

Stefano Di Carlo

List of Publications by Year in descending order

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Version: 2024-02-01

169
papers

1,946
citations

567281

15
h-index

414414

32
g-index

173
all docs

173
docs citations

173
times ranked

1575
citing authors

#	ARTICLE	IF	CITATIONS
1	An expanded evaluation of protein function prediction methods shows an improvement in accuracy. Genome Biology, 2016, 17, 184.	8.8	308
2	The CAFA challenge reports improved protein function prediction and new functional annotations for hundreds of genes through experimental screens. Genome Biology, 2019, 20, 244.	8.8	261
3	Multi-level and hybrid modelling approaches for systems biology. Computational and Structural Biotechnology Journal, 2017, 15, 396-402.	4.1	51
4	Increasing pattern recognition accuracy for chemical sensing by evolutionary based drift compensation. Pattern Recognition Letters, 2011, 32, 1594-1603.	4.2	50
5	Software-Based Self-Test of Set-Associative Cache Memories. IEEE Transactions on Computers, 2011, 60, 1030-1044.	3.4	42
6	A watchdog processor to detect data and control flow errors. , 0, , .		37
7	Statistical Reliability Estimation of Microprocessor-Based Systems. IEEE Transactions on Computers, 2012, 61, 1521-1534.	3.4	36
8	Control-flow checking via regular expressions. , 0, , .		31
9	A software-based self test of CUDA Fermi GPUs. , 2013, , .		30
10	Cost of Sickness Absenteeism during Seasonal Influenza Outbreaks of Medium Intensity among Health Care Workers. International Journal of Environmental Research and Public Health, 2019, 16, 747.	2.6	29
11	SyRA: Early System Reliability Analysis for Cross-Layer Soft Errors Resilience in Memory Arrays of Microprocessor Systems. IEEE Transactions on Computers, 2019, 68, 765-783.	3.4	27
12	An effective distributed BIST architecture for RAMs. , 0, , .		23
13	Specification and design of a new memory fault simulator. , 0, , .		23
14	A combined approach for genome wide protein function annotation/prediction. Proteome Science, 2013, 11, S1.	1.7	22
15	Using Boolean networks to model post-transcriptional regulation in gene regulatory networks. Journal of Computational Science, 2014, 5, 332-344.	2.9	22
16	HD/sup 2/BIST: a hierarchical framework for BIST scheduling, data patterns delivering and diagnosis in SoCs. , 0, , .		21
17	Automatic March Tests Generation for Static and Dynamic Faults in SRAMs. , 0, , .		21
18	A programmable BIST architecture for clusters of multiple-port SRAMs. , 0, , .		20

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19	A Functional Verification based Fault Injection Environment. , 2007, , .		20
20	SSDEXplorer: A Virtual Platform for Performance/Reliability-Oriented Fine-Grained Design Space Exploration of Solid State Drives. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2015, 34, 1627-1638.	2.7	20
21	Cross-layer system reliability assessment framework for hardware faults. , 2016, , .		20
22	RT Level vs. Microarchitecture-Level Reliability Assessment: Case Study on ARM(R) Cortex(R)-A9 CPU. , 2017, , .		20
23	ReDO: Cross-Layer Multi-Objective Design-Exploration Framework for Efficient Soft Error Resilient Systems. IEEE Transactions on Computers, 2018, 67, 1462-1477.	3.4	20
24	Data criticality estimation in software applications. , 0, , .		19
25	ATPG for Dynamic Burn-In Test in Full-Scan Circuits. Proceedings of the Asian Test Symposium, 2006, , .	0.0	18
26	FishAPP: A mobile App to detect fish falsification through image processing and machine learning techniques. , 2016, , .		18
27	Static analysis of SEU effects on software applications. , 0, , .		17
28	Programmable built-in self-testing of embedded RAM clusters in system-on-chip architectures. , 2003, 41, 90-97.		17
29	March Test Generation Revealed. IEEE Transactions on Computers, 2008, 57, 1704-1713.	3.4	17
30	A cross-layer approach for new reliability-performance trade-offs in MLC NAND flash memories. , 2012, , .		17
31	A novel methodology to increase fault tolerance in autonomous FPGA-based systems. , 2014, , .		17
32	An area-efficient 2-D convolution implementation on FPGA for space applications. , 2011, , .		16
33	SIFI: AMD southern islands GPU microarchitectural level fault injector. , 2017, , .		16
34	March AB, a state-of-the-art march test for realistic static linked faults and dynamic faults in SRAMs. IET Computers and Digital Techniques, 2007, 1, 237.	1.2	15
35	ReNE: A Cytoscape Plugin for Regulatory Network Enhancement. PLoS ONE, 2014, 9, e115585.	2.5	15
36	IEEE Standard 1500 Compliance Verification for Embedded Cores. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2008, 16, 397-407.	3.1	14

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37	Fault mitigation strategies for CUDA GPUs. , 2013, , .		14
38	Cross-layer reliability evaluation, moving from the hardware architecture to the system level: A CLERECO EU project overview. Microprocessors and Microsystems, 2015, 39, 1204-1214.	2.8	14
39	CyTRANSFINDER: a Cytoscape 3.3 plugin for three-component (TF, gene, miRNA) signal transduction pathway construction. BMC Bioinformatics, 2016, 17, 157.	2.6	14
40	Online self-repair of FIR filters. IEEE Design and Test of Computers, 2003, 20, 50-57.	1.0	13
41	FPGA-Based Remote-Code Integrity Verification of Programs in Distributed Embedded Systems. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2012, 42, 187-200.	2.9	13
42	Multi-faceted microarchitecture level reliability characterization for NVIDIA and AMD GPUs. , 2018, , .		13
43	A cDNA Microarray Gene Expression Data Classifier for Clinical Diagnostics Based on Graph Theory. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2011, 8, 577-591.	3.0	12
44	Integration of STT-MRAM model into CACTI simulator. , 2014, , .		12
45	SATTA. ACM Transactions on Reconfigurable Technology and Systems, 2015, 8, 1-22.	2.5	12
46	Computing of Low Shear Stress-Driven Endothelial Gene Network Involved in Early Stages of Atherosclerotic Process. BioMed Research International, 2018, 2018, 1-12.	1.9	12
47	Design and optimization of adaptable BCH codecs for NAND flash memories. Microprocessors and Microsystems, 2013, 37, 407-419.	2.8	11
48	A systematic analysis of a mi-RNA inter-pathway regulatory motif. Journal of Clinical Bioinformatics, 2013, 3, 20.	1.2	11
49	Applying March Tests to K-Way Set-Associative Cache Memories. , 2008, , .		10
50	"Plug & Test" at System Level via Testable TLM Primitives. , 2008, , .		10
51	A FPGA-Based Reconfigurable Software Architecture for Highly Dependable Systems. , 2009, , .		10
52	Performance and Reliability Analysis of Cross-Layer Optimizations of NAND Flash Controllers. Transactions on Embedded Computing Systems, 2015, 14, 1-24.	2.9	10
53	Power-aware voltage tuning for STT-MRAM reliability. , 2015, , .		10
54	GPU acceleration for statistical gene classification. , 2010, , .		9

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55	An extended gene protein/products boolean network model including post-transcriptional regulation. <i>Theoretical Biology and Medical Modelling</i> , 2014, 11, S5.	2.1	9
56	SA-FEMIP: A Self-Adaptive Features Extractor and Matcher IP-Core Based on Partially Reconfigurable FPGAs for Space Applications. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2015, 23, 2198-2208.	3.1	9
57	An On-Line Testing Technique for the Scheduler Memory of a GPGPU. <i>IEEE Access</i> , 2020, 8, 16893-16912.	4.2	9
58	Models in Memory Testing. <i>Frontiers in Electronic Testing</i> , 2010, , 157-185.	0.3	9
59	Validation of a software dependability tool via fault injection experiments. , 0, , .		8
60	A hierarchical infrastructure for SoC test management. <i>IEEE Design and Test of Computers</i> , 2003, 20, 32-39.	1.0	8
61	Influence of Parasitic Capacitance Variations on 65 nm and 32 nm Predictive Technology Model SRAM Core-Cells. , 2008, , .		8
62	Efficient multi-level fault simulation of HW/SW systems for structural faults. <i>Science China Information Sciences</i> , 2011, 54, 1784-1796.	4.3	8
63	Building gene expression profile classifiers with a simple and efficient rejection option in R. <i>BMC Bioinformatics</i> , 2011, 12, S3.	2.6	8
64	FLARES. <i>Transactions on Architecture and Code Optimization</i> , 2014, 11, 1-25.	2.0	8
65	Modeling antibiotic resistance in the microbiota using multi-level Petri Nets. <i>BMC Systems Biology</i> , 2018, 12, 108.	3.0	8
66	Performance Monitor Counters: Interplay Between Safety and Security in Complex Cyber-Physical Systems. <i>IEEE Transactions on Device and Materials Reliability</i> , 2019, 19, 73-83.	2.0	8
67	An optimal algorithm for the automatic generation of March tests. , 0, , .		7
68	Single-Event Upset Analysis and Protection in High Speed Circuits. , 0, , .		7
69	Automatic March Tests Generations for Static Linked Faults in SRAMs. , 2006, , .		7
70	Increasing the robustness of CUDA Fermi GPU-based systems. , 2013, , .		7
71	AID!: An adaptive image denoising FPGA-based IP-core for real-time applications. , 2013, , .		7
72	A portable open-source controller for safe Dynamic Partial Reconfiguration on Xilinx FPGAs. , 2015, , .		7

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73	Meta-Analysis of cortical inhibitory interneurons markers landscape and their performances in scRNA-seq studies. , 2021, , .		7
74	On-Line Instruction-Checking in Pipelined Microprocessors. , 2008, , .		6
75	Efficient Simulation of Structural Faults for the Reliability Evaluation at System-Level. , 2010, , .		6
76	FunMod: A Cytoscape Plugin for Identifying Functional Modules in Undirected Proteinâ€“Protein Networks. Genomics, Proteomics and Bioinformatics, 2014, 12, 178-186.	6.9	6
77	A Functional Approach for Testing the Reorder Buffer Memory. Journal of Electronic Testing: Theory and Applications (JETTA), 2014, 30, 469-481.	1.2	6
78	Using multi-level Petri nets models to simulate microbiota resistance to antibiotics. , 2017, , .		6
79	Using Nets-Within-Nets for Modeling Differentiating Cells in the Epigenetic Landscape. Lecture Notes in Computer Science, 2016, , 315-321.	1.3	6
80	Identification of miRNAs Potentially Involved in Bronchiolitis Obliterans Syndrome: A Computational Study. PLoS ONE, 2016, 11, e0161771.	2.5	6
81	A graph-based representation of Gene Expression profiles in DNA microarrays. , 2008, , .		5
82	A Low-Cost FPGA-Based Test and Diagnosis Architecture for SRAMs. , 2009, , .		5
83	Using genome wide data for protein function prediction by exploiting gene ontology relationships. , 2012, , .		5
84	Trading-off reliability and performance in FPGA-based reconfigurable heterogeneous systems. , 2018, , .		5
85	Alternatives to Fault Injections for Early Safety/Security Evaluations. , 2019, , .		5
86	On the in-field test of the GPGPU scheduler memory. , 2019, , .		5
87	â€“One DB to rule them allâ€“the RING: a Regulatory INteraction Graph combining TFs, genes/proteins, SNPs, diseases and drugs. Database: the Journal of Biological Databases and Curation, 2019, 2019, .	3.0	5
88	Nets-within-nets for modeling emergent patterns in ontogenetic processes. Computational and Structural Biotechnology Journal, 2021, 19, 5701-5721.	4.1	5
89	Automatic March tests generation for multi-port SRAMs. , 2006, , .		4
90	Memory Fault Simulator for Static-Linked Faults. Proceedings of the Asian Test Symposium, 2006, , .	0.0	4

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91	Test exploration and validation using transaction level models. , 2009, , .		4
92	FLARE: A design environment for FLASH-based space applications. , 2009, , .		4
93	FEMIP: A high performance FPGA-based features extractor & matcher for space applications. , 2013, , .		4
94	On the on-line functional test of the Reorder Buffer memory in superscalar processors. , 2013, , .		4
95	SSDEXplorer: A virtual platform for fine-grained design space exploration of Solid State Drives. , 2014, , .		4
96	Cross-layer early reliability evaluation: Challenges and promises. , 2014, , .		4
97	On Enhancing Fault Injection's Capabilities and Performances for Safety Critical Systems. , 2014, , .		4
98	In-silico cardiac aging regulatory model including microRNA post-transcriptional regulation. Methods, 2017, 124, 57-68.	3.8	4
99	Microarchitecture level reliability comparison of modern GPU designs: First findings. , 2017, , .		4
100	Modeling biological complexity using Biology System Description Language (BiSDL). , 2018, , .		4
101	Securing bitstream integrity, confidentiality and authenticity in reconfigurable mobile heterogeneous systems. , 2018, , .		4
102	Exploring Deep Learning for In-Field Fault Detection in Microprocessors. , 2021, , .		4
103	Exploiting Evolution for an Adaptive Drift-Robust Classifier in Chemical Sensing. Lecture Notes in Computer Science, 2010, , 412-421.	1.3	4
104	Software-Based Self-Test for Reliable Applications in Railway Systems. , 2012, , 198-220.		4
105	GAGAM: A Genomic Annotation-Based Enrichment of ATAC-seq Data for Gene Activity Matrix. Lecture Notes in Computer Science, 2022, , 18-32.	1.3	4
106	FAUST: fault-injection script-based tool. , 0, , .		3
107	Differential gene expression graphs: A data structure for classification in DNA microarrays. , 2008, , .		3
108	Automating defects simulation and fault modeling for SRAMs. , 2008, , .		3

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109	MarciaTesta: An Automatic Generator of Test Programs for Microprocessors' Data Caches. , 2011, , .		3
110	Computational Tools for Applying Multi-level Models to Synthetic Biology. , 2018, , 95-112.		3
111	miRNAs Potentially Involved in Post Lung Transplant-Obliterative Bronchiolitis: The Role of miR-21-5p. Cells, 2021, 10, 688.	4.1	3
112	A Methodology for Co-simulation-Based Optimization of Biofabrication Protocols. Lecture Notes in Computer Science, 2022, , 179-192.	1.3	3
113	SEU effect analysis in a open-source router via a distributed fault injection environment. , 0, , .		2
114	A 22n March Test for Realistic Static Linked Faults in SRAMs. , 0, , .		2
115	Analysis of System-Failure Rate Caused by Soft-Errors using a UML-Based Systematic Methodology in an SoC, 2007		2
116	&lt;/title&gt; &lt;/titles&gt; &lt;/publication_date&gt; &lt;/month&gt;05&lt;/month&gt; &lt;/year&gt;2009&lt;/year&gt; &lt;/publication_date&gt; &lt;/pages&gt; &lt;/first_page&gt;3&lt;/first_page&gt; &lt;/last_page&gt;3&lt;/last_page&gt; &lt;/pages&gt; &lt;/publisher_item&gt; &lt;/item_number &lt;/item_number_type=sequence-number&gt;5167501&lt;/item_number&gt; &lt;/publisher_item&gt; &lt;/doi_data&gt; &lt;/doi&gt;10.1109/MDT.2009.45&lt;/doi&gt; &lt;/resource&gt;http://ieeexplore.ieee.org/lp	1.0	2
117	Defective Behaviour of an 8T SRAM Cell with Open Defects. , 2010, , .		2
118	A unifying formalism to support automated synthesis of SBSTs for embedded caches. , 2011, , .		2
119	Reducing the Complexity of Complex Gene Coexpression Networks by Coupling Multiweighted Labeling with Topological Analysis. BioMed Research International, 2013, 2013, 1-9.	1.9	2
120	A cloud-based approach for Gene Regulatory Networks dynamics simulations. , 2015, , .		2
121	Bayesian network early reliability evaluation analysis for both permanent and transient faults. , 2015, , .		2
122	RILF-2: Toward the next generation reliability information interchange format. , 2016, , .		2
123	SIERRA“Simulation environment for memory redundancy algorithms. Simulation Modelling Practice and Theory, 2016, 69, 14-30.	3.8	2
124	Memory read faults: taxonomy and automatic test generation. , 0, , .		1
125	Automated synthesis of SEU tolerant architectures from OO descriptions. , 0, , .		1
126	Software dependability techniques validated via fault injection experiments. , 0, , .		1

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127	A Unique March Test Algorithm for the Wide Spread of Realistic Memory Faults in SRAMs. , 0, , .		1
128	Automating the IEEE std. 1500 compliance verification for embedded cores. , 2007, , .		1
129	System Level Testing via TLM 2.0 Debug Transport Interface. , 2009, , .		1
130	NBTI mitigation by Dynamic Partial Reconfiguration. , 2012, , .		1
131	Ef ³ S: An evaluation framework for flash-based systems. , 2013, , .		1
132	ZipStream: Improving dependability in dynamic partial reconfiguration. , 2013, , .		1
133	Cross-Layer Early Reliability Evaluation for the Computing cOntinuum. , 2014, , .		1
134	A novel algorithm and hardware architecture for fast video-based shape reconstruction of space debris. Eurasip Journal on Advances in Signal Processing, 2014, 2014, .	1.7	1
135	A Bayesian model for system level reliability estimation. , 2015, , .		1
136	A computationally inferred regulatory heart aging model including post-transcriptional regulations. , 2016, , .		1
137	Shielding Performance Monitor Counters: a double edged weapon for safety and security. , 2018, , .		1
138	Special session: How approximate computing impacts verification, test and reliability. , 2018, , .		1
139	Combining Cluster Sampling and ACE analysis to improve fault-injection based reliability evaluation of GPU-based systems. , 2019, , .		1
140	Special Session: Operating Systems under test: an overview of the significance of the operating system in the resiliency of the computing continuum. , 2021, , .		1
141	A 3D Voxel Neighborhood Classification Approach within a Multiparametric MRI Classifier for Prostate Cancer Detection. Lecture Notes in Computer Science, 2015, , 231-239.	1.3	1
142	Genetic Defect Based March Test Generation for SRAM. Lecture Notes in Computer Science, 2011, , 141-150.	1.3	1
143	EXT-TAURUM P2T: An Extended Secure CAN-FD Architecture for Road Vehicles. IEEE Transactions on Device and Materials Reliability, 2022, 22, 98-110.	2.0	1
144	Artificial Resilience in neuromorphic systems. , 2022, , .		1

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145	On integrating a proprietary and a commercial architecture for optimal BIST performances in SoCs. , 0, , .		0
146	Digital, Memory and Mixed-Signal Test Engineering Education: Five Centres of Competence in Europe. , 0, , .		0
147	A tool for teaching memory testing based on BIST. International Biennial Baltic Electronics Conference, 2006, , .	0.0	0
148	Using ER models for microprocessor functional test coverage evaluation. , 2008, , .		0
149	Gene expression reliability estimation through cluster-based analysis. , 2009, , .		0
150	Gene expression classifiers and out-of-class samples detection. , 2009, , .		0
151	Test infrastructures evaluation at transaction level. , 2009, , .		0
152	System reliability evaluation using concurrent multi-level simulation of structural faults. , 2010, , .		0
153	Validation & Verification of an EDA automated synthesis tool. , 2011, , .		0
154	Covariance Matrix Adaptation Evolutionary Strategy for Drift Correction of Electronic Nose Data. , 2011, , .		0
155	SAFE: A self adaptive frame enhancer FPGA-based IP-core for real-time space applications. , 2013, , .		0
156	Innovative practices session 9C DFT and data for diagnostics. , 2017, , .		0
157	Innovative practices session 5C automotive test solutions. , 2017, , .		0
158	Bayesian models for early cross-layer reliability analysis and design space exploration. , 2019, , .		0
159	Guest Editorsâ€™ Introduction: Selected Papers from IEEE VLSI Test Symposium. IEEE Design and Test, 2020, 37, 5-6.	1.2	0
160	Cross-Layer Soft-Error Resilience Analysis of Computing Systems. , 2020, , .		0
161	Engineering Minds for Biologists. , 2021, , 79-90.		0
162	Guest Editorial: Special Section on Emerging Trends and Computing Paradigms for Testing, Reliability and Security in Future VLSI Systems. IEEE Transactions on Emerging Topics in Computing, 2021, 9, 649-650.	4.6	0

#	ARTICLE	IF	CITATIONS
163	A Computational Pipeline to Identify New Potential Regulatory Motifs in Melanoma Progression. Communications in Computer and Information Science, 2015, , 181-194.	0.5	0
164	System biology (SB) allows the identification of pathogenic micro RNA (miR) in BOS. , 2015, , .		0
165	Breathomics can discriminate between anti IgE-treated and non-treated severe asthma adults. , 2015, , .		0
166	LSC Abstract “ Identification of pathogenic micro RNA (miR) in BOS: A system biology approach. , 2016, , .		0
167	TTTC News. IEEE Design and Test, 2022, 39, 134-136.	1.2	0
168	Test Technology Newsletter. Journal of Electronic Testing: Theory and Applications (JETTA), 0, , 1.	1.2	0
169	Using Analog Scrambling Circuits for Automotive Sensor Integrity and Authenticity. , 2022, , .		0