

Lui Sha

List of Publications by Year in descending order

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121
papers

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citations

394286

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197736

49
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124
all docs

124
docs citations

124
times ranked

2256
citing authors

#	ARTICLE	IF	CITATIONS
1	Real Time Scheduling Theory: A Historical Perspective. Real-Time Systems, 2004, 28, 101-155.	1.1	434
2	Dynamic clustering for acoustic target tracking in wireless sensor networks. IEEE Transactions on Mobile Computing, 2004, 3, 258-271.	3.9	375
3	Real-time communication and coordination in embedded sensor networks. Proceedings of the IEEE, 2003, 91, 1002-1022.	16.4	323
4	The deferrable server algorithm for enhanced aperiodic responsiveness in hard real-time environments. IEEE Transactions on Computers, 1995, 44, 73-91.	2.4	298
5	Using simplicity to control complexity. IEEE Software, 2001, 18, 20-28.	2.1	265
6	Real-time scheduling theory and Ada. Computer, 1990, 23, 53-62.	1.2	248
7	Generalized rate-monotonic scheduling theory: a framework for developing real-time systems. Proceedings of the IEEE, 1994, 82, 68-82.	16.4	148
8	Cyber-Physical Systems: A New Frontier. , 2009, , 3-13.		104
9	The System-Level Simplex Architecture for Improved Real-Time Embedded System Safety. , 2009, , .		89
10	Data-Centered Runtime Verification of Wireless Medical Cyber-Physical System. IEEE Transactions on Industrial Informatics, 2017, 13, 1900-1909.	7.2	85
11	Acoustic Target Tracking Using Tiny Wireless Sensor Devices. Lecture Notes in Computer Science, 2003, , 642-657.	1.0	78
12	Feedback control with queueing-theoretic prediction for relative delay guarantees in web servers. , 0, , .		76
13	Impact of Cache Partitioning on Multi-tasking Real Time Embedded Systems. , 2008, , .		75
14	Dynamic clustering for acoustic target tracking in wireless sensor networks. , 0, , .		66
15	Real-Time Reachability for Verified Simplex Design. , 2014, , .		51
16	Elastic feedback control. , 0, , .		45
17	Memory Bandwidth Management for Efficient Performance Isolation in Multi-Core Platforms. IEEE Transactions on Computers, 2016, 65, 562-576.	2.4	42
18	SecureCore: A multicore-based intrusion detection architecture for real-time embedded systems. , 2013, , .		38

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19	TaskShuffler: A Schedule Randomization Protocol for Obfuscation against Timing Inference Attacks in Real-Time Systems. , 2016, , .		38
20	Handling execution overruns in hard real-time control systems. IEEE Transactions on Computers, 2002, 51, 835-849.	2.4	36
21	NetSimplex: Controller Fault Tolerance Architecture in Networked Control Systems. IEEE Transactions on Industrial Informatics, 2013, 9, 346-356.	7.2	35
22	Implementing logical synchrony in integrated modular avionics. , 2009, , .		33
23	Adaptive Control of Multi-Tiered Web Applications Using Queueing Predictor. , 2006, , .		32
24	Template-based real-time dwell scheduling with energy constraint. , 0, , .		30
25	Optimizing Tunable WCET with Shared Resource Allocation and Arbitration in Hard Real-Time Multicore Systems. , 2011, , .		30
26	Sources of unbounded priority inversions in real-time systems and a comparative study of possible solutions. Operating Systems Review (ACM), 1992, 26, 110-120.	1.5	27
27	Performance analysis of power management policies in wireless networks. IEEE Transactions on Wireless Communications, 2006, 5, 1351-1361.	6.1	27
28	Real-Time Reachability for Verified Simplex Design. Transactions on Embedded Computing Systems, 2016, 15, 1-27.	2.1	27
29	VirtualDrone. , 2017, , .		27
30	A Container-based DoS Attack-Resilient Control Framework for Real-Time UAV Systems. , 2019, , .		27
31	ORTEGA: An Efficient and Flexible Online Fault Tolerance Architecture for Real-Time Control Systems. IEEE Transactions on Industrial Informatics, 2008, 4, 213-224.	7.2	26
32	Dependable Model-driven Development of CPS. ACM Transactions on Cyber-Physical Systems, 2019, 3, 1-31.	1.9	24
33	Dependable system upgrade. , 0, , .		22
34	A Formal Architecture Pattern for Real-Time Distributed Systems. , 2009, , .		22
35	System-wide energy optimization for multiple DVS components and real-time tasks. Real-Time Systems, 2011, 47, 489-515.	1.1	22
36	Real-Time I/O Management System with COTS Peripherals. IEEE Transactions on Computers, 2013, 62, 45-58.	2.4	21

#	ARTICLE	IF	CITATIONS
37	A Switch Design for Real-Time Industrial Networks. , 2008, , .		20
38	From Stateflow Simulation to Verified Implementation: A Verification Approach and A Real-Time Train Controller Design. , 2016, , .		20
39	Checking is Believing: Event-Aware Program Anomaly Detection in Cyber-Physical Systems. IEEE Transactions on Dependable and Secure Computing, 2021, 18, 825-842.	3.7	20
40	Trade-Off Analysis of Real-Time Control Performance and Schedulability*. Real-Time Systems, 2001, 21, 199-217.	1.1	18
41	ASIIST: Application Specific I/O Integration Support Tool for Real-Time Bus Architecture Designs. , 2009, , .		18
42	An Interleaving Structure for Guaranteed QoS in Real-Time Broadcasting Systems. IEEE Transactions on Computers, 2010, 59, 666-678.	2.4	18
43	On-chip control flow integrity check for real time embedded systems. , 2013, , .		18
44	Supporting Emergency Medical Care Teams with an Integrated Status Display Providing Real-Time Access to Medical Best Practices, Workflow Tracking, and Patient Data. Journal of Medical Systems, 2017, 41, 186.	2.2	18
45	Hard Real-Time Communication in Bus-Based Networks. , 0, , .		17
46	Switch Scheduling and Network Design for Real-Time Systems. , 0, , .		17
47	Schedulability Envelope for Real-Time Radar Dwell Scheduling. IEEE Transactions on Computers, 2006, 55, 1599-1613.	2.4	17
48	Queueing-Model-Based Adaptive Control of Multi-Tiered Web Applications. IEEE Transactions on Network and Service Management, 2008, 5, 157-167.	3.2	17
49	Safety-Assured Model-Driven Design of the Multifunction Vehicle Bus Controller. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 3320-3333.	4.7	17
50	Model-Based Analysis of Wireless System Architectures for Real-Time Applications. IEEE Transactions on Mobile Computing, 2013, 12, 219-232.	3.9	15
51	Design of a crossbar VOQ real-time switch with clock-driven scheduling for a guaranteed delay bound. Real-Time Systems, 2013, 49, 117-135.	1.1	15
52	A Bluetooth loop scatternet formation algorithm. , 0, , .		14
53	Scheduling real-time dwells using tasks with synthetic periods. , 0, , .		14
54	Radar dwell scheduling considering physical characteristics of phased array antenna. , 0, , .		13

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55	Online QoS Optimization Using Service Classes in Surveillance Radar Systems. Real-Time Systems, 2004, 28, 5-37.	1.1	13
56	Finite-Horizon Scheduling of Radar Dwells with Online Template Construction. , 0, , .		13
57	Pattern-Based Composition and Analysis of Virtually Synchronized Real-Time Distributed Systems. , 2012, , .		13
58	Optimal QoS sampling frequency assignment for real-time wireless sensor networks. , 0, , .		12
59	Building Robust Wireless LAN for Industrial Control with the DSSS-CDMA Cell Phone Network Paradigm. IEEE Transactions on Mobile Computing, 2007, 6, 706-719.	3.9	12
60	Sharp Thresholds for Scheduling Recurring Tasks with Distance Constraints. IEEE Transactions on Computers, 2008, 57, 344-358.	2.4	12
61	Medical-Grade Quality of Service for Real-Time Mobile Healthcare. Computer, 2015, 48, 41-49.	1.2	11
62	ORTEGA: An Efficient and Flexible Software Fault Tolerance Architecture for Real-Time Control Systems. , 2008, , .		10
63	Towards Resilient UAV: Escape Time in GPS Denied Environment with Sensor Drift. IFAC-PapersOnLine, 2019, 52, 423-428.	0.5	10
64	Finite-horizon scheduling of radar dwells with online template construction. Real-Time Systems, 2006, 33, 47-75.	1.1	9
65	Optimized Scheduling of Multi-IMA Partitions with Exclusive Region for Synchronized Real-Time Multi-Core Systems. , 2013, , .		9
66	System-Wide Energy Optimization for Multiple DVS Components and Real-Time Tasks. , 2010, , .		8
67	Toward Physiology-Aware DASH: Bandwidth-Compliant Prioritized Clinical Multimedia Communication in Ambulances. IEEE Transactions on Multimedia, 2017, 19, 2307-2321.	5.2	8
68	Timing Performance Control in Web Server Systems Utilizing Server Internal State Information. , 2005, , .		7
69	Feedback fault tolerance of real-time embedded systems. ACM SIGBED Review, 2006, 3, 23-28.	1.8	7
70	Building Reliable MD PnP Systems. , 2007, , .		7
71	Guaranteeing the End-to-End Latency of an IMA System with an Increasing Workload. IEEE Transactions on Computers, 2014, 63, 1460-1473.	2.4	7
72	A Self-Adaptively Evolutionary Screening Approach for Sepsis Patient. , 2016, , .		7

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73	Transforming Medical Best Practice Guidelines to Executable and Verifiable Statechart Models. , 2016, , .		7
74	Sepsis Patient Detection and Monitor Based on Auto-BN. Journal of Medical Systems, 2016, 40, 111.	2.2	7
75	Preventable Medical Errors Driven Modeling of Medical Best Practice Guidance Systems. Journal of Medical Systems, 2017, 41, 9.	2.2	7
76	A Mobile Geo-Communication Dataset for Physiology-Aware DASH in Rural Ambulance Transport. , 2017, , .		7
77	Prevention of failures due to assumptions made by software components in real-time systems. ACM SIGBED Review, 2005, 2, 36-39.	1.8	6
78	An Organ-Centric Best Practice Assist System for Acute Care. , 2016, , .		6
79	Pattern-Based Statechart Modeling Approach for Medical Best Practice Guidelines - A Case Study. , 2017, , .		6
80	Modeling and Integrating Human Interaction Assumptions in Medical Cyber-Physical System Design. , 2017, , .		6
81	RSimplex. ACM Transactions on Cyber-Physical Systems, 2018, 2, 1-26.	1.9	6
82	Rapid Early-Phase Virtual Integration. , 2009, , .		5
83	A Pathophysiological Model-Driven Communication for Dynamic Distributed Medical Best Practice Guidance Systems. Journal of Medical Systems, 2016, 40, 227.	2.2	5
84	A Cyber-Physical System Framework for Early Detection of Paroxysmal Diseases. IEEE Access, 2018, 6, 34834-34845.	2.6	5
85	A framework for supporting the development of verifiably safe medical best practice guideline systems. Journal of Systems Architecture, 2020, 104, 101693.	2.5	5
86	Time indexing in sensor networks. , 0, , .		4
87	Dependency Algebra: A Tool for Designing Robust Real-Time Systems. , 0, , .		4
88	How to reliably integrate medical devices over wireless. , 2012, , .		4
89	Design Verifiably Correct Model Patterns to Facilitate Modeling Medical Best Practice Guidelines With Statecharts. IEEE Internet of Things Journal, 2019, 6, 6276-6284.	5.5	4
90	<i>UACFinder</i>. ACM Transactions on Cyber-Physical Systems, 2020, 4, 1-25.	1.9	4

#	ARTICLE	IF	CITATIONS
91	Scheduling tasks with variable deadlines. , 0, , .		3
92	Upgrading real-time control software in the field. Proceedings of the IEEE, 2003, 91, 1131-1140.	16.4	3
93	Lightning: A Fast and Lightweight Acoustic Localization Protocol Using Low-End Wireless Micro-Sensors. , 0, , .		3
94	MAC layer support for group communication in wireless sensor networks. , 0, , .		3
95	Limiting Worst-Case End-to-End Latency When Traffic Increases in a Switched Avionics Network. , 2011, , .		3
96	Towards organ-centric compositional development of safe networked supervisory medical systems. , 2013, , .		3
97	SINK. , 2015, , .		3
98	Physiology-Aware Rural Ambulance Routing. , 2017, , .		3
99	Model and Integrate Medical Resource Available Times and Relationships in Verifiably Correct Executable Medical Best Practice Guideline Models. , 2018, , .		3
100	Decision-driven scheduling. Real-Time Systems, 2019, 55, 514-551.	1.1	3
101	Automated Veri.cation of the Dependability of Object-Oriented Real-Time Systems. , 0, , .		2
102	A case for resource heterogeneity in large sensor networks. , 0, , .		2
103	A Dependable Online Testing and Upgrade Architecture for Real-Time Embedded Systems. , 0, , .		2
104	Towards a cyber-medical model for device configuration safety in acute care. , 2014, , .		2
105	Using human intellectual tasks as guidelines to systematically model medical cyber-physical systems. , 2016, , .		2
106	Enhanced processor budget for QoS management in multimedia systems. , 0, , .		1
107	A Distributed, Energy-Aware, Utility-Based Approach for Data Transport in Wireless Sensor Networks. , 0, , .		1
108	Model-based design of a wireless telemetry system and QoS assessment using AADL. , 2012, , .		1

#	ARTICLE	IF	CITATIONS
109	Modeling and architecture design of an MDPnP acute care monitoring system. , 2013, , .		1
110	WiP abstract: A treatment coordination protocol for cyber-physical-human medical systems. , 2014, , .		1
111	An integrated Medical CPS for early detection of paroxysmal sympathetic hyperactivity. , 2016, , .		1
112	Towards Verifiable Safe and Correct Medical Best Practice Guideline Systems. , 2017, , .		1
113	Safety Constrained Multi-UAV Time Coordination: A Bi-level Control Framework in GPS Denied Environment. , 2021, , .		1
114	Local Group Communication-aware MAC Protocol in Wireless Sensor Networks. International Journal of Wireless Information Networks, 2006, 13, 275-287.	1.8	0
115	GD-Aggregate: A WAN Virtual Topology Building Tool for Hard Real-Time and Embedded Applications. , 2007, , .		0
116	Applying software model checking to PALS systems. , 2014, , .		0
117	A schedulability test for software migration on multicore system. , 2017, , .		0
118	Model and integrate medical resource availability into verifiably correct executable medical guidelines. , 2017, , .		0
119	IAFinder: Identifying Potential Implicit Assumptions to Facilitate Validation in Medical Cyber-Physical System. , 2018, , .		0
120	Safety Constrained Multi-UAV Time Coordination: A Bi-level Control Framework in GPS Denied Environment. , 2020, , .		0
121	Controller Redundancy Design for Cyber-Physical Systems. , 2015, , 61-86.		0