Krishnendu Chakrabarty

List of Publications by Year in Descending Order

687 papers	**10,850** citations	**46** h-index	**80** g-index
790 ext. papers	**13,221** ext. citations	**2.3** avg, IF	**6.88** L-index

#	Paper	IF	Citations
687	Online Fault Detection in ReRAM-Based Computing Systems for Inferencing. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2022**, 1-14	2.6	
686	Design Automation and Test Solutions for Monolithic 3D ICs. *ACM Journal on Emerging Technologies in Computing Systems*, **2022**, 18, 1-49	1.7	0
685	Built-in Self-Test and Fault Localization for Inter-Layer Vias in Monolithic 3D ICs. *ACM Journal on Emerging Technologies in Computing Systems*, **2022**, 18, 1-37	1.7	1
684	Functional Criticality Analysis of Structural Faults in AI Accelerators. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2022**, 1-1	2.5	1
683	Obfuscation for IP Protection **2022**, 87-109		
682	Architecture for Security **2022**, 19-32		
681	Threat Landscape **2022**, 11-18		
680	Tools for Security **2022**, 33-60		
679	Watermarking for IP Protection **2022**, 61-85		
678	On the Impact of Uncertainties in Silicon-Photonic Neural Networks. *IEEE Design and Test*, **2022**, 1-1	1.4	0
677	Unsupervised Two-Stage Root-Cause Analysis with Transfer Learning for Integrated Systems. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2022**, 1-1	2.5	
676	A Resilient and Hierarchical IoT-based Solution for Stress Monitoring in Everyday Settings. *IEEE Internet of Things Journal*, **2021**, 1-1	10.7	1
675	Heterogeneous Manycore Architectures Enabled by Processing-in-Memory for Deep Learning: From CNNs to GNNs: (ICCAD Special Session Paper) **2021**,		1
674	Microfluidic Device Security **2021**, 555-577		
673	Acoustoelectronic nanotweezers enable dynamic and large-scale control of nanomaterials. *Nature Communications*, **2021**, 12, 3844	17.4	5
672	Computer-aided Design Techniques for Flow-based Microfluidic Lab-on-a-chip Systems. *ACM Computing Surveys*, **2021**, 54, 1-29	13.4	8
671	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 40, 143-156	2.5	5

670	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 40, 386-399	2.5	2
669	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 40, 185-198	2.5	1
668	Board-Level Functional Fault Identification Using Streaming Data. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 40, 1920-1933	2.5	3
667	AccuReD: High Accuracy Training of CNNs on ReRAM/GPU Heterogeneous 3-D Architecture. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 40, 971-984	2.5	12
666	Toward Hardware-Based IP Vulnerability Detection and Post-Deployment Patching in Systems-on-Chip. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 40, 1158-1171	2.5	5
665	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 40, 1301-1314	2.5	2
664	Acoustohydrodynamic tweezers via spatial arrangement of streaming vortices. *Science Advances*, **2021**, 7,	14.3	15
663	Fault Modeling and Efficient Testing of Memristor-Based Memory. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2021**, 1-12	3.9	3
662	Knowledge Transfer in Board-Level Functional Fault Diagnosis Enabled by Domain Adaptation. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 1-1	2.5	2
661	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 1-1	2.5	2
660	Unsupervised Two-Stage Root-Cause Analysis for Integrated Systems. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 1-1	2.5	
659	Accurate and Robust Malware Detection: Running XGBoost on Run-Time Data from Performance Counters. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 1-1	2.5	1
658	Mixing Models as Integer Factorization: A Key to Sample Preparation with Microfluidic Biochips. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 1-1	2.5	0
657	Efficient Identification of Critical Faults in Memristor-based Inferencing Accelerators. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 1-1	2.5	
656	Lotus. *ACM Journal on Emerging Technologies in Computing Systems*, **2021**, 17, 1-21	1.7	1
655	C-Testing and Efficient Fault Localization for AI Accelerators*. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 1-1	2.5	4
654	Power Supply Noise-Aware At-Speed Delay Fault Testing of Monolithic 3-D ICs. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2021**, 1-14	2.6	
653	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 1-1	2.5	

652	Efficient Identification of Critical Faults in Memristor Crossbars for Deep Neural Networks **2021**,		2
651	Modeling Silicon-Photonic Neural Networks under Uncertainties **2021**,		5
650	Variation-Aware Delay Fault Testing for Carbon-Nanotube FET Circuits. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2021**, 29, 409-422	2.6	4
649	ReGraphX: NoC-enabled 3D Heterogeneous ReRAM Architecture for Training Graph Neural Networks **2021**,		3
648	Perspectives on Emerging Computation-in-Memory Paradigms **2021**,		1
647	Learning to Train CNNs on Faulty ReRAM-based Manycore Accelerators. *Transactions on Embedded Computing Systems*, **2021**, 20, 1-23	1.8	2
646	Run-time Malware Detection Using Embedded Trace Buffers. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 1-1	2.5	
645	Securing SoCs with FPGAs Against Rowhammer Attacks. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 1-1	2.5	0
644	. *IEEE Transactions on Information Forensics and Security*, **2021**, 16, 2076-2089	8	2
643	Performance and Accuracy Tradeoffs for Training Graph Neural Networks on ReRAM-Based Architectures. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2021**, 1-14	2.6	1
642	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2021**, 1-1	2.5	2
641	Multi-Objective Optimization of ReRAM Crossbars for Robust DNN Inferencing under Stochastic Noise **2021**,		1
640	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 1-1	2.5	1
639	Acoustic streaming vortices enable contactless, digital control of droplets. *Science Advances*, **2020**, 6, eaba0606	14.3	22
638	GRAMARCH: A GPU-ReRAM based Heterogeneous Architecture for Neural Image Segmentation **2020**,		3
637	Reliability-Oriented IEEE Std. 1687 Network Design and Block-Aware High-Level Synthesis for MEDA Biochips* **2020**,		4
636	. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2020**, 28, 1513-1526	2.6	11
635	**2020**,		3

634	**2020**,		2
633	Programmable Daisychaining of Microelectrodes to Secure Bioassay IP in MEDA Biochips. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2020**, 28, 1269-1282	2.6	7
632	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 4908-4920	2.5	4
631	Unsupervised Root-Cause Analysis for Integrated Systems **2020**,		3
630	C-Testing of AI Accelerators * **2020**,		3
629	Secure Assay Execution on MEDA Biochips to Thwart Attacks Using Real-Time Sensing. *ACM Transactions on Design Automation of Electronic Systems*, **2020**, 25, 1-25	1.5	5
628	3D-ReG. *ACM Journal on Emerging Technologies in Computing Systems*, **2020**, 16, 1-24	1.7	8
627	Algorithmic Fault Detection for RRAM-based Matrix Operations. *ACM Transactions on Design Automation of Electronic Systems*, **2020**, 25, 1-31	1.5	5
626	Molecular Barcoding as a Defense Against Benchtop Biochemical Attacks on DNA Fingerprinting and Information Forensics. *IEEE Transactions on Information Forensics and Security*, **2020**, 15, 3595-3609	8	1
625	Runtime Identification of Hardware Trojans by Feature Analysis on Gate-Level Unstructured Data and Anomaly Detection. *ACM Transactions on Design Automation of Electronic Systems*, **2020**, 25, 1-23	1.5	4
624	Fine-grained Adaptive Testing Based on Quality Prediction. *ACM Transactions on Design Automation of Electronic Systems*, **2020**, 25, 1-25	1.5	0
623	Prevention: Tamper-Resistant Pin-Constrained Digital Microfluidic Biochips **2020**, 51-77		
622	Security and Trust **2020**, 19-49		
621	Mitigation: Tamper-Mitigating Routing Fabrics **2020**, 109-133		
620	Accurate Anomaly Detection Using Correlation-Based Time-Series Analysis **2020**, 23-51		0
619	Self-learning and Efficient Health-Status Analysis **2020**, 115-136		
618	Healthcare IoT **2020**, 515-545		22
617	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 2682-2695	2.5	7

616	Test Generation for Flow-Based Microfluidic Biochips With General Architectures. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 2530-2543	2.5	3
615	Bio-chemical Assay Locking to Thwart Bio-IP Theft. *ACM Transactions on Design Automation of Electronic Systems*, **2020**, 25, 1-20	1.5	5
614	**2020**,		1
613	Sensor-Array Optimization Based on Time-Series Data Analytics for Sanitation-Related Malodor Detection. *IEEE Transactions on Biomedical Circuits and Systems*, **2020**, 14, 705-714	5.1	4
612	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 3531-3543	2.5	2
611	Advances in Design and Test of Monolithic 3-D ICs. *IEEE Design and Test*, **2020**, 37, 92-100	1.4	5
610	Hardware Design and Fault-Tolerant Synthesis for Digital Acoustofluidic Biochips. *IEEE Transactions on Biomedical Circuits and Systems*, **2020**, 14, 1065-1078	5.1	4
609	. *IEEE Transactions on Big Data*, **2020**, 6, 609-623	3.2	6
608	Hierarchical Symbol-Based Health-Status Analysis Using Time-Series Data in a Core Router System. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 700-713	2.5	0
607	Synthesis of Tamper-Resistant Pin-Constrained Digital Microfluidic Biochips. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 171-184	2.5	4
606	An Efficient Fault-Tolerant Valve-Based Microfluidic Routing Fabric for Droplet Barcoding in Single-Cell Analysis. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 359-372	2.5	1
605	Software-Based Self-Testing Using Bounded Model Checking for Out-of-Order Superscalar Processors. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 714-727	2.5	2
604	Cyberphysical Microfluidic Biochips **2020**, 1-17		2
603	Secure and Trustworthy Cyberphysical Microfluidic Biochips **2020**,		1
602	Analysis and Design of Tamper-Mitigating Microfluidic Routing Fabrics. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 1003-1016	2.5	0
601	Timing-Driven Flow-Channel Network Construction for Continuous-Flow Microfluidic Biochips. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 1314-1327	2.5	13
600	An Interlayer Interconnect BIST and Diagnosis Solution for Monolithic 3-D ICs. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 3056-3066	2.5	3
599	Self-Learning and Efficient Health-Status Analysis for a Core Router System. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 1935-1948	2.5	

598	Detection: Randomizing Checkpoints on Cyberphysical Digital Microfluidic Biochips **2020**, 79-107		
597	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 4921-4934	2.5	2
596	Synterface. *Transactions on Embedded Computing Systems*, **2019**, 18, 1-21	1.8	1
595	Reliable Power Delivery and Analysis of Power-Supply Noise During Testing in Monolithic 3D ICs **2019**,		3
594	Security Assessment of Microfluidic Fully-Programmable-Valve-Array Biochips **2019**,		7
593	Black-Box Test-Coverage Analysis and Test-Cost Reduction Based on a Bayesian Network Model **2019**,		1
592	Contactless, programmable acoustofluidic manipulation of objects on water. *Lab on A Chip*, **2019**, 19, 3397-3404	7.2	19
591	Impact of Electrostatic Coupling on Monolithic 3D-enabled Network on Chip. *ACM Transactions on Design Automation of Electronic Systems*, **2019**, 24, 1-22	1.5	5
590	Fault tolerance in neuromorphic computing systems **2019**,		15
589	Execution of provably secure assays on MEDA biochips to thwart attacks **2019**,		17
588	Robust sample preparation on digital microfluidic biochips **2019**,		6
587	Factorization based dilution of biochemical fluids with micro-electrode-dot-array biochips **2019**,		6
586	RTL-to-GDS Tool Flow and Design-for-Test Solutions for Monolithic 3D ICs **2019**,		4
585	REGENT: A Heterogeneous ReRAM/GPU-based Architecture Enabled by NoC for Training CNNs **2019**,		8
584	Multi-Tenant FPGA-based Reconfigurable Systems: Attacks and Defenses **2019**,		6
583	Test and Design-for-Testability Solutions for Monolithic 3D Integrated Circuits **2019**,		2
582	Security Assessment of Microfluidic Immunoassays **2019**,		3
581	CAD-Base. *ACM Transactions on Design Automation of Electronic Systems*, **2019**, 24, 1-30	1.5	18

580	. *IEEE Transactions on Information Forensics and Security*, **2019**, 14, 2901-2915	8	13
579	Anomaly Detection and Health-Status Analysis in a Core Router System. *IEEE Design and Test*, **2019**, 36, 7-17	1.4	1
578	Machine Learning-Based Aging Analysis **2019**, 265-289		1
577	Optimization of Test-Access Architectures and Test Scheduling for 3D ICs **2019**, 281-300		
576	Synthesis of Reconfigurable Flow-Based Biochips for Scalable Single-Cell Screening. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2019**, 38, 2255-2270	2.5	4
575	Sample preparation for multiple-reactant bioassays on micro-electrode-dot-array biochips **2019**,		8
574	Fault-Tolerant Training Enabled by On-Line Fault Detection for RRAM-Based Neural Computing Systems. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2019**, 38, 1611-1624	2.5	20
573	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2019**, 38, 589-603	2.5	16
572	Efficient Generation of Dilution Gradients With Digital Microfluidic Biochips. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2019**, 38, 874-887	2.5	5
571	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2019**, 38, 1831-1843	2.5	9
570	Randomized Checkpoints: A Practical Defense for Cyber-Physical Microfluidic Systems. *IEEE Design and Test*, **2019**, 36, 5-13	1.4	10
569	Changepoint-Based Anomaly Detection for Prognostic Diagnosis in a Core Router System. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2019**, 38, 1331-1344	2.5	4
568	Synthesis of a Cyberphysical Hybrid Microfluidic Platform for Single-Cell Analysis. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2019**, 38, 1237-1250	2.5	5
567	. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2019**, 27, 2755-2766	2.6	10
566	Board-Level Functional Fault Identification using Streaming Data **2019**,		8
565	Machine Learning-based Prediction of Test Power **2019**,		7
564	Desieve the Attacker: Thwarting IP Theft in Sieve-Valve-based Biochips **2019**,		6
563	BioScan: Parameter-Space Exploration of Synthetic Biocircuits Using MEDA Biochips* **2019**,		1

544	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2019**, 38, 1942-1955	2.5	6
543	Defect Clustering-Aware Spare-TSV Allocation in 3-D ICs for Yield Enhancement. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2019**, 38, 1928-1941	2.5	7
542	Droplet Size-Aware High-Level Synthesis **2019**, 21-51		
541	Predicting ${X}$ -Sensitivity of Circuit-Inputs on Test-Coverage: A Machine-Learning Approach. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2019**, 38, 2343-2356	2.5	7
540	Micro-Electrode-Dot-Array Digital Microfluidic Biochips: Technology, Design Automation, and Test Techniques. *IEEE Transactions on Biomedical Circuits and Systems*, **2019**, 13, 292-313	5.1	19
539	Optimization of Multi-Target Sample Preparation On-Demand With Digital Microfluidic Biochips. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2019**, 38, 253-266	2.5	9
538	Multicast Testing of Interposer-Based 2.5D ICs. *ACM Transactions on Design Automation of Electronic Systems*, **2018**, 23, 1-25	1.5	1
537	Machine Learning for Hardware Security: Opportunities and Risks. *Journal of Electronic Testing: Theory and Applications (JETTA)*, **2018**, 34, 183-201	0.7	32
536	. *Proceedings of the IEEE*, **2018**, 106, 1717-1743	14.3	9
535	Keynote Paper: From EDA to IoT eHealth: Promises, Challenges, and Solutions. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2018**, 37, 2965-2978	2.5	57
534	Exact Synthesis of Biomolecular Protocols for Multiple Sample Pathways on Digital Microfluidic Biochips **2018**,		3
533	Secure Randomized Checkpointing for Digital Microfluidic Biochips. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2018**, 37, 1119-1132	2.5	36
532	Data-Driven Resiliency Solutions for Boards and Systems **2018**,		7
531	Testing 3D-SoCs Using 2-D Time-Division Multiplexing. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2018**, 37, 3177-3185	2.5	2
530	Workload-Aware Static Aging Monitoring and Mitigation of Timing-Critical Flip-Flops. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2018**, 37, 2098-2110	2.5	3
529	Fine-Grained Aging-Induced Delay Prediction Based on the Monitoring of Run-Time Stress. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2018**, 37, 1064-1075	2.5	14
528	Online Soft-Error Vulnerability Estimation for Memory Arrays and Logic Cores. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2018**, 37, 499-511	2.5	3
527	Leakage Current Analysis for Diagnosis of Bridge Defects in Power-Gating Designs. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2018**, 37, 883-895	2.5	0

526	Structural and Functional Test Methods for Micro-Electrode-Dot-Array Digital Microfluidic Biochips. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2018**, 37, 968-981	2.5	18
525	Locking of biochemical assays for digital microfluidic biochips **2018**,		23
524	Fault-tolerant valve-based microfluidic routing fabric for droplet barcoding in single-cell analysis **2018**,		5
523	. *IEEE Transactions on Multi-Scale Computing Systems*, **2018**, 4, 577-592		16
522	Demand-Driven Single- and Multitarget Mixture Preparation Using Digital Microfluidic Biochips. *ACM Transactions on Design Automation of Electronic Systems*, **2018**, 23, 1-26	1.5	2
521	Performance and Thermal Tradeoffs for Energy-Efficient Monolithic 3D Network-on-Chip. *ACM Transactions on Design Automation of Electronic Systems*, **2018**, 23, 1-25	1.5	12
520	**2018**,		8
519	Broadcast-based minimization of the overall access time for the IEEE 1687 network **2018**,		10
518	Securing IJTAG against data-integrity attacks **2018**,		4
517	An inter-layer interconnect BIST solution for monolithic 3D ICs **2018**,		3
516	Emerging Circuit Technologies: An Overview on the Next Generation of Circuits **2018**, 43-67		0
515	Stuck-at Fault Tolerance in RRAM Computing Systems. *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, **2018**, 8, 102-115	5.2	46
514	Toward Predictive Fault Tolerance in a Core-Router System: Anomaly Detection Using Correlation-Based Time-Series Analysis. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2018**, 37, 2111-2124	2.5	7
513	Efficient and Adaptive Error Recovery in a Micro-Electrode-Dot-Array Digital Microfluidic Biochip. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2018**, 37, 601-614	2.5	22
512	**2018**,		12
511	Built-In Self-Diagnosis and Fault-Tolerant Daisy-Chain Design in MEDA Biochips* **2018**,		5
510	Access-Time Minimization in the IEEE 1687 Network Using Broadcast and Hardware Parallelism **2018**,		4
509	Power-Supply Noise Analysis for Monolithic 3D ICs Using Electrical and Thermal Co-Simulation **2018**,		1

508 Analysis of Process Variations, Defects, and Design-Induced Coupling in Memristors **2018**,   12

507 Tamper-resistant pin-constrained digital microfluidic biochips **2018**,   3

506 Failure prediction based on anomaly detection for complex core routers **2018**,   2

505 Abetting Planned Obsolescence by Aging 3D Networks-on-Chip **2018**,   4

504 Shadow attacks on MEDA biochips **2018**,   7

503 Fault-Tolerant Unicast-Based Multicast for Reliable Network-on-Chip Testing. *ACM Transactions on Design Automation of Electronic Systems*, **2018**, 23, 1-23   1.5   7

502 *. IEEE Transactions on Multi-Scale Computing Systems*, **2018**, 4, 722-733

501 Design-for-testability for continuous-flow microfluidic biochips **2018**,   3

500 On Designing All-Optical Multipliers Using Mach-Zender Interferometers **2018**,   3

499 Control-Layer Routing and Control-Pin Minimization for Flow-Based Microfluidic Biochips. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2017**, 36, 55-68   2.5   36

498 Exact routing for micro-electrode-dot-array digital microfluidic biochips **2017**,   26

497 Computation-oriented fault-tolerance schemes for RRAM computing systems **2017**,   17

496 A Branch-&-Bound Test-Access-Mechanism Optimization Method for Multi- V_{dd} SoCs. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2017**, 36, 1911-1924   2.5   1

495 Quo Vadis Test? The Past, the Present, and the Future: No Longer a Necessary Evil. *IEEE Design and Test*, **2017**, 34, 93-95   1.4   1

494 Tackling Test Challenges for Interposer-Based 2.5-D Integrated Circuits. *IEEE Design and Test*, **2017**, 34, 72-79   1.4   3

493 Test Architecture and Test-Path Scheduling **2017**, 81-108

492 Robust TSV-based 3D NoC design to counteract electromigration and crosstalk noise **2017**,   4

491 Test-cost optimization in a scan-compression architecture using support-vector regression **2017**,   7

490	Computer-Aided Design of Microfluidic Very Large Scale Integration (mVLSI) Biochips **2017**,		6
489	Droplet Size-Aware High-Level Synthesis for Micro-Electrode-Dot-Array Digital Microfluidic Biochips. *IEEE Transactions on Biomedical Circuits and Systems*, **2017**, 11, 612-626	5.1	36
488	Testing of Interposer-Based 2.5D Integrated Circuits **2017**,		1
487	Synthesis of Error-Recovery Protocols for Micro-Electrode-Dot-Array Digital Microfluidic Biochips. *Transactions on Embedded Computing Systems*, **2017**, 16, 1-22	1.8	15
486	Fault-Tolerant Training with On-Line Fault Detection for RRAM-Based Neural Computing Systems **2017**,		55
485	Sample Preparation on Micro-Electrode-Dot-Array Digital Microfluidic Biochips **2017**,		10
484	Offline Error Detection in MEDA-Based Digital Microfluidic Biochips Using Oscillation-Based Testing Methodology. *Journal of Electronic Testing: Theory and Applications (JETTA)*, **2017**, 33, 621-635	0.7	6
483	Impact of Electrostatic Coupling and Wafer-Bonding Defects on Delay Testing of Monolithic 3D Integrated Circuits. *ACM Journal on Emerging Technologies in Computing Systems*, **2017**, 13, 1-23	1.7	18
482	VFI-Based Power Management to Enhance the Lifetime of High-Performance 3D NoCs. *ACM Transactions on Design Automation of Electronic Systems*, **2017**, 23, 1-26	1.5	1
481	**2017**,		4
480	Testing microfluidic Fully Programmable Valve Arrays (FPVAs) **2017**,		21
479	CoSyn: Efficient single-cell analysis using a hybrid microfluidic platform **2017**,		11
478	ExTest Scheduling and Optimization for 2.5-D SoCs With Wrapped Tiles. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2017**, 36, 1030-1042	2.5	4
477	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2017**, 36, 733-746	2.5	35
476	Knowledge-Driven Board-Level Functional Fault Diagnosis **2017**,		2
475	Diagnosis Using Support Vector Machines (SVM) **2017**, 23-42		1
474	Knowledge Discovery and Knowledge Transfer **2017**, 121-142		
473	Diagnosis Using Multiple Classifiers and Majority-Weighted Voting (WMV) **2017**, 43-59		

454	A Programmable Method for Low-Power Scan Shift in SoC Dies **2017**, 163-178		
453	Fault Modeling, Testing, and Design for Testability **2017**, 81-115		1
452	Built-In Self-Test **2017**, 109-133		
451	Wash Optimization for Cross-Contamination Removal **2017**, 53-79		0
450	Techniques for Fault Diagnosis **2017**, 117-136		
449	Post-bond Scan-Based Testing of Interposer Interconnects **2017**, 49-80		
448	. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2016**, 35, 985-998	2.5	19
447	Adaptive Board-Level Functional Fault Diagnosis Using Incremental Decision Trees. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2016**, 35, 323-336	2.5	12
446	Two-dimensional time-division multiplexing for 3D-SoCs **2016**,		2
445	Energy-efficient and reliable 3D network-on-chip (NoC): architectures and optimization algorithms **2016**,		5
444	A design-for-test solution for monolithic 3D integrated circuits **2016**,		3
443	. *Computer*, **2016**, 49, 36-43	1.6	35
442	The hype, myths, and realities of testing 3D integrated circuits **2016**,		4
441	Analysis of electrostatic coupling in monolithic 3D integrated circuits and its impact on delay testing **2016**,		10
440	Editorial First TVLSI Best AE and Reviewer Awards. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2016**, 24, 2613-2613	2.6	
439	A programmable method for low-power scan shift in SoC integrated circuits **2016**,		9
438	High-level synthesis for micro-electrode-dot-array digital microfluidic biochips **2016**,		41
437	Online soft-error vulnerability estimation for memory arrays **2016**,		3

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