 213-230

7   Cell Counting **2018**, 231-257

6   Robust On-chip Signaling by Staggered and Twisted Bundle. *IEEE Design and Test*, **2013**, 1-1   1.4

5   Energy-Efficient and Error-Resilient Cognitive I/O for 3-D-Integrated Manycore Microprocessors. *IEEE Design and Test*, **2020**, 1-1   1.4

4   3D IC Design Automation Considering Dynamic Power and Thermal Integrity **2011**, 335-350

3   Tensor-Solver for Deep Neural Network. *Computer Architecture and Design Methodologies*, **2019**, 63-105   0.2

2   CMOS 3-D-Integrated MEMS Sensor **2018**, 126-141

LIST OF PUBLICATIONS

1   CMOS Image Sensor **2018**, 142-168