Alireza Ejlali

List of Publications by Year
in descending order

88 papers	1,566 citations	394421 19 h-index	414414 32 g-index
88 all docs	88 docs citations	88 times ranked	824 citing authors

#	Article	IF	Citations
1	Passive Primary/Backup-Based Scheduling for Simultaneous Power and Reliability Management on Heterogeneous Embedded Systems. IEEE Transactions on Sustainable Computing, 2023, 8, 82-93.	3.1	3
2	PROWL: A Cache Replacement <u>P</u>olicy fo<u>r</u> C<u>o</u>nsistency A<u>w</u>are Renewab<u>l</u>e Powered Devices. IEEE Transactions on Emerging Topics in Computing, 2022, 10, 476-487.	4.6	3
3	ReMap: Reliability Management of Peak-Power-Aware Real-Time Embedded Systems Through Task Replication. IEEE Transactions on Emerging Topics in Computing, 2022, 10, 312-323.	4.6	6
4	ARMOR: A Reliable and Mobility-Aware RPL for Mobile Internet of Things Infrastructures. IEEE Internet of Things Journal, 2022, 9, 1503-1516.	8.7	12
5	MASTER: Reclamation of Hybrid Scratchpad Memory to Maximize Energy Saving in Multi-Core Edge Systems. IEEE Transactions on Sustainable Computing, 2022, 7, 749-760.	3.1	3
6	Toward the Design of Fault-Tolerance-Aware and Peak-Power-Aware Multicore Mixed-Criticality Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 1509-1522.	2.7	9
7	Thermal-Aware Standby-Sparing Technique on Heterogeneous Real-Time Embedded Systems. IEEE Transactions on Emerging Topics in Computing, 2022, 10, 1883-1897.	4.6	11
8	BOT-MICS: Bounding Time Using Analytics in Mixed-Criticality Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 3239-3251.	2.7	7
9	A Survey of Fault-Tolerance Techniques for Embedded Systems From the Perspective of Power, Energy, and Thermal Issues. IEEE Access, 2022, 10, 12229-12251.	4.2	24
10	Learning-Oriented QoS- and Drop-Aware Task Scheduling for Mixed-Criticality Systems. Computers, 2022, 11, 101.	3.3	4
11	Power-Aware Checkpointing for Multicore Embedded Systems. IEEE Transactions on Parallel and Distributed Systems, 2022, , 1-15.	5.6	3
12	Power-Aware Runtime Scheduler for Mixed-Criticality Systems on Multicore Platform. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 2009-2023.	2.7	20
13	Fast and Predictable Non-Volatile Data Memory for Real-Time Embedded Systems. IEEE Transactions on Computers, 2021, 70, 359-371.	3.4	8
14	CHANCE: Capacitor Charging Management Scheme in Energy Harvesting Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 419-429.	2.7	8
15	High-Performance Predictable NVM-Based Instruction Memory for Real-Time Embedded Systems. IEEE Transactions on Emerging Topics in Computing, 2021, 9, 441-455.	4.6	3
16	ELITE: An Elaborated Cross-Layer RPL Objective Function to Achieve Energy Efficiency in Internet-of-Things Devices. IEEE Internet of Things Journal, 2021, 8, 1169-1182.	8.7	35
17	READY: Reliability- and Deadline-Aware Power-Budgeting for Heterogeneous Multicore Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 646-654.	2.7	11
18	A Low-Waste Reliable Adiabatic Platform. Computers and Electrical Engineering, 2021, 89, 106887.	4.8	0

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19	Ring-DVFS: Reliability-Aware Reinforcement Learning-Based DVFS for Real-Time Embedded Systems. IEEE Embedded Systems Letters, 2021, 13, 146-149.	1.9	10
20	COACH: <u>Co</u>nsistency <u>A</u>ware <u>Ch</u>eck-Pointing for Nonvolatile Processor in Energy Harvesting Systems. IEEE Transactions on Emerging Topics in Computing, 2021, 9, 2076-2088.	4.6	10
21	PVMC: Task Mapping and Scheduling under Process Variation Heterogeneity in Mixed-Criticality Systems. IEEE Transactions on Emerging Topics in Computing, 2021, , 1-1.	4.6	4
22	Improving the Timing Behaviour of Mixed-Criticality Systems Using Chebyshev's Theorem. , 2021, , .		4
23	CATNAP-Sim: A Comprehensive Exploration and a Nonvolatile Processor Simulator for Energy Harvesting Systems. IEEE Design and Test, 2021, 38, 69-77.	1.2	0
24	A Cluster-Based and Drop-aware Extension of RPL to Provide Reliability in IoT Applications. , 2021, , .		2
25	A Case for PIM Support in General-Purpose Compilers. IEEE Design and Test, 2021, , 1-1.	1.2	0
26	Peak-Power-Aware Energy Management for Periodic Real-Time Applications. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 779-788.	2.7	25
27	Simultaneous Management of Peak-Power and Reliability in Heterogeneous Multicore Embedded Systems. IEEE Transactions on Parallel and Distributed Systems, 2020, 31, 623-633.	5.6	17
28	Meeting Thermal Safe Power in Fault-Tolerant Heterogeneous Embedded Systems. IEEE Embedded Systems Letters, 2020, 12, 29-32.	1.9	13
29	An optimal analytical solution for maximizing expected battery lifetime using the calculus of variations. The Integration VLSI Journal, 2020, 71, 86-94.	2.1	3
30	REFER: A Reliable and Energy-Efficient RPL for Mobile IoT Applications. , 2020, , .		13
31	A Comparative Study of Joint Power and Reliability Management Techniques in Multicore Embedded Systems. , 2020, , .		3
32	FANTOM: Fault Tolerant Task-Drop Aware Scheduling for Mixed-Criticality Systems. IEEE Access, 2020, 8, 187232-187248.	4.2	19
33	Impacts of Mobility Models on RPL-Based Mobile IoT Infrastructures: An Evaluative Comparison and Survey. IEEE Access, 2020, 8, 167779-167829.	4.2	36
34	Peak-Power-Aware Primary-Backup Technique for Efficient Fault-Tolerance in Multicore Embedded Systems. IEEE Access, 2020, 8, 142843-142857.	4.2	14
35	Leakage-Aware Battery Lifetime Analysis Using the Calculus of Variations. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 4829-4841.	5.4	6
36	A comprehensive analysis on the resilience of adiabatic logic families against transient faults. The Integration VLSI Journal, 2020, 72, 183-193.	2.1	13

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37	Peak Power Management to Meet Thermal Design Power in Fault-Tolerant Embedded Systems. IEEE Transactions on Parallel and Distributed Systems, 2019, 30, 161-173.	5.6	37
38	Online Peak Power and Maximum Temperature Management in Multi-core Mixed-Criticality Embedded Systems. , 2019, , .		10
39	Effects of RPL objective functions on the primitive characteristics of mobile and static IoT infrastructures. Microprocessors and Microsystems, 2019, 69, 79-91.	2.8	31
40	PEDAL. , 2019, , .		14
41	Towards a Reliable Modulation and Encoding Scheme for Internet of Things Communications. , 2019, , .		4
42	Reliability-Aware Energy Management in Mixed-Criticality Systems. IEEE Transactions on Sustainable Computing, 2018, 3, 195-208.	3.1	31
43	An Instruction-Level Quality-Aware Method for Exploiting STT-RAM Read Approximation Techniques. IEEE Embedded Systems Letters, 2018, 10, 41-44.	1.9	1
44	Run-Time Adaptive Power-Aware Reliability Management for Manycores. IEEE Design and Test, 2018, 35, 36-44.	1.2	8
45	Slack clustering for scheduling frame-based tasks on multicore embedded systems. Microelectronics Journal, 2018, 81, 144-153.	2.0	2
46	Objective function: A key contributor in Internet of Things primitive properties. , 2018, , .		12
47	Exploiting Approximate MLC-PCM in Low-Power Embedded Systems. Transactions on Embedded Computing Systems, 2018, 17, 1-25.	2.9	5
48	NPAM: NVM-Aware Page Allocation for Multi-Core Embedded Systems. IEEE Transactions on Computers, 2017, 66, 1703-1716.	3.4	8
49	Reliability side-effects in Internet of Things application layer protocols. , 2017, , .		61
50	Two-State Checkpointing for Energy-Efficient Fault Tolerance in Hard Real-Time Systems. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2016, 24, 2426-2437.	3.1	49
51	A Compile-Time Optimization Method for WCET Reduction in Real-Time Embedded Systems through Block Formation. Transactions on Architecture and Code Optimization, 2016, 12, 1-25.	2.0	7
52	Two-Phase Low-Energy N-Modular Redundancy for Hard Real-Time Multi-Core Systems. IEEE Transactions on Parallel and Distributed Systems, 2016, 27, 1497-1510.	5.6	38
53	Stretch: exploiting service level degradation for energy management in mixed-criticality systems. , 2015, , .		3
54	Offline replication and online energy management for hard real-time multicore systems. , 2015, , .		15

#	Article	IF	Citations
55	dsReliM: Power-constrained reliability management in Dark-Silicon many-core chips under process variations. , 2015, , .		16
56	Dynamic Shared SPM Reuse for Real-Time Multicore Embedded Systems. Transactions on Architecture and Code Optimization, 2015, 12, 1-25.	2.0	7
57	DRVS: Power-efficient reliability management through Dynamic Redundancy and Voltage Scaling under variations. , 2015, , .		40
58	A Hardware Platform for Evaluating Low-Energy Multiprocessor Embedded Systems Based on COTS Devices. IEEE Transactions on Industrial Electronics, 2015, 62, 1262-1269.	7.9	32
59	A fast, flexible, and easy-to-develop FPGA-based fault injection technique. Microelectronics Reliability, 2014, 54, 1000-1008.	1.7	80
60	A comparative study of energy/power consumption in parallel decimal multipliers. Microelectronics Journal, 2014, 45, 775-780.	2.0	5
61	An Accurate Instruction-Level Energy Estimation Model and Tool for Embedded Systems. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 1927-1934.	4.7	60
62	Error control schemes in solar energy harvesting wireless sensor networks. , 2012, , .		3
63	Cooperative Hybrid ARQ in Solar Powered Wireless Sensor Networks. Microelectronics Reliability, 2012, 52, 3043-3052.	1.7	5
64	SCFIT: A FPGA-based fault injection technique for SEU fault model. , 2012, , .		28
65	Low-Energy Standby-Sparing for Hard Real-Time Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2012, 31, 329-342.	2.7	69
66	Feedback-Based Energy Management in a Standby-Sparing Scheme for Hard Real-Time Systems. , 2011, , .		19
67	A Comparative Study of System-Level Energy Management Methods for Fault-Tolerant Hard Real-Time Systems. IEEE Transactions on Computers, 2011, 60, 1288-1299.	3.4	31
68	Reliability/energy trade-off in Bluetooth error control schemes. Microelectronics Reliability, 2011, 51, 1398-1412.	1.7	4
69	Improving the energy efficiency of reversible logic circuits by the combined use of adiabatic styles. The Integration VLSI Journal, 2011, 44, 12-21.	2.1	18
70	A Body Biasing Method for Charge Recovery Circuits: Improving the Energy Efficiency and DPA-Immunity. , 2010, , .		2
71	Sub-threshold charge recovery circuits. , 2010, , .		8
72	A control-theoretic energy management for fault-tolerant hard real-time systems. , 2010, , .		7

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73	Joint Reliable and Power-Efficient CDS-Based Topology Control for Wireless Multi-hop Networks. Communications in Computer and Information Science, 2010, , 327-337.	0.5	0
74	Performability/Energy Tradeoff in Error-Control Schemes for On-Chip Networks. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2010, 18, 1-14.	3.1	54
75	A standby-sparing technique with low energy-overhead for fault-tolerant hard real-time systems. , 2009, , .		44
76	Low energy single event upset/single event transient-tolerant latch for deep subMicron technologies. IET Computers and Digital Techniques, 2009, 3, 289.	1.2	110
77	Soft Error-Aware Voltage Scaling Technique for Power Minimization in Application-Specific Multiprocessor System-on-Chip. Journal of Low Power Electronics, 2009, 5, 145-156.	0.6	9
78	Error propagation analysis using FPGA-based SEU-fault injection. Microelectronics Reliability, 2008, 48, 319-328.	1.7	14
79	SEU-Hardened Energy Recovery Pipelined Interconnects for On-Chip Networks. , 2008, , .		1
80	A secure and low-energy logic style using charge recovery approach. , 2008, , .		15
81	An Asymmetric Checkpointing and Rollback Error Recovery Scheme for Embedded Processors. , 2008, , .		4
82	Joint Consideration of Fault-Tolerance, Energy-Efficiency and Performance in On-Chip Networks. , 2007, , .		43
83	Emulating switch-level models of CMOS circuits. Microelectronic Engineering, 2007, 84, 204-212.	2.4	0
84	Fast co-verification of HDL models. Microelectronic Engineering, 2007, 84, 218-228.	2.4	2
85	Combined time and information redundancy for SEU-tolerance in energy-efficient real-time systems. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2006, 14, 323-335.	3.1	66
86	FPGA-based fault injection into switch-level models. Microprocessors and Microsystems, 2004, 28, 317-327.	2.8	13
87	FPGA-based Monte Carlo simulation for fault tree analysis. Microelectronics Reliability, 2004, 44, 1017-1028.	1.7	57
88	Switch Level Fault Emulation. Lecture Notes in Computer Science, 2003, , 849-858.	1.3	2