

# Himanshu Thapliyal

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1991794/publications.pdf>

Version: 2024-02-01

97  
papers

2,103  
citations

331670

21  
h-index

330143

37  
g-index

98  
all docs

98  
docs citations

98  
times ranked

1199  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Survey of Affective Computing for Stress Detection: Evaluating technologies in stress detection for better health. IEEE Consumer Electronics Magazine, 2016, 5, 44-56.	2.3	199
2	Design of Testable Reversible Sequential Circuits. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2013, 21, 1201-1209.	3.1	120
3	Reversible Logic-Based Concurrently Testable Latches for Molecular QCA. IEEE Nanotechnology Magazine, 2010, 9, 62-69.	2.0	115
4	Design of Efficient Reversible Binary Subtractors Based on a New Reversible Gate. , 2009, , .		102
5	Design of adder and subtractor circuits in majority logic-based field-coupled QCA nanocomputing. Electronics Letters, 2016, 52, 464-466.	1.0	96
6	Stress Detection and Management: A Survey of Wearable Smart Health Devices. IEEE Consumer Electronics Magazine, 2017, 6, 64-69.	2.3	65
7	A new design of the reversible subtractor circuit. , 2011, , .		56
8	Design of efficient reversible logic-based binary and BCD adder circuits. ACM Journal on Emerging Technologies in Computing Systems, 2013, 9, 1-31.	2.3	56
9	Quantum Circuit Design of a T-count Optimized Integer Multiplier. IEEE Transactions on Computers, 2019, 68, 729-739.	3.4	56
10	FinSAL: FinFET-Based Secure Adiabatic Logic for Energy-Efficient and DPA Resistant IoT Devices. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2018, 37, 110-122.	2.7	47
11	Machine Learning Based Solutions for Real-Time Stress Monitoring. IEEE Consumer Electronics Magazine, 2020, 9, 34-41.	2.3	46
12	Design of Reversible Latches Optimized for Quantum Cost, Delay and Garbage Outputs. , 2010, , .		44
13	A new reversible design of BCD adder. , 2011, , .		43
14	Ancilla-input and garbage-output optimized design of a reversible quantum integer multiplier. Journal of Supercomputing, 2016, 72, 1477-1493.	3.6	43
15	Quantum Computing Circuits and Devices. IEEE Design and Test, 2019, 36, 69-94.	1.2	42
16	Energy-Efficient Design of Hybrid MTJ/CMOS and MTJ/Nanoelectronics Circuits. IEEE Transactions on Magnetics, 2018, 54, 1-8.	2.1	41
17	Design exploration of a Symmetric Pass Gate Adiabatic Logic for energy-efficient and secure hardware. The Integration VLSI Journal, 2017, 58, 369-377.	2.1	33
18	EE-SPFAL: A Novel Energy-Efficient Secure Positive Feedback Adiabatic Logic for DPA Resistant RFID and Smart Card. IEEE Transactions on Emerging Topics in Computing, 2019, 7, 281-293.	4.6	33

#	ARTICLE	IF	CITATIONS
19	Quantum Circuit Designs of Integer Division Optimizing T-count and T-depth. IEEE Transactions on Emerging Topics in Computing, 2021, 9, 1045-1056.	4.6	33
20	IoT-Based Fall Detection for Smart Home Environments. , 2016, , .		32
21	Mapping of Subtractor and Adder-Subtractor Circuits on Reversible Quantum Gates. Lecture Notes in Computer Science, 2016, , 10-34.	1.3	32
22	IoT based indoor location detection system for smart home environment. , 2018, , .		32
23	Progress in Reversible Processor Design: A Novel Methodology for Reversible Carry Look-Ahead Adder. Lecture Notes in Computer Science, 2013, , 73-97.	1.3	32
24	Internet of Things-Based Consumer Electronics: Reviewing Existing Consumer Electronic Devices, Systems, and Platforms and Exploring New Research Paradigms. IEEE Consumer Electronics Magazine, 2018, 7, 66-67.	2.3	30
25	Mach-Zehnder Interferometer Based All Optical Reversible NOR Gates. , 2012, , .		29
26	Design of A ternary barrel shifter using multiple-valued reversible logic. , 2010, , .		28
27	Smart Wristband-Based Stress Detection Framework for Older Adults With Cortisol as Stress Biomarker. IEEE Transactions on Consumer Electronics, 2021, 67, 30-39.	3.6	28
28	Design of a reversible single precision floating point multiplier based on operand decomposition. , 2010, , .		24
29	Design of a Piezoelectric-Based Physically Unclonable Function for IoT Security. IEEE Internet of Things Journal, 2019, 6, 2770-2777.	8.7	24
30	A Review of Machine Learning Classification Using Quantum Annealing for Real-World Applications. SN Computer Science, 2021, 2, 1.	3.6	24
31	Machine Learning Based Stress Monitoring in Older Adults Using Wearable Sensors and Cortisol as Stress Biomarker. Journal of Signal Processing Systems, 2022, 94, 513-525.	2.1	23
32	Testable Reversible Latches for Molecular QCA. , 2008, , .		22
33	Design of a reversible bidirectional barrel shifter. , 2011, , .		21
34	Reversible logic based multiplication computing unit using binary tree data structure. Journal of Supercomputing, 2015, 71, 2668-2693.	3.6	19
35	Use of Thermistor Temperature Sensors for Cyber-Physical System Security. Sensors, 2019, 19, 3905.	3.8	19
36	Design of a reversible floating-point adder architecture. , 2011, , .		18

#	ARTICLE	IF	CITATIONS
37	Efficient Reversible Logic Design of BCD Subtractors. Lecture Notes in Computer Science, 2009, , 99-121.	1.3	18
38	QUALPUF. , 2016, , .		17
39	The effect of trust and its antecedents towards determining usersâ€™ behavioral intention with voice-based consumer electronic devices. Heliyon, 2022, 8, e09271.	3.2	17
40	Design of Adiabatic Logic-Based Energy-Efficient and Reliable PUF for IoT Devices. ACM Journal on Emerging Technologies in Computing Systems, 2020, 16, 1-18.	2.3	16
41	Reversible logic based concurrent error detection methodology for emerging nanocircuits. , 2010, , .		15
42	Low-Power and Secure Lightweight Cryptography Via TFET-Based Energy Recovery Circuits. , 2017, , .		14
43	Quantum Circuit Designs of Integer Division Optimizing T-Count and T-Depth. , 2017, , .		14
44	Hardware Security Primitives for Vehicles. IEEE Consumer Electronics Magazine, 2019, 8, 99-103.	2.3	14
45	Machine Learning-Based Anxiety Detection in Older Adults Using Wristband Sensors and Context Feature. SN Computer Science, 2021, 2, 1.	3.6	13
46	Exploration of Non-Volatile MTJ/CMOS Circuits for DPA-Resistant Embedded Hardware. IEEE Transactions on Magnetics, 2019, 55, 1-8.	2.1	12
47	Energy-Efficient and Secure S-Box Circuit Using Symmetric Pass Gate Adiabatic Logic. , 2016, , .		11
48	Wearable Health Monitoring System for Older Adults in a Smart Home Environment. , 2021, , .		11
49	Combined Integer and Floating Point Multiplication Architecture(CIFM) for FPGAs and Its Reversible Logic Implementation. Midwest Symposium on Circuits and Systems, 2006, , .	1.0	10
50	Evaluation of Wearable Head Set Devices in Older Adult Populations for Research. , 2015, , .		9
51	Automatic synthesis of quaternary quantum circuits. Journal of Supercomputing, 2017, 73, 1733-1759.	3.6	9
52	Design of Quantum Computing Circuits. IT Professional, 2019, 21, 22-26.	1.5	9
53	Quantum circuit designs of carry lookahead adder optimized for T-count T-depth and qubits. Sustainable Computing: Informatics and Systems, 2021, 29, 100457.	2.2	9
54	Exploring Human Body Communications for IoT Enabled Ambulatory Health Monitoring Systems. , 2016, , .		8

#	ARTICLE	IF	CITATIONS
55	Energy-efficient magnetic circuits based on nanoelectronic devices. , 2017, , .		8
56	Adiabatic Computing Based Low-Power and DPA-Resistant Lightweight Cryptography for IoT Devices. , 2017, , .		8
57	Validating Physiological Stress Detection Model Using Cortisol as Stress Bio Marker. , 2020, , .		8
58	Fortifying Vehicular Security through Low Overhead Physically Unclonable Functions. ACM Journal on Emerging Technologies in Computing Systems, 2022, 18, 1-18.	2.3	8
59	Heuristic Based Majority/Minority Logic Synthesis for Emerging Technologies. , 2017, , .		7
60	On the design of quaternary arithmetic logic unit based on CNTFETs. International Journal of Electronics Letters, 2019, 7, 1-13.	1.2	7
61	An Integrated TRNG-PUF Architecture Based on Photovoltaic Solar Cells. IEEE Consumer Electronics Magazine, 2021, 10, 99-105.	2.3	7
62	FinSAL: A novel FinFET based Secure Adiabatic Logic for energy-efficient and DPA resistant IoT devices. , 2016, , .		6
63	Amazon Echo Enabled IoT Home Security System for Smart Home Environment. , 2018, , .		6
64	Solar Cell Based Physically Unclonable Function for Cybersecurity in IoT Devices. , 2018, , .		6
65	Humans in the Loop: Cybersecurity Aspects in the Consumer IoT Context. IEEE Consumer Electronics Magazine, 2022, 11, 78-84.	2.3	6
66	Smart Home System for Patients with Mild Cognitive Impairment. , 2015, , .		5
67	Design of Quantum Circuits for Galois Field Squaring and Exponentiation. , 2017, , .		5
68	Security Evaluation of MTJ/CMOS Circuits Against Power Analysis Attacks. , 2017, , .		5
69	Adiabatic Logic Based Energy-Efficient Security for Smart Consumer Electronics. IEEE Consumer Electronics Magazine, 2022, 11, 57-64.	2.3	5
70	Low-Power and Energy-Efficient Full Adders With Approximate Adiabatic Logic for Edge Computing. , 2020, , .		5
71	2-Phase Energy-Efficient Secure Positive Feedback Adiabatic Logic for CPA-Resistant IoT Devices. , 2020, , .		5
72	Reversible Logic Based Mapping of Quaternary Sequential Circuits Using QGFSOP Expression. , 2015, , .		4

#	ARTICLE	IF	CITATIONS
73	Design of a multilayer five-input majority gate and adder/subtractor circuits in NML computing. Electronics Letters, 2016, 52, 1618-1620.	1.0	4
74	Design Methodologies for Reversible Logic Based Barrel Shifters. Journal of Circuits, Systems and Computers, 2016, 25, 1650003.	1.5	4
75	Quasi-Adiabatic SRAM Based Silicon Physical Unclonable Function. SN Computer Science, 2020, 1, 1.	3.6	4
76	EE-ACML: Energy-Efficient Adiabatic CMOS/MTJ Logic for CPA-Resistant IoT Devices. Sensors, 2021, 21, 7651.	3.8	4
77	Towards Photoplethysmogram Based Non-Invasive Blood Pressure Classification. , 2018, , .		3
78	T-count Optimized Quantum Circuits for Bilinear Interpolation. , 2018, , .		3
79	Approximate Adiabatic Logic for Low-Power and Secure Edge Computing. IEEE Consumer Electronics Magazine, 2022, 11, 88-94.	2.3	3
80	Novel Secure MTJ/CMOS Logic (SMCL) for Energy-Efficient and DPA-Resistant Design. SN Computer Science, 2021, 2, 1.	3.6	3
81	Physical Unclonable Function (PUF)-Based Sustainable Cybersecurity. IEEE Consumer Electronics Magazine, 2021, 10, 79-80.	2.3	3
82	Reversible Logic Based Design and Test of Field Coupled Nanocomputing Circuits. Lecture Notes in Computer Science, 2014, , 133-172.	1.3	3
83	Special Session: Quantum Carry Lookahead Adders for NISQ and Quantum Image Processing. , 2020, , .		3
84	Design procedures and NML cost analysis of reversible barrel shifters optimizing garbage and ancilla lines. Journal of Supercomputing, 2016, 72, 1092-1124.	3.6	2
85	Energy-recovery based hardware security primitives for low-power embedded devices. , 2018, , .		2
86	A PUF Based CAN Security Framework. , 2020, , .		2
87	Exploration of Solar Cell Materials for Developing Novel PUFs in Cyber-Physical Systems. SN Computer Science, 2020, 1, 1.	3.6	2
88	PPG Based Continuous Blood Pressure Monitoring Framework for Smart Home Environment. , 2020, , .		2
89	2-SPGAL: 2-Phase Symmetric Pass Gate Adiabatic Logic for Energy-Efficient Secure Consumer IoT. , 2021, , .		2
90	Machine Learning Based Prediction of Future Stress Events in a Driving Scenario. , 2021, , .		2

#	ARTICLE	IF	CITATIONS
91	Single-Rail Adiabatic Logic for Energy-Efficient and CPA-Resistant Cryptographic Circuit in Low-Frequency Medical Devices. IEEE Open Journal of Nanotechnology, 2021, , 1-1.	2.0	2
92	2-Phase Adiabatic Logic for Low-Energy and CPA-Resistant Implantable Medical Devices. IEEE Transactions on Consumer Electronics, 2022, 68, 47-56.	3.6	2
93	Efficient Circuit Design of Reversible Square. Lecture Notes in Computer Science, 2017, , 33-46.	1.3	1
94	Design of Quantum Circuits for Cryptanalysis and Image Processing Applications. , 2019, , .		1
95	Solving Energy and Cybersecurity Constraints in IoT Devices Using Energy Recovery Computing. , 2019, , .		1
96	Low-Energy and CPA-Resistant Adiabatic CMOS/MTJ Logic for IoT Devices. , 2021, , .		1
97	Edge Device Based Stress Detection For Older Adults With Cortisol Biomarker. , 2022, , .		0