

# Kanad Basu

## List of Publications by Year in descending order

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Version: 2024-02-01

36  
papers

585  
citations

933447

10  
h-index

794594

19  
g-index

36  
all docs

36  
docs citations

36  
times ranked

311  
citing authors

#	ARTICLE	IF	CITATIONS
1	Analyzing and mitigating the impact of permanent faults on a systolic array based neural network accelerator. , 2018, , .		101
2	RATS: Restoration-Aware Trace Signal Selection for Post-Silicon Validation. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2013, 21, 605-613.	3.1	64
3	Fault-Tolerant Systolic Array Based Accelerators for Deep Neural Network Execution. IEEE Design and Test, 2019, 36, 44-53.	1.2	54
4	A Theoretical Study of Hardware Performance Counters-Based Malware Detection. IEEE Transactions on Information Forensics and Security, 2020, 15, 512-525.	6.9	40
5	Efficient Trace Signal Selection for Post Silicon Validation and Debug. , 2011, , .		38
6	Toward Functional Safety of Systolic Array-Based Deep Learning Hardware Accelerators. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2021, 29, 485-498.	3.1	33
7	Hardware-assisted detection of firmware attacks in inverter-based cyberphysical microgrids. International Journal of Electrical Power and Energy Systems, 2021, 132, 107150.	5.5	28
8	Efficient combination of trace and scan signals for post silicon validation and debug. , 2011, , .		24
9	Satisfiability Attack-Resistant Camouflaged Two-Dimensional Heterostructure Devices. ACS Nano, 2021, 15, 3453-3467.	14.6	24
10	Efficient trace data compression using statically selected dictionary. , 2011, , .		19
11	Hardware Trojan Detection Using Controlled Circuit Aging. IEEE Access, 2020, 8, 77415-77434.	4.2	19
12	Special Session: Reliability Analysis for AI/ML Hardware. , 2021, , .		18
13	PREEMPT. , 2019, , .		16
14	Toward Increasing the Difficulty of Reverse Engineering of RSFQ Circuits. IEEE Transactions on Applied Superconductivity, 2020, 30, 1-13.	1.7	14
15	Post-Silicon Gate-Level Error Localization With Effective and Combined Trace Signal Selection. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 248-261.	2.7	12
16	Hardware Trojans Inspired IP Watermarks. IEEE Design and Test, 2019, 36, 72-79.	1.2	11
17	Defending Hardware-Based Malware Detectors Against Adversarial Attacks. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 1727-1739.	2.7	10
18	Explainable Machine Learning for Intrusion Detection via Hardware Performance Counters. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 4952-4964.	2.7	9

#	ARTICLE	IF	CITATIONS
19	COPPTCHA: COPPA Tracking by Checking Hardware-Level Activity. IEEE Transactions on Information Forensics and Security, 2020, 15, 3213-3226.	6.9	8
20	RTL-ConTest: Concolic Testing on RTL for Detecting Security Vulnerabilities. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 466-477.	2.7	7
21	ND-HMDs: Non-Differentiable Hardware Malware Detectors against Evasive Transient Execution Attacks. , 2020, , .		6
22	WIND: An Efficient Post-Silicon Debug Strategy for Network on Chip. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 2372-2385.	2.7	5
23	Two Sides of the Same Coin: Boons and Banes of Machine Learning in Hardware Security. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2021, 11, 228-251.	3.6	4
24	Constrained signal selection for post-silicon validation. , 2012, , .		3
25	HardCompress: A Novel Hardware-based Low-power Compression Scheme for DNN Accelerators. , 2021, , .		3
26	<i>In situ</i> ellipsometry aided rapid ALD process development and parameter space visualization of cerium oxide nanofilms. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	3
27	Can Monitoring System State + Counting Custom Instruction Sequences Aid Malware Detection?. , 2019, , .		2
28	Can Overclocking Detect Hardware Trojans?. , 2021, , .		2
29	Runtime Malware Detection Using Embedded Trace Buffers. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 35-48.	2.7	2
30	Time Series-Based Malware Detection Using Hardware Performance Counters. , 2021, , .		2
31	Real-Time Hardware-Based Malware and Micro-Architectural Attack Detection Utilizing CMOS Reservoir Computing. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 349-353.	3.0	1
32	Hardware-assisted Detection of Malware in Automotive-Based Systems. , 2021, , .		1
33	Hardware Performance Counters: Ready-Made vs Tailor-Made. Transactions on Embedded Computing Systems, 2021, 20, 1-26.	2.9	1
34	Benefits and Challenges of Utilizing Hardware Performance Counters for COPPA Violation Detection. , 2020, , .		1
35	Analysis and Mitigation of DRAM Faults in Sparse-DNN Accelerators. IEEE Design and Test, 2023, 40, 90-99.	1.2	0
36	Special Session: Effective In-field Testing of Deep Neural Network Hardware Accelerators. , 2022, , .		0