Gang Qu

List of Publications by Year
in descending order

140 papers	3,323 citations	331670 21 h-index	302126 39 g-index
141 all docs	141 docs citations	141 times ranked	2727 citing authors

#	Article	IF	Citations
1	A Survey on Recent Advances in Vehicular Network Security, Trust, and Privacy. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 760-776.	8.0	400
2	A Privacy-Preserving Trust Model Based on Blockchain for VANETs. IEEE Access, 2018, 6, 45655-45664.	4.2	265
3	A Survey on Silicon PUFs and Recent Advances in Ring Oscillator PUFs. Journal of Computer Science and Technology, 2014, 29, 664-678.	1.5	181
4	AoI-Minimal Trajectory Planning and Data Collection in UAV-Assisted Wireless Powered IoT Networks. IEEE Internet of Things Journal, 2021, 8, 1211-1223.	8.7	163
5	Power optimization of variable-voltage core-based systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1999, 18, 1702-1714.	2.7	162
6	BARS: A Blockchain-Based Anonymous Reputation System for Trust Management in VANETs. , 2018, , .		157
7	A Blockchain-Based Privacy-Preserving Authentication Scheme for VANETs. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2019, 27, 2792-2801.	3.1	132
8	A PUF-FSM Binding Scheme for FPGA IP Protection and Pay-Per-Device Licensing. IEEE Transactions on Information Forensics and Security, 2015, 10, 1137-1150.	6.9	107
9	Physical Unclonable Function-Based Key Sharing via Machine Learning for IoT Security. IEEE Transactions on Industrial Electronics, 2020, 67, 7025-7033.	7.9	106
10	Synthesis techniques for low-power hard real-time systems on variable voltage processors. , 0, , .		102
11	Secure Routing Protocol based on Multi-objective Ant-colony-optimization for wireless sensor networks. Applied Soft Computing Journal, 2019, 77, 366-375.	7.2	85
12	Group Cooperation With Optimal Resource Allocation in Wireless Powered Communication Networks. IEEE Transactions on Wireless Communications, 2017, 16, 3840-3853.	9.2	83
13	Energy reduction techniques for multimedia applications with tolerance to deadline misses. , 2003, , .		63
14	Approximate computing for low power and security in the Internet of Things. Computer, 2017, 50, 27-34.	1.1	63
15	VoltJockey. , 2019, , .		62
16	Temperature-aware cooperative ring oscillator PUF. , 2009, , .		61
17	A Mesh-of-Trees Interconnection Network for Single-Chip Parallel Processing. , 2006, , .		52
18	Voltage Over-Scaling-Based Lightweight Authentication for IoT Security. IEEE Transactions on Computers, 2022, 71, 323-336.	3.4	51

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19	Recent Attacks and Defenses on FPGA-based Systems. ACM Transactions on Reconfigurable Technology and Systems, 2019, 12, 1-24.	2.5	49
20	An Entropy Analysis Based Intrusion Detection System for Controller Area Network in Vehicles. , 2018, , .		41
21	HCIC: Hardware-Assisted Control-Flow Integrity Checking. IEEE Internet of Things Journal, 2019, 6, 458-471.	8.7	41
22	An FSM Reengineering Approach to Sequential Circuit Synthesis by State Splitting. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2008, 27, 1159-1164.	2.7	36
23	Ultra-Low Overhead Dynamic Watermarking on Scan Design for Hard IP Protection. IEEE Transactions on Information Forensics and Security, 2015, 10, 2298-2313.	6.9	36
24	Power optimization of variable voltage core-based systems. , 0, , .		34
25	Insider Threats against Trust Mechanism with Watchdog and Defending Approaches in Wireless Sensor Networks. , 2012, , .		34
26	Control Flow Integrity Based on Lightweight Encryption Architecture. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2018, 37, 1358-1369.	2.7	29
27	Security in Approximate Computing and Approximate Computing for Security: Challenges and Opportunities. Proceedings of the IEEE, 2020, 108, 2214-2231.	21.3	28
28	Publicly detectable watermarking for intellectual property authentication in VLSI design. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2002, 21, 1363-1368.	2.7	25
29	Fingerprint - Iris Fusion Based Identification System Using a Single Hamming Distance Matcher. , 2009, , .		24
30	Reconfigurable Binding against FPGA Replay Attacks. ACM Transactions on Design Automation of Electronic Systems, 2015, 20, 1-20.	2.6	24
31	VOLtA: Voltage over-scaling based lightweight authentication for IoT applications. , 2017, , .		24
32	VoltJockey: Breaking SGX by Software-Controlled Voltage-Induced Hardware Faults. , 2019, , .		23
33	Trusted Integrated Circuits: The Problem and Challenges. Journal of Computer Science and Technology, 2014, 29, 918-928.	1.5	22
34	Design THINGS for the Internet of Things &#x2014; An EDA perspective. , 2014, , .		22
35	Mesh-of-Trees and Alternative Interconnection Networks for Single-Chip Parallelism. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2009, 17, 1419-1432.	3.1	21
36	A 3â€Ð hand gesture signature based biometric authentication system for smartphones. Security and Communication Networks, 2016, 9, 1359-1373.	1.5	21

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37	Energy minimization with guaranteed quality of service. , 2000, , .		20
38	Secure and Low-Overhead Circuit Obfuscation Technique with Multiplexers. , 2016, , .		20
39	A survey on security and trust of FPGA-based systems. , 2014, , .		19
40	A new countermeasure against scan-based side-channel attacks. , 2016, , .		17
41	ALT-DVS: Dynamic Voltage Scaling with Awareness of Leakage and Temperature for Real-Time Systems. , 2007, , .		16
42	A Guaranteed Secure Scan Design Based on Test Data Obfuscation by Cryptographic Hash. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 4524-4536.	2.7	16
43	VoltJockey: A New Dynamic Voltage Scaling-Based Fault Injection Attack on Intel SGX. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 1130-1143.	2.7	16
44	Satisfiability Don't Care condition based circuit fingerprinting techniques. , 2015, , .		15
45	A novel data format for approximate arithmetic computing. , 2017, , .		15
46	New Methods of Template Attack Based on Fault Sensitivity Analysis. IEEE Transactions on Multi-Scale Computing Systems, 2017, 3, 113-123.	2.4	14
47	A New Active IC Metering Technique Based on Locking Scan Cells. , 2017, , .		13
48	Power Management of Multicore Multiple Voltage Embedded Systems by Task Scheduling. , 2007, , .		12
49	A Silicon PUF Based Entropy Pump. IEEE Transactions on Dependable and Secure Computing, 2019, 16, 402-414.	5.4	11
50	Energy minimization of system pipelines using multiple voltages. , 0, , .		10
51	Polymorphic gate based IC watermarking techniques. , 2018, , .		10
52	Information Hiding behind Approximate Computation. , 2019, , .		10
53	TALk: A Temperature-Aware Leakage Minimization Technique for Real-Time Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2011, 30, 1564-1568.	2.7	9
54	20 Years of research on intellectual property protection. , 2017, , .		9

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55	A Delay based Plug-in-Monitor for Intrusion Detection in Controller Area Network. , 2018, , .		9
56	Transferring performance gain from software prefetching to energy reduction. , 0, , .		8
57	Is the Secure IC camouflaging really secure?. , 2016, , .		8
58	Practical IP watermarking and fingerprinting methods for ASIC designs. , 2017, , .		8
59	Edge Computing based GPS Spoofing Detection Methods. , 2018, , .		8
60	Partial Scan Design Against Scan-Based Side Channel Attacks. , 2018, , .		7
61	Estimate and Recompute: A Novel Paradigm for Approximate Computing on Data Flow Graphs. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 335-345.	2.7	7
62	Optimization-intensive watermarking techniques for decision problems. , 0, , .		6
63	Improving Key Distribution forWireless Sensor Networks. , 2007, , .		6
64	A DTN Routing Protocol for Vehicle Location Information Protection. , 2014, , .		6
65	Reliable and Anti-cloning PUFs Based on Configurable Ring Oscillators. , 2015, , .		6
66	A novel approximate computing based security primitive for the Internet of Things. , 2017, , .		6
67	A low-overhead PUF based on parallel scan design. , 2018, , .		6
68	Memristors for Secret Sharing-Based Lightweight Authentication. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2018, 26, 2671-2683.	3.1	6
69	A Secure and Low-overhead Active IC Metering Scheme. , 2019, , .		6
70	TCIM: Triangle Counting Acceleration With Processing-In-MRAM Architecture. , 2020, , .		6
71	What is the limit of energy saving by dynamic voltage scaling?. , 0, , .		5
72	A New Approach Towards Solving the Location Discovery Problem in Wireless Sensor Networks. , 2006, , .		5

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73	Template attack on masking AES based on fault sensitivity analysis. , 2015, , .		5
74	Mitigating Adversarial Attacks for Deep Neural Networks by Input Deformation and Augmentation. , 2020, , .		5
75	Who is Charging My Phone? Identifying Wireless Chargers via Fingerprinting. IEEE Internet of Things Journal, 2021, 8, 2992-2999.	8.7	5
76	Accelerating Graph-Connected Component Computation With Emerging Processing-In-Memory Architecture. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 5333-5342.	2.7	5
77	Quality of service and system design. , 0, , .		4
78	Pass and run: A privacy preserving delay tolerant network communication protocol for CyberVehicles. , 2013, , .		4
79	Spear and Shield: Evolution of Integrated Circuit Camouflaging. Journal of Computer Science and Technology, 2018, 33, 42-57.	1.5	4
80	Balancing Testability and Security by Configurable Partial Scan Design. , 2018, , .		4
81	A conflict-free approach for parallelizing SAT-based de-camouflaging attacks. , 2018, , .		4
82	Energy and Error Reduction using Variable Bit-width Optimization on Dynamic Fixed Point Format. , 2019, , .		4
83	Toward a Formal and Quantitative Evaluation Framework for Circuit Obfuscation Methods. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2019, 38, 1844-1857.	2.7	4
84	A New Secure Scan Design with PUF-based Key for Authentication. , 2020, , .		4
85	System synthesis of synchronous multimedia applications. , 0, , .		3
86	Techniques for energy-efficient communication pipeline design. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2002, 10, 542-549.	3.1	3
87	Arbitrate-and-move primitives for high throughput on-chip interconnection networks. , 0, , .		3
88	An improved scan design for minimization of test power under routing constraint. , 2015, , .		3
89	Rebuttal to â€œComments on â€˜A PUF-FSM Binding Scheme for FPGA IP Protection and Pay-Per-Device Licensingâ€™â€™. IEEE Transactions on Information Forensics and Security, 2016, 11, 2626-2627.	6.9	3
90	How to Secure Scan Design Against Scan-Based Side-Channel Attacks?. , 2017, , .		3

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91	A reconfigurable scan network based IC identification for embedded devices. , 2018, , .		3
92	PUF-PassSE: A PUF based Password Strength Enhancer for IoT Applications. , 2019, , .		3
93	A new quality of service metric for hard/soft real-time applications. , 0, , .		2
94	An Adaptive Energy Efficient Transmission Protocol in Wireless Ad-hoc Network. , 2009, , .		2
95	An energy efficient adaptive event detection scheme for wireless sensor network. , 2011, , .		2
96	FADER: False alarm detection and recovery for trust-aware routing in wireless sensor networks. , 2013, , .		2
97	Hardware Design and Verification Techniques for Supply Chain Risk Mitigation. , 2015, , .		2
98	A scan design method based on two complementary connection styles to minimize test power. , 2015, , .		2
99	Security through obscurity: Integrated circuit obfuscation using don't care conditions. , 2016, , .		2
100	Functional obfuscation of digital circuits using observability don't care conditions. , 2016, , .		2
101	An ultra-low overhead LUT-based PUF for FPGA. , 2016, , .		2
102	An Empirical Study on Gate Camouflaging Methods Against Circuit Partition Attack. , 2017, , .		2
103	A Memristor-based Scan Hold Flip-Flop. , 2019, , .		2
104	FTApprox: A Fault-Tolerant Approximate Arithmetic Computing Data Format. , 2021, , .		2
105	Hardware Security and Trust: A New Battlefield of Information. Lecture Notes in Computer Science, 2020, , 486-501.	1.3	2
106	AID: Attesting the Integrity of Deep Neural Networks. , 2021, , .		2
107	How many solutions does a SAT instance have?. , 0, , .		1
108	Publicly detectable techniques for the protection of virtual components. , 0, , .		1

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109	An on-line approach for power minimization in QoS sensitive systems. , 0, , .		1
110	Approaching the maximum energy saving on embedded systems with multiple voltages. , 2003, , .		1
111	Power minimization techniques on distributed real-time systems by global and local slack management. , 0, , .		1
112	Enhanced leakage reduction technique by gate replacement. , 2005, , .		1
113	SecureGo: A Hardware-Software Co-Protection against Identity Theft in Online Transaction. , 2007, , .		1
114	Simultaneous input vector selection and dual threshold voltage assignment for static leakage minimization. IEEE/ACM International Conference on Computer-Aided Design, Digest of Technical Papers, 2007, , .	0.0	1
115	A Power Efficient Path Key Establishment Algorithm for Wireless Sensor Networks. , 2008, , .		1
116	Incorporating temperature-leakage interdependency into dynamic voltage scaling for real-time systems. , 2013, , .		1
117	DA systemization of knowledge: A catalog of prior forward-looking initiatives. , 2015, , .		1
118	Energy efficient runtime approximate computing on data flow graphs. , 2017, , .		1
119	Pass and Run: A Privacy Preserving Delay Tolerant Network Communication Protocol for CyberVehicles. IEEE Design and Test, 2019, 36, 56-62.	1.2	1
120	Techniques for energy minimization of communication pipelines. , 0, , .		1
121	QoS-driven scheduling for multimedia applications. , 0, , .		0
122	Power minimization using system-level partitioning of applications with quality of service requirements. , 0, , .		0
123	Energy minimization with guaranteed quality of service. , 2000, , .		0
124	Achieving utility arbitrarily close to the optimal with limited energy. , 2000, , .		0
125	Fair watermarking techniques. , 0, , .		0
126	QoP-driven scheduling for MPEG video decoding. , 0, , .		0

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127	LOW POWER SYSTEM DESIGN BY COMBINING SOFTWARE PREFETCHING AND DYNAMIC VOLTAGE SCALING. Journal of Circuits, Systems and Computers, 2007, 16, 745-767.	1.5	0
128	Extended abstract: A hardware-assisted data hiding based approach in building high performance secure execution systems. , 2008, , .		0
129	Behavioral level dual-v<inf>th</inf> design for reduced leakage power with thermal awareness. , 2010, , .		0
130	Scheduling for Multi-core Processor under Process and Temperature Variation. , 2012, , .		0
131	Enhancing Trust-Aware Routing by False Alarm Detection and Recovery. , 2014, , .		0
132	Group Cooperation and Resource Allocation in Wireless Powered Communication Networks. , 2016, , .		0
133	Energy efficient runtime approximate computing on data flow graphs. , 2017, , .		0
134	RMLIM: A Runtime Machine Learning Based Identification Model for Approximate Computing on Data Flow Graphs. IEEE Transactions on Sustainable Computing, 2022, 7, 201-210.	3.1	0
135	Age-Aware Utility Maximization in Relay-Assisted Wireless Powered Communication Networks. Entropy, 2021, 23, 1177.	2.2	0
136	Peak Temperature Reduction by Physical Information Driven Behavioral Synthesis with Resource Usage Allocation. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, 2009, E92-A, 3151-3159.	0.3	0
137	Analysis of watermarking techniques for graph coloring problem. , 0, , .		0
138	Energy minimization with guaranteed quality of service. , 0, , .		0
139	Achieving utility arbitrarily close to the optimal with limited energy. , 0, , .		0
140	A Memristor-based Secure Scan Design against the Scan-based Side-Channel Attacks. , 2022, , .		0