

Weiqiang Liu

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

121
papers

1,328
citations

18
h-index

30
g-index

146
ext. papers

1,982
ext. citations

3.1
avg, IF

5.37
L-index

#	Paper	IF	Citations
121	Design of Approximate Radix-4 Booth Multipliers for Error-Tolerant Computing. <i>IEEE Transactions on Computers</i> , 2017 , 66, 1435-1441	2.5	123
120	A First Step Toward Cost Functions for Quantum-Dot Cellular Automata Designs. <i>IEEE Nanotechnology Magazine</i> , 2014 , 13, 476-487	2.6	112
119	. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2018 , 65, 2856-2868	3.9	59
118	A Retrospective and Prospective View of Approximate Computing [Point of View]. <i>Proceedings of the IEEE</i> , 2020 , 108, 394-399	14.3	54
117	QCA Systolic Array Design. <i>IEEE Transactions on Computers</i> , 2013 , 62, 548-560	2.5	45
116	Optimized Schoolbook Polynomial Multiplication for Compact Lattice-Based Cryptography on FPGA. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2019 , 27, 2459-2463	2.6	38
115	. <i>IEEE Transactions on Computers</i> , 2019 , 68, 804-819	2.5	37
114	. <i>IEEE Access</i> , 2020 , 8, 74720-74742	3.5	33
113	. <i>IEEE Transactions on Computers</i> , 2016 , 65, 2522-2533	2.5	33
112	. <i>IEEE Transactions on Computers</i> , 2016 , 65, 308-314	2.5	29
111	Design of Approximate Unsigned Integer Non-restoring Divider for Inexact Computing 2015 ,		29
110	A machine learning attack resistant multi-PUF design on FPGA 2018 ,		23
109	. <i>IEEE Transactions on Computers</i> , 2016 , 65, 1165-1171	2.5	22
108	Hybrid Low Radix Encoding-Based Approximate Booth Multipliers. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2020 , 67, 3367-3371	3.5	19
107	. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2019 , 66, 4727-4739	3.9	18
106	XOR-Based Low-Cost Reconfigurable PUFs for IoT Security. <i>Transactions on Embedded Computing Systems</i> , 2019 , 18, 1-21	1.8	18
105	Data Compression Device Based on Modified LZ4 Algorithm. <i>IEEE Transactions on Consumer Electronics</i> , 2018 , 64, 110-117	4.8	18

104	. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021 , 68, 250-263	3.9	18
103	. <i>IEEE Transactions on Emerging Topics in Computing</i> , 2019 , 1-1	4.1	17
102	. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2020 , 67, 886-890	3.5	17
101	QCA Systolic Matrix Multiplier 2010 ,		17
100	A Modeling Attack Resistant Deception Technique for Securing Lightweight-PUF-Based Authentication. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2021 , 40, 1183-1196	2.5	17
99	2018 ,		16
98	. <i>IEEE Transactions on Emerging Topics in Computing</i> , 2019 , 1-1	4.1	16
97	XOR gate based low-cost configurable RO PUF 2017 ,		16
96	. <i>IEEE Transactions on Multi-Scale Computing Systems</i> , 2018 , 4, 299-312		15
95	Ultra-Lightweight and Reconfigurable Tristate Inverter Based Physical Unclonable Function Design. <i>IEEE Access</i> , 2018 , 6, 28478-28487	3.5	15
94	Algorithm and Design of a Fully Parallel Approximate Coordinate Rotation Digital Computer (CORDIC). <i>IEEE Transactions on Multi-Scale Computing Systems</i> , 2017 , 3, 139-151		14
93	Optimized Modular Multiplication for Supersingular Isogeny Diffie-Hellman. <i>IEEE Transactions on Computers</i> , 2019 , 68, 1249-1255	2.5	14
92	. <i>IEEE Access</i> , 2019 , 7, 5124-5140	3.5	14
91	Design of Approximate High-Radix Dividers by Inexact Binary Signed-Digit Addition 2017 ,		14
90	. <i>IEEE Transactions on Sustainable Computing</i> , 2020 , 1-1	3.5	14
89	Security in Approximate Computing and Approximate Computing for Security: Challenges and Opportunities. <i>Proceedings of the IEEE</i> , 2020 , 108, 2214-2231	14.3	12
88	A Modeling Attack Resistant Deception Technique for Securing PUF based Authentication 2019 ,		12
87	. <i>IEEE Transactions on Computers</i> , 2017 , 66, 1994-2004	2.5	10

86	Lattice-based Cryptography for IoT in A Quantum World: Are We Ready? 2019 ,		10
85	Design and Performance Evaluation of Approximate Floating-Point Multipliers 2016 ,		10
84	Inexact floating-point adder for dynamic image processing 2014 ,		10
83	New Majority Gate-Based Parallel BCD Adder Designs for Quantum-Dot Cellular Automata. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2019 , 66, 1232-1236	3.5	10
82	2018 ,		10
81	Ten years of hardware Trojans: a survey from the attacker's perspective. <i>IET Computers and Digital Techniques</i> , 2020 , 14, 231-246	0.9	9
80	High Performance Modular Multiplication for SIDH. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2020 , 39, 3118-3122	2.5	9
79	Design and Implementation of an Approximate Softmax Layer for Deep Neural Networks 2020 ,		9
78	Lightweight Hardware Implementation of R-LWE Lattice-Based Cryptography 2018 ,		9
77	High-performance approximate half and full adder cells using NAND logic gate. <i>IEICE Electronics Express</i> , 2019 , 16, 20190043-20190043	0.5	8
76	Mathematical Modeling Analysis of Strong Physical Unclonable Functions. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2020 , 39, 4426-4438	2.5	8
75	Cost-efficient decimal adder design in Quantum-dot cellular automata 2012 ,		8
74	Design of Approximate Logarithmic Multipliers 2017 ,		7
73	Background Calibration of Bit Weights in Pipelined-SAR ADCs Using Paired Comparators. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2020 , 28, 1074-1078	2.6	7
72	Designs of Approximate Floating-Point Multipliers with Variable Accuracy for Error-Tolerant Applications. <i>Journal of Signal Processing Systems</i> , 2018 , 90, 641-654	1.4	7
71	AxMM: Area and Power Efficient Approximate Modular Multiplier for R-LWE Cryptosystem 2020 ,		7
70	. <i>IEEE Transactions on Dependable and Secure Computing</i> , 2020 , 1-1	3.9	6
69	. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2020 , 67, 4869-4882	3.9	6

68	Lightweight Modeling Attack-Resistant Multiplexer-Based Multi-PUF (MMPUF) Design on FPGA. <i>Electronics (Switzerland)</i> , 2020 , 9, 815	2.6	6
67	Design and Optimization of Modular Multiplication for SIDH 2018 ,		6
66	Building an accurate hardware Trojan detection technique from inaccurate simulation models and unlabelled ICs. <i>IET Computers and Digital Techniques</i> , 2019 , 13, 348-359	0.9	6
65	Theoretical Analysis of Delay-Based PUFs and Design Strategies for Improvement 2019 ,		6
64	A Novel Feature Extraction Strategy for Hardware Trojan Detection 2020 ,		6
63	. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2021 , 68, 1566-1570	3.5	6
62	Design of High-Speed Wide-Word Hybrid Parallel-Prefix/Carry-Select and Skip Adders. <i>Journal of Signal Processing Systems</i> , 2018 , 90, 409-419	1.4	5
61	. <i>IEEE Transactions on Computers</i> , 2019 , 68, 287-293	2.5	5
60	. <i>IEEE Transactions on Emerging Topics in Computing</i> , 2019 , 1-1	4.1	5
59	Security Analysis of Hardware Trojans on Approximate Circuits 2020 ,		5
58	Precision Adaptive MFCC Based on R2SDF-FFT and Approximate Computing for Low-Power Speech Keywords Recognition. <i>IEEE Circuits and Systems Magazine</i> , 2021 , 21, 24-39	3.2	5
57	A Real-Time Hardware Emulator for 3D Non-Stationary U2V Channels. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021 , 68, 3951-3964	3.9	5
56	. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2020 , 67, 4707-4718	3.9	4
55	A Parallel Decimal Multiplier Using Hybrid Binary Coded Decimal (BCD) Codes 2016 ,		4
54	A Highly Flexible Lightweight and High Speed True Random Number Generator on FPGA 2018 ,		4
53	Montgomery modular multiplier design in quantum-dot cellular automata using cut-set retiming 2010 ,		4
52	A review of QCA adders and metrics 2012 ,		4
51	. <i>Proceedings of the IEEE</i> , 2020 , 108, 2103-2107	14.3	4

50	INA: Incremental Network Approximation Algorithm for Limited Precision Deep Neural Networks 2019 ,		4
49	. <i>IEEE Open Journal of the Computer Society</i> , 2021 , 2, 38-52	3.6	4
48	A Co-training Based Hardware Trojan Detection Technique by Exploiting Unlabeled ICs and Inaccurate Simulation Models 2018 ,		4
47	A lightweight key renewal scheme based authentication protocol with configurable RO PUF for clustered sensor networks. <i>Microelectronics Journal</i> , 2021 , 117, 105265	1.8	4
46	DPAEG: A Dependency Parse-Based Adversarial Examples Generation Method for Intelligent Q&A Robots. <i>Security and Communication Networks</i> , 2020 , 2020, 1-15	1.9	3
45	Ultra High-Speed Polynomial Multiplications for Lattice-based Cryptography on FPGAs. <i>IEEE Transactions on Emerging Topics in Computing</i> , 2022 , 1-1	4.1	3
44	AxRLWE: A Multi-level Approximate Ring-LWE Co-processor for Lightweight IoT Applications. <i>IEEE Internet of Things Journal</i> , 2021 , 1-1	10.7	3
43	Active DNN IP Protection: A Novel User Fingerprint Management and DNN Authorization Control Technique 2020 ,		3
42	A large-scale comprehensive evaluation of single-slice ring oscillator and PicoPUF bit cells on 28-nm Xilinx FPGAs. <i>Journal of Cryptographic Engineering</i> , 2021 , 11, 227-238	1.9	3
41	Transformer PUF : A Highly Flexible Configurable RO PUF Based on FPGA 2020 ,		3
40	DC-LSTM: Deep Compressed LSTM with Low Bit-Width and Structured Matrices 2020 ,		3
39	BCD Adder Designs Based on Three-Input XOR and Majority Gates. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2021 , 68, 1942-1946	3.5	3
38	Design and Analysis of Majority Logic Based Approximate Radix-4 Booth Encoders 2019 ,		3
37	. <i>IEEE Transactions on Emerging Topics in Computing</i> , 2021 , 1-1	4.1	3
36	. <i>IEEE Open Journal of Nanotechnology</i> , 2021 , 2, 31-40	2.1	3
35	Approximate Computing and Its Application to Hardware Security 2018 , 43-67		3
34	Design of Dynamic Range Approximate Logarithmic Multipliers 2018 ,		3
33	. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021 , 68, 4102-4115	3.9	3

32	A High-Performance SIKE Hardware Accelerator. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2022 , 1-13	2.6	3
31	Design of Approximate FFT with Bit-width Selection Algorithms 2018 ,		2
30	2018 ,		2
29	Design of 3-D quantum-dot cellular automata adders. <i>IEICE Electronics Express</i> , 2015 , 12, 20150195-20150195	0.5	2
28	More is Less: Domain-Specific Speech Recognition Microprocessor Using One-Dimensional Convolutional Recurrent Neural Network. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021 , 1-12	3.9	2
27	Towards CRYSTALS-Kyber: A M-LWE Cryptoprocessor with Area-Time Trade-Off 2021 ,		2
26	A Reconfigurable Memory PUF Based on Tristate Inverter Arrays 2016 ,		2
25	2019 ,		2
24	Theoretical Analysis of Configurable RO PUFs and Strategies to Enhance Security 2019 ,		2
23	AxSA: On the Design of High-Performance and Power-Efficient Approximate Systolic Arrays for Matrix Multiplication. <i>Journal of Signal Processing Systems</i> , 2021 , 93, 605-615	1.4	2
22	Background Calibration for Bit Weights in Pipelined ADCs Using Adaptive Dither Windows. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2021 , 68, 1783-1787	3.5	2
21	Backdoors hidden in facial features: a novel invisible backdoor attack against face recognition systems. <i>Peer-to-Peer Networking and Applications</i> , 2021 , 14, 1458-1474	3.1	2
20	A Dynamically Configurable PUF and Dynamic Matching Authentication Protocol. <i>IEEE Transactions on Emerging Topics in Computing</i> , 2021 , 1-1	4.1	2
19	. <i>IEEE Transactions on Information Forensics and Security</i> , 2021 , 1-1	8	2
18	Multi-Incentive Delay-Based (MID) PUF 2019 ,		1
17	Multiprecision Multiplication on ARMv8 2017 ,		1
16	DC MUX PUF: A highly reliable feed-back MUX PUF based on measuring duty cycle 2017 ,		1
15	Notice of Violation of IEEE Publication Principles: Application of LDPC codes on PUF error correction based on code-offset construction 2017 ,		1

14	Design of Majority Logic-based Approximate Booth Multipliers for Error-Tolerant Applications. <i>IEEE Nanotechnology Magazine</i> , 2022 , 1-1	2.6	1
13	Detect and Remove Watermark in Deep Neural Networks via Generative Adversarial Networks. <i>Lecture Notes in Computer Science</i> , 2021 , 341-357	0.9	1
12	Intellectual Property Protection for Deep Learning Models: Taxonomy, Methods, Attacks, and Evaluations. <i>IEEE Transactions on Artificial Intelligence</i> , 2021 , 1-1	4.7	1
11	Design of Unsigned Approximate Hybrid Dividers based on Restoring Array and Logarithmic Dividers. <i>IEEE Transactions on Emerging Topics in Computing</i> , 2020 , 1-1	4.1	1
10	A Dynamic Highly Reliable SRAM-Based PUF Retaining Memory Function 2021 ,		1
9	High-Performance Systolic Array Montgomery Multiplier for SIKE 2021 ,		1
8	Design of An Approximate FFT Processor Based on Approximate Complex Multipliers 2021 ,		1
7	PTB: Robust Physical Backdoor Attacks against Deep Neural Networks in Real World. <i>Computers and Security</i> , 2022 , 102726	4.9	1
6	Design, evaluation and application of approximate-truncated Booth multipliers. <i>IET Circuits, Devices and Systems</i> , 2020 , 14, 1305-1317	1.1	0
5	An Efficient High SFDR PDDS Using High-Pass-Shaped Phase Dithering. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2021 , 29, 2003-2007	2.6	
4	Low-Power Approximate RPR Scheme for Unsigned Integer Arithmetic Computation. <i>IEEE Open Journal of Nanotechnology</i> , 2022 , 3, 36-44	2.1	
3	Design and analysis of energy-efficient approximate Booth-folding squarers with precision recovery. <i>Electronics Letters</i> ,	1.1	
2	Design and analysis of hardware Trojans in approximate circuits. <i>Electronics Letters</i> , 2022 , 58, 197-199	1.1	
1	Security and Approximation: Vulnerabilities in Approximation-aware Testing. <i>IEEE Transactions on Emerging Topics in Computing</i> , 2022 , 1-1	4.1	