

Lui Sha

List of Publications by Year in descending order

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Version: 2024-02-01

121
papers

4,033
citations

393982

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197535

49
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124
all docs

124
docs citations

124
times ranked

2256
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | 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 |
| 2 | Safety Constrained Multi-UAV Time Coordination: A Bi-level Control Framework in GPS Denied Environment. , 2021, , . | | 1 |
| 3 | A framework for supporting the development of verifiably safe medical best practice guideline systems. Journal of Systems Architecture, 2020, 104, 101693. | 2.5 | 5 |
| 4 | Safety Constrained Multi-UAV Time Coordination: A Bi-level Control Framework in GPS Denied Environment. , 2020, , . | | 0 |
| 5 | <i>UACFinder</i>. ACM Transactions on Cyber-Physical Systems, 2020, 4, 1-25. | 1.9 | 4 |
| 6 | A Container-based DoS Attack-Resilient Control Framework for Real-Time UAV Systems. , 2019, , . | | 27 |
| 7 | 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 |
| 8 | Towards Resilient UAV: Escape Time in GPS Denied Environment with Sensor Drift. IFAC-PapersOnLine, 2019, 52, 423-428. | 0.5 | 10 |
| 9 | Dependable Model-driven Development of CPS. ACM Transactions on Cyber-Physical Systems, 2019, 3, 1-31. | 1.9 | 24 |
| 10 | Decision-driven scheduling. Real-Time Systems, 2019, 55, 514-551. | 1.1 | 3 |
| 11 | Safety-Assured Model-Driven Design of the Multifunction Vehicle Bus Controller. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 3320-3333. | 4.7 | 17 |
| 12 | IAFinder: Identifying Potential Implicit Assumptions to Facilitate Validation in Medical Cyber-Physical System. , 2018, , . | | 0 |
| 13 | Model and Integrate Medical Resource Available Times and Relationships in Verifiably Correct Executable Medical Best Practice Guideline Models. , 2018, , . | | 3 |
| 14 | A Cyber-Physical System Framework for Early Detection of Paroxysmal Diseases. IEEE Access, 2018, 6, 34834-34845. | 2.6 | 5 |
| 15 | RSimplex. ACM Transactions on Cyber-Physical Systems, 2018, 2, 1-26. | 1.9 | 6 |
| 16 | Data-Centered Runtime Verification of Wireless Medical Cyber-Physical System. IEEE Transactions on Industrial Informatics, 2017, 13, 1900-1909. | 7.2 | 85 |
| 17 | A schedulability test for software migration on multicore system. , 2017, , . | | 0 |
| 18 | Towards Verifiable Safe and Correct Medical Best Practice Guideline Systems. , 2017, , . | | 1 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Toward Physiology-Aware DASH: Bandwidth-Compliant Prioritized Clinical Multimedia Communication in Ambulances. IEEE Transactions on Multimedia, 2017, 19, 2307-2321. | 5.2 | 8 |
| 20 | Physiology-Aware Rural Ambulance Routing. , 2017, , . | | 3 |
| 21 | 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 |
| 22 | VirtualDrone. , 2017, , . | | 27 |
| 23 | Preventable Medical Errors Driven Modeling of Medical Best Practice Guidance Systems. Journal of Medical Systems, 2017, 41, 9. | 2.2 | 7 |
| 24 | A Mobile Geo-Communication Dataset for Physiology-Aware DASH in Rural Ambulance Transport. , 2017, , . | | 7 |
| 25 | Pattern-Based Statechart Modeling Approach for Medical Best Practice Guidelines - A Case Study. , 2017, , . | | 6 |
| 26 | Modeling and Integrating Human Interaction Assumptions in Medical Cyber-Physical System Design. , 2017, , . | | 6 |
| 27 | Model and integrate medical resource availability into verifiably correct executable medical guidelines. , 2017, , . | | 0 |
| 28 | A Self-Adaptively Evolutionary Screening Approach for Sepsis Patient. , 2016, , . | | 7 |
| 29 | An integrated Medical CPS for early detection of paroxysmal sympathetic hyperactivity. , 2016, , . | | 1 |
| 30 | Using human intellectual tasks as guidelines to systematically model medical cyber-physical systems. , 2016, , . | | 2 |
| 31 | An Organ-Centric Best Practice Assist System for Acute Care. , 2016, , . | | 6 |
| 32 | Real-Time Reachability for Verified Simplex Design. Transactions on Embedded Computing Systems, 2016, 15, 1-27. | 2.1 | 27 |
| 33 | From Stateflow Simulation to Verified Implementation: A Verification Approach and A Real-Time Train Controller Design. , 2016, , . | | 20 |
| 34 | A Pathophysiological Model-Driven Communication for Dynamic Distributed Medical Best Practice Guidance Systems. Journal of Medical Systems, 2016, 40, 227. | 2.2 | 5 |
| 35 | Transforming Medical Best Practice Guidelines to Executable and Verifiable Statechart Models. , 2016, , . | | 7 |
| 36 | TaskShuffler: A Schedule Randomization Protocol for Obfuscation against Timing Inference Attacks in Real-Time Systems. , 2016, , . | | 38 |

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| 37 | Sepsis Patient Detection and Monitor Based on Auto-BN. Journal of Medical Systems, 2016, 40, 111. | 2.2 | 7 |
| 38 | Memory Bandwidth Management for Efficient Performance Isolation in Multi-Core Platforms. IEEE Transactions on Computers, 2016, 65, 562-576. | 2.4 | 42 |
| 39 | SINK. , 2015, , . | | 3 |
| 40 | Medical-Grade Quality of Service for Real-Time Mobile Healthcare. Computer, 2015, 48, 41-49. | 1.2 | 11 |
| 41 | Controller Redundancy Design for Cyber-Physical Systems. , 2015, , 61-86. | | 0 |
| 42 | WiP abstract: A treatment coordination protocol for cyber-physical-human medical systems. , 2014, , . | | 1 |
| 43 | Real-Time Reachability for Verified Simplex Design. , 2014, , . | | 51 |
| 44 | Towards a cyber-medical model for device configuration safety in acute care. , 2014, , . | | 2 |
| 45 | 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 |
| 46 | Applying software model checking to PALS systems. , 2014, , . | | 0 |
| 47 | Model-Based Analysis of Wireless System Architectures for Real-Time Applications. IEEE Transactions on Mobile Computing, 2013, 12, 219-232. | 3.9 | 15 |
| 48 | On-chip control flow integrity check for real time embedded systems. , 2013, , . | | 18 |
| 49 | Optimized Scheduling of Multi-IMA Partitions with Exclusive Region for Synchronized Real-Time Multi-Core Systems. , 2013, , . | | 9 |
| 50 | Towards organ-centric compositional development of safe networked supervisory medical systems. , 2013, , . | | 3 |
| 51 | Real-Time I/O Management System with COTS Peripherals. IEEE Transactions on Computers, 2013, 62, 45-58. | 2.4 | 21 |
| 52 | 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 |
| 53 | NetSimplex: Controller Fault Tolerance Architecture in Networked Control Systems. IEEE Transactions on Industrial Informatics, 2013, 9, 346-356. | 7.2 | 35 |
| 54 | SecureCore: A multicore-based intrusion detection architecture for real-time embedded systems. , 2013, , . | | 38 |

| # | ARTICLE | IF | CITATIONS |
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| 55 | Modeling and architecture design of an MDPnP acute care monitoring system. , 2013, , . | | 1 |
| 56 | Model-based design of a wireless telemetry system and QoS assessment using AADL. , 2012, , . | | 1 |
| 57 | Pattern-Based Composition and Analysis of Virtually Synchronized Real-Time Distributed Systems. , 2012, , . | | 13 |
| 58 | How to reliably integrate medical devices over wireless. , 2012, , . | | 4 |
| 59 | Optimizing Tunable WCET with Shared Resource Allocation and Arbitration in Hard Real-Time Multicore Systems. , 2011, , . | | 30 |
| 60 | System-wide energy optimization for multiple DVS components and real-time tasks. Real-Time Systems, 2011, 47, 489-515. | 1.1 | 22 |
| 61 | Limiting Worst-Case End-to-End Latency When Traffic Increases in a Switched Avionics Network. , 2011, , . | | 3 |
| 62 | An Interleaving Structure for Guaranteed QoS in Real-Time Broadcasting Systems. IEEE Transactions on Computers, 2010, 59, 666-678. | 2.4 | 18 |
| 63 | System-Wide Energy Optimization for Multiple DVS Components and Real-Time Tasks. , 2010, , . | | 8 |
| 64 | ASIIST: Application Specific I/O Integration Support Tool for Real-Time Bus Architecture Designs. , 2009, , . | | 18 |
| 65 | A Formal Architecture Pattern for Real-Time Distributed Systems. , 2009, , . | | 22 |
| 66 | Cyber-Physical Systems: A New Frontier. , 2009, , 3-13. | | 104 |
| 67 | Implementing logical synchrony in integrated modular avionics. , 2009, , . | | 33 |
| 68 | The System-Level Simplex Architecture for Improved Real-Time Embedded System Safety. , 2009, , . | | 89 |
| 69 | Rapid Early-Phase Virtual Integration. , 2009, , . | | 5 |
| 70 | Queueing-Model-Based Adaptive Control of Multi-Tiered Web Applications. IEEE Transactions on Network and Service Management, 2008, 5, 157-167. | 3.2 | 17 |
| 71 | Sharp Thresholds for Scheduling Recurring Tasks with Distance Constraints. IEEE Transactions on Computers, 2008, 57, 344-358. | 2.4 | 12 |
| 72 | ORTEGA: An Efficient and Flexible Software Fault Tolerance Architecture for Real-Time Control Systems. , 2008, , . | | 10 |

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|----|---|------|-----------|
| 73 | 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 |
| 74 | Impact of Cache Partitioning on Multi-tasking Real Time Embedded Systems. , 2008, , . | | 75 |
| 75 | A Switch Design for Real-Time Industrial Networks. , 2008, , . | | 20 |
| 76 | GD-Aggregate: A WAN Virtual Topology Building Tool for Hard Real-Time and Embedded Applications. , 2007, , . | | 0 |
| 77 | 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 |
| 78 | Building Reliable MD PnP Systems. , 2007, , . | | 7 |
| 79 | Performance analysis of power management policies in wireless networks. IEEE Transactions on Wireless Communications, 2006, 5, 1351-1361. | 6.1 | 27 |
| 80 | Schedulability Envelope for Real-Time Radar Dwell Scheduling. IEEE Transactions on Computers, 2006, 55, 1599-1613. | 2.4 | 17 |
| 81 | Finite-horizon scheduling of radar dwells with online template construction. Real-Time Systems, 2006, 33, 47-75. | 1.1 | 9 |
| 82 | Local Group Communication-aware MAC Protocol in Wireless Sensor Networks. International Journal of Wireless Information Networks, 2006, 13, 275-287. | 1.8 | 0 |
| 83 | Feedback fault tolerance of real-time embedded systems. ACM SIGBED Review, 2006, 3, 23-28. | 1.8 | 7 |
| 84 | Adaptive Control of Multi-Tiered Web Applications Using Queueing Predictor. , 2006, , . | | 32 |
| 85 | Prevention of failures due to assumptions made by software components in real-time systems. ACM SIGBED Review, 2005, 2, 36-39. | 1.8 | 6 |
| 86 | Timing Performance Control in Web Server Systems Utilizing Server Internal State Information. , 2005, , . | | 7 |
| 87 | Online QoS Optimization Using Service Classes in Surveillance Radar Systems. Real-Time Systems, 2004, 28, 5-37. | 1.1 | 13 |
| 88 | Real Time Scheduling Theory: A Historical Perspective. Real-Time Systems, 2004, 28, 101-155. | 1.1 | 434 |
| 89 | Dynamic clustering for acoustic target tracking in wireless sensor networks. IEEE Transactions on Mobile Computing, 2004, 3, 258-271. | 3.9 | 375 |
| 90 | Real-time communication and coordination in embedded sensor networks. Proceedings of the IEEE, 2003, 91, 1002-1022. | 16.4 | 323 |

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| 91 | Acoustic Target Tracking Using Tiny Wireless Sensor Devices. Lecture Notes in Computer Science, 2003, , 642-657. | 1.0 | 78 |
| 92 | Upgrading real-time control software in the field. Proceedings of the IEEE, 2003, 91, 1131-1140. | 16.4 | 3 |
| 93 | Handling execution overruns in hard real-time control systems. IEEE Transactions on Computers, 2002, 51, 835-849. | 2.4 | 36 |
| 94 | Using simplicity to control complexity. IEEE Software, 2001, 18, 20-28. | 2.1 | 265 |
| 95 | Trade-Off Analysis of Real-Time Control Performance and Schedulability*. Real-Time Systems, 2001, 21, 199-217. | 1.1 | 18 |
| 96 | The deferrable server algorithm for enhanced aperiodic responsiveness in hard real-time environments. IEEE Transactions on Computers, 1995, 44, 73-91. | 2.4 | 298 |
| 97 | Generalized rate-monotonic scheduling theory: a framework for developing real-time systems. Proceedings of the IEEE, 1994, 82, 68-82. | 16.4 | 148 |
| 98 | 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 |
| 99 | Real-time scheduling theory and Ada. Computer, 1990, 23, 53-62. | 1.2 | 248 |
| 100 | A Bluetooth loop scatternet formation algorithm. , 0, , . | | 14 |
| 101 | Dependable system upgrade. , 0, , . | | 22 |
| 102 | Elastic feedback control. , 0, , . | | 45 |
| 103 | Scheduling tasks with variable deadlines. , 0, , . | | 3 |
| 104 | Template-based real-time dwell scheduling with energy constraint. , 0, , . | | 30 |
| 105 | Optimal QoS sampling frequency assignment for real-time wireless sensor networks. , 0, , . | | 12 |
| 106 | Feedback control with queueing-theoretic prediction for relative delay guarantees in web servers. , 0, , . | | 76 |
| 107 | Radar dwell scheduling considering physical characteristics of phased array antenna. , 0, , . | | 13 |
| 108 | Scheduling real-time dwells using tasks with synthetic periods. , 0, , . | | 14 |

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| 109 | Automated Verification of the Dependability of Object-Oriented Real-Time Systems. , 0, , . | | 2 |
| 110 | Enhanced processor budget for QoS management in multimedia systems. , 0, , . | | 1 |
| 111 | Dynamic clustering for acoustic target tracking in wireless sensor networks. , 0, , . | | 66 |
| 112 | Lightning: A Fast and Lightweight Acoustic Localization Protocol Using Low-End Wireless Micro-Sensors. , 0, , . | | 3 |
| 113 | Finite-Horizon Scheduling of Radar Dwells with Online Template Construction. , 0, , . | | 13 |
| 114 | Hard Real-Time Communication in Bus-Based Networks. , 0, , . | | 17 |
| 115 | Time indexing in sensor networks. , 0, , . | | 4 |
| 116 | A case for resource heterogeneity in large sensor networks. , 0, , . | | 2 |
| 117 | A Distributed, Energy-Aware, Utility-Based Approach for Data Transport in Wireless Sensor Networks. , 0, , . | | 1 |
| 118 | Dependency Algebra: A Tool for Designing Robust Real-Time Systems. , 0, , . | | 4 |
| 119 | A Dependable Online Testing and Upgrade Architecture for Real-Time Embedded Systems. , 0, , . | | 2 |
| 120 | MAC layer support for group communication in wireless sensor networks. , 0, , . | | 3 |
| 121 | Switch Scheduling and Network Design for Real-Time Systems. , 0, , . | | 17 |