

Pallab Dasgupta

List of Publications by Year in descending order

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Version: 2024-02-01

90
papers

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1039880

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14
g-index

92
all docs

92
docs citations

92
times ranked

179
citing authors

#	ARTICLE	IF	CITATIONS
1	Policy Based Security Analysis in Enterprise Networks: A Formal Approach. IEEE Transactions on Network and Service Management, 2010, 7, 231-243.	3.2	27
2	Instrumenting AMS assertion verification on commercial platforms. ACM Transactions on Design Automation of Electronic Systems, 2009, 14, 1-47.	1.9	25
3	Feature Indented Assertions for Analog and Mixed-Signal Validation. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2016, 35, 1928-1941.	1.9	18
4	Automatic Characterization of Exploitable Faults: A Machine Learning Approach. IEEE Transactions on Information Forensics and Security, 2019, 14, 954-968.	4.5	18
5	Hierarchical Program-Triggered Reinforcement Learning Agents for Automated Driving. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 10902-10911.	4.7	16
6	Leveraging UPF-extracted assertions for modeling and formal verification of architectural power intent. , 2010, , .		15
7	Auxiliary Specifications for Context-Sensitive Monitoring of AMS Assertions. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2011, 30, 1446-1457.	1.9	15
8	POWER-TRUCTOR: An Integrated Tool Flow for Formal Verification and Coverage of Architectural Power Intent. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2013, 32, 1801-1813.	1.9	11
9	Accelerating Assertion Coverage With Adaptive Testbenches. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2008, 27, 967-972.	1.9	10
10	Breaking Redundancy-Based Countermeasures with Random Faults and Power Side Channel. , 2018, , .		10
11	Synchronizing AMS Assertions with AMS Simulation. ACM Transactions on Design Automation of Electronic Systems, 2012, 17, 1-25.	1.9	9
12	Formal Verification of Hardware / Software Power Management Strategies. , 2013, , .		8
13	Satisfiability Models for Maximum Transition Power. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2008, 16, 941-951.	2.1	7
14	Formal Interpretation of Assertion Based Features on AMS Designs. IEEE Design and Test, 2014, , 1-1.	1.1	7
15	Formal Methods for Validation and Test Point Prioritization in Railway Signaling Logic. IEEE Transactions on Intelligent Transportation Systems, 2017, 18, 678-689.	4.7	7
16	Solar Irradiance Prediction from Historical Trends Using Deep Neural Networks. , 2018, , .		7
17	A Structured Approach for Rapid Identification of Fault-Sensitive Nets in Analog Circuits. , 2019, , .		7
18	Formal methods for analyzing the completeness of an assertion suite against a high-level fault model. , 0, , .		6

#	ARTICLE	IF	CITATIONS
19	Incorporating local variables in mixed-signal assertions. , 2009, , .		6
20	Computing Minimal Debugging Windows in Failure Traces of AMS Assertions. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2012, 31, 1776-1781.	1.9	6
21	Formal Methods for Early Analysis of Functional Reliability in Component-Based Embedded Applications. IEEE Embedded Systems Letters, 2013, 5, 8-11.	1.3	6
22	Counterexample Ranking Using Mined Invariants. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2013, 32, 1978-1991.	1.9	6
23	Formal Hardware/Software Co-Verification of Embedded Power Controllers. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2014, 33, 2025-2029.	1.9	6
24	Synthesis of sampling modes for adaptive control. , 2014, , .		6
25	Cohesive Coverage Management for Simulation and Formal Property Verification. , 2008, , .		5
26	Fault Analysis of Security Policy Implementations in Enterprise Networks. , 2009, , .		5
27	Auxiliary State Machines and Auxiliary Functions: Constructs for Extending AMS Assertions. , 2011, , .		5
28	The BUSpec platform for automated generation of verification aids for standard bus protocols. , 2004, , .		4
29	Bounded Delay Timing Analysis Using Boolean Satisfiability. , 2007, , .		4
30	An end to end correctness verification approach for application specific usage control. , 2009, , .		4
31	A Verification framework for Analyzing Security Implementations in an Enterprise LAN. , 2009, , .		4
32	Assertion Aware Sampling Refinement: A Mixed-Signal Perspective. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2012, 31, 1772-1776.	1.9	4
33	Reliability Guarantees in Automata-Based Scheduling for Embedded Control Software. IEEE Embedded Systems Letters, 2013, 5, 17-20.	1.3	4
34	Adaptive sharing of sampling rates among software based controllers. , 2015, , .		4
35	Route optimization for an electric vehicle with priority destinations. , 2017, , .		4
36	An automated framework for exploitable fault identification in block ciphers. Journal of Cryptographic Engineering, 2019, 9, 203-219.	1.5	4

#	ARTICLE	IF	CITATIONS
37	CoverT: A Coverage Reporting Tool for Analog Mixed-Signal Designs. , 2020, , .		4
38	Safe and Stable RL (S^2 RL) Driving Policies Using Control Barrier and Control Lyapunov Functions. IEEE Transactions on Intelligent Vehicles, 2023, 8, 1889-1899.	9.4	4
39	SAT based solutions for consistency problems in formal property specifications for open systems. , 0, , .		3
40	Formal Methods for Pattern Based Reliability Analysis in Embedded Systems. , 2015, , .		3
41	Algorithmic approaches for optimizing electronic control unit time using multi-rate sampling. Control Theory and Technology, 2018, 16, 173-190.	1.0	3
42	Formal Feature Interpretation of Hybrid Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2018, 37, 2474-2484.	1.9	3
43	Co-Synthesis of Loop Execution Patterns for Multihop Control Networks. IEEE Embedded Systems Letters, 2018, 10, 111-114.	1.3	3
44	Interpreting Local Variables in AMS Assertions During Simulation. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2019, 38, 980-984.	1.9	3
45	Recurrence in Dense-Time AMS Assertions. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 2416-2420.	1.9	3
46	SongFO: A Spectrum-Based Fundamental Frequency Estimation for Monophonic Songs. Circuits, Systems, and Signal Processing, 2021, 40, 772-797.	1.2	3
47	A formal approach for specification-driven AMS behavioral model generation. , 2009, , .		2
48	Inline Assertions - Embedding Formal Properties in a Test Bench. , 2009, , .		2
49	Formal methods for ranking counterexamples through assumption mining. , 2012, , .		2
50	Cohesive Coverage Management: Simulation Meets Formal Methods. Journal of Electronic Testing: Theory and Applications (JETTA), 2012, 28, 449-468.	0.9	2
51	Early Analysis of Critical Faults: An Approach to Test Generation From Formal Specifications. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2012, 31, 447-451.	1.9	2
52	Handling fault detection latencies in automata-based scheduling for embedded control software. , 2013, , .		2
53	Feature Based Coverage Analysis of AMS Circuits. , 2018, , .		2
54	Synthesizing Performance-Aware (m, k)-Firm Control Execution Patterns Under Dropped Samples. , 2019, , .		2

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55	The Notion of Cross Coverage in AMS Design Verification. , 2020, , .		2
56	Performance and energy aware robust specification of control execution patterns under dropped samples. IET Computers and Digital Techniques, 2019, 13, 493-504.	0.9	2
57	Pattern Guided Integrated Scheduling and Routing in Multi-Hop Control Networks. Transactions on Embedded Computing Systems, 2020, 19, 1-28.	2.1	2
58	A Branching Time Temporal Framework for Quantitative Reasoning. Journal of Automated Reasoning, 2003, 30, 205-232.	1.1	1
59	Formal Verification of Power Scheduling Policies for Battery Powered Mobile Systems. , 2006, , .		1
60	Timing Analysis of Sequential Circuits Using Symbolic Event Propagation. , 2007, , .		1
61	Abstraction refinement for state space partitioning based on auxiliary state machines. , 2009, , .		1
62	Coverage Management with Inline Assertions and Formal Test Points. , 2010, , .		1
63	A Generalized Theory for Formal Assertion Coverage. , 2012, , .		1
64	Acceptance and random generation of event sequences under real time calculus constraints. , 2014, , .		1
65	Monitoring AMS Simulation: From Assertions to Features. , 2015, , .		1
66	Generating AMS Behavioral Models with Formal Guarantees on Feature Accuracy. , 2017, , .		1
67	Fault Vulnerability Ranking of Transistors in Analog Integrated Circuits using AC Analysis. , 2020, , .		1
68	A Methodology for Identification of Internal Nets for Improving Fault Coverage in Analog and Mixed Signal Circuits. Journal of Electronic Testing: Theory and Applications (JETTA), 2020, 36, 719-730.	0.9	1
69	Assertions for Protecting Mixed-Signal Latency Contracts in Power Management. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2020, 28, 1745-1756.	2.1	1
70	\$\$\$hf_0\$\$\$: A Hybrid Pitch Extraction Method for Multimodal Voice. Circuits, Systems, and Signal Processing, 2021, 40, 262-275.	1.2	1
71	SMT-Based Verification of Safety-Critical Embedded Control Software. IEEE Embedded Systems Letters, 2021, 13, 138-141.	1.3	1
72	Migrating Assertions From Dense to Discrete Time. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 2362-2371.	1.9	1

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73	POWER-SIM: An SOC Simulator for Estimating Power Profiles of Mobile Workloads. Journal of Low Power Electronics, 2012, 8, 293-303.	0.6	1
74	Heuristic search strategies for multiobjective state space search. Sadhana - Academy Proceedings in Engineering Sciences, 1996, 21, 263-290.	0.8	0
75	Min-max event-triggered computation tree logic. Sadhana - Academy Proceedings in Engineering Sciences, 2002, 27, 163-180.	0.8	0
76	Property Driven Test Generation in Absence of Direct Interface. , 2006, , .		0
77	A New Pseudo-Boolean Satisfiability based approach to Power Mode Schedulability Analysis. , 2007, , .		0
78	Incremental Verification Techniques for an Updated Architectural Specification. , 2009, , .		0
79	Directed automated symbolic verification of formal properties with local variables. , 2009, , .		0
80	Auto-generation of ams behavioral models in different languages from hybrid automata. , 2010, , .		0
81	A study of modeling techniques in use in digital and mixed-signal domains for semi-formal verification. , 2010, , .		0
82	Backward Reasoning with Formal Properties: A Methodology for Bug Isolation on Simulation Traces. , 2011, , .		0
83	POWER-SIM: An SOC Simulator for Estimating Power Profiles of Mobile Workloads. , 2011, , .		0
84	A Library for Passive Online Verification of Analog and Mixed-Signal Circuits. , 2012, , .		0
85	Acceptance and random generation of event sequences under real time calculus constraints. , 2014, , .		0
86	Formal Methods for Coverage Analysis of Power Management Logic with Mixed-Signal Components. , 2018, , .		0
87	Usage-Driven Personalization of Power Management Logic. IEEE Embedded Systems Letters, 2021, 13, 106-109.	1.3	0
88	Performance-Driven Post-Processing of Control Loop Execution Schedules. ACM Transactions on Design Automation of Electronic Systems, 2021, 26, 1-27.	1.9	0
89	Exploitable Fault Space Characterization: A Complementary Approach. , 2019, , 59-88.		0
90	CoVerPlan: A Comprehensive Verification Planning Framework leveraging PSS Specifications. ACM Transactions on Design Automation of Electronic Systems, 0, , .	1.9	0