

Insup Lee

List of Publications by Year in descending order

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Version: 2024-02-01

103
papers

2,606
citations

567281

15
h-index

414414

32
g-index

103
all docs

103
docs citations

103
times ranked

1792
citing authors

#	ARTICLE	IF	CITATIONS
1	Challenges and Research Directions in Medical Cyber-Physical Systems. Proceedings of the IEEE, 2012, 100, 75-90.	21.3	258
2	Java-MaC: A Run-Time Assurance Approach for Java Programs. Formal Methods in System Design, 2004, 24, 129-155.	0.8	169
3	Compositional Real-Time Scheduling Framework. , 0, , .		165
4	Robustness of attack-resilient state estimators. , 2014, , .		162
5	Periodic resource model for compositional real-time guarantees. , 0, , .		146
6	Hierarchical Scheduling Framework for Virtual Clustering of Multiprocessors. , 2008, , .		110
7	Compositional Analysis Framework Using EDP Resource Models. , 2007, , .		99
8	Verisim: formal analysis of network simulations. IEEE Transactions on Software Engineering, 2002, 28, 129-145.	5.6	68
9	Stacked LSTM based deep recurrent neural network with kalman smoothing for blood glucose prediction. BMC Medical Informatics and Decision Making, 2021, 21, 101.	3.0	62
10	PIPAC: Patient infusion pattern based access control scheme for wireless insulin pump system. , 2013, , .		60
11	Optimal virtual cluster-based multiprocessor scheduling. Real-Time Systems, 2009, 43, 25-59.	1.3	59
12	Intelligent and Dynamic Ransomware Spread Detection and Mitigation in Integrated Clinical Environments. Sensors, 2019, 19, 1114.	3.8	55
13	Realizing Compositional Scheduling through Virtualization. , 2012, , .		49
14	Attack-resilient state estimation in the presence of noise. , 2015, , .		48
15	From Verification to Implementation: A Model Translation Tool and a Pacemaker Case Study. , 2012, , .		44
16	Attack resilient state estimation for autonomous robotic systems. , 2014, , .		42
17	Continuous Glucose Monitoring for Hypoglycemia Avoidance and Glucose Counterregulation in Long-Standing Type 1 Diabetes. Journal of Clinical Endocrinology and Metabolism, 2018, 103, 105-114.	3.6	42
18	A Compositional Scheduling Framework for Digital Avionics Systems. , 2009, , .		41

#	ARTICLE	IF	CITATIONS
19	Fair real-time traffic scheduling over a wireless LAN. , 0, , .		39
20	MC-Fluid: Fluid Model-Based Mixed-Criticality Scheduling on Multiprocessors. , 2014, , .		39
21	Patient Infusion Pattern based Access Control Schemes for Wireless Insulin Pump System. IEEE Transactions on Parallel and Distributed Systems, 2015, 26, 3108-3121.	5.6	38
22	MAuth-CAN: Masquerade-Attack-Proof Authentication for In-Vehicle Networks. IEEE Transactions on Vehicular Technology, 2020, 69, 2204-2218.	6.3	38
23	Physiology-Invariant Meal Detection for Type 1 Diabetes. Diabetes Technology and Therapeutics, 2016, 18, 616-624.	4.4	37
24	Cyber-Physical System Checkpointing and Recovery. , 2018, , .		37
25	Compositional Analysis of Multi-mode Systems. , 2010, , .		36
26	A Process Algebraic Approach to the Schedulability Analysis of Real-Time Systems. Real-Time Systems, 1998, 15, 189-219.	1.3	34
27	Formal specifications and analysis of the computer-assisted resuscitation algorithm (CARA) Infusion Pump Control System. International Journal on Software Tools for Technology Transfer, 2004, 5, 308-319.	1.9	29
28	A trust model for vehicular network-based incident reports. , 2013, , .		29
29	A Safety-Assured Development Approach for Real-Time Software. , 2010, , .		26
30	A Verifiable Language for Programming Real-Time Communication Schedules. IEEE Transactions on Computers, 2007, 56, 1505-1519.	3.4	25
31	Adding Time to Synchronous Process Communications. IEEE Transactions on Computers, 1987, C-36, 941-948.	3.4	23
32	The MIDDLEware Assurance Substrate: Enabling Strong Real-Time Guarantees in Open Systems with OpenFlow. , 2014, , .		22
33	Introduction to the special section on runtime verification. International Journal on Software Tools for Technology Transfer, 2012, 14, 243-247.	1.9	21
34	Overhead-aware compositional analysis of real-time systems. , 2013, , .		20
35	Cloud-Based Secure Logger for Medical Devices. , 2016, , .		20
36	The specification and schedulability analysis of real-time systems using ACSR. , 0, , .		19

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37	Compositional Schedulability Analysis of Hierarchical Real-Time Systems. , 2007, , .		19
38	Timed and Resource-Oriented Statecharts for Embedded Software. IEEE Transactions on Industrial Informatics, 2010, 6, 568-578.	11.3	18
39	Timing Analysis of Mixed Time/Event-Triggered Multi-Mode Systems. , 2009, , .		17
40	Specification and analysis of real-time systems with PARAGON. Annals of Software Engineering, 1999, 7, 211-234.	0.5	16
41	Compositional Feasibility Analysis of Conditional Real-Time Task Models. , 2008, , .		16
42	Assuring the safety of on-demand medical cyber-physical systems. , 2013, , .		14
43	Data flow testing as model checking. , 2003, , .		13
44	Extending Task-level to Job-level Fixed Priority Assignment and Schedulability Analysis Using Pseudo-deadlines. , 2012, , .		13
45	A graphical language with formal semantics for the specification and analysis of real-time systems. , 0, , .		12
46	Distributed spatial control, global monitoring and steering of mobile agents. , 0, , .		12
47	Improving schedulability of fixed-priority real-time systems using shapers. , 2013, , .		12
48	Representation of Confidence in Assurance Cases Using the Beta Distribution. , 2016, , .		12
49	LogSafe: Secure and Scalable Data Logger for IoT Devices. , 2018, , .		11
50	A Semantic Framework for Mode Change Protocols. , 2011, , .		10
51	Automatic verification of linear controller software. , 2015, , .		10
52	Context-Aware Detection in Medical Cyber-Physical Systems. , 2018, , .		10
53	Generating Reliable Code from Hybrid-Systems Models. IEEE Transactions on Computers, 2010, 59, 1281-1294.	3.4	9
54	Removing Abstraction Overhead in the Composition of Hierarchical Real-Time Systems. , 2011, , .		9

#	ARTICLE	IF	CITATIONS
55	Reducing pulse oximetry false alarms without missing life-threatening events. Smart Health, 2018, 9-10, 287-296.	3.2	9
56	Towards Context-Aware Cyber-Physical Systems. , 2018, , .		9
57	Assured Runtime Monitoring and Planning: Toward Verification of Neural Networks for Safe Autonomous Operations. IEEE Robotics and Automation Magazine, 2020, 27, 102-116.	2.0	9
58	Composition Techniques for Tree Communication Schedules. Real-Time Systems (ECRTS), Proceedings of the Euromicro Workshop on, 2007, , .	0.0	8
59	AS-CRED: Reputation and Alert Service for Interdomain Routing. IEEE Systems Journal, 2013, 7, 396-409.	4.6	8
60	Characterizing Glycemic Control and Sleep in Adults with Long-Standing Type 1 Diabetes and Hypoglycemia Unawareness Initiating Hybrid Closed Loop Insulin Delivery. Journal of Diabetes Research, 2021, 2021, 1-8.	2.3	8
61	An efficient state space generation for analysis of real-time systems. Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM, 1996, 21, 4-13.	0.7	7
62	Strong and Weak Policy Relations. , 2009, , .		7
63	A stochastic approach for attack resilient UAV motion planning. , 2016, , .		6
64	Prediction of Critical Pulmonary Shunts in Infants. IEEE Transactions on Control Systems Technology, 2016, 24, 1936-1952.	5.2	6
65	MC-Fluid: Multi-Core Fluid-Based Mixed-Criticality Scheduling. IEEE Transactions on Computers, 2018, 67, 469-483.	3.4	6
66	Improving the Safety of Patient-Controlled Analgesia Infusions with Safety Interlocks and Closed-Loop Control. , 2007, , .		5
67	Data Freshness Over-Engineering: Formulation and Results. , 2018, , .		5
68	Implementing A Real-time Process Algebra In HOL. , 0, , .		4
69	Distributed simulation of multi-agent hybrid systems. , 0, , .		4
70	Research challenges in embedded and hybrid systems. ACM SIGBED Review, 2004, 1, 1-5.	1.8	4
71	Human-interpretable diagnostic information for robotic planning systems. , 2016, , .		4
72	Continuous Estimation Using Context-Dependent Discrete Measurements. IEEE Transactions on Automatic Control, 2019, 64, 238-253.	5.7	4

#	ARTICLE	IF	CITATIONS
73	VitalCore: Analytics and Support Dashboard for Medical Device Integration. , 2021, 2021, 82-86.		4
74	Distributed Web-based simulation optimization. , 0, , .		3
75	Evaluation and Enhancement of an Intraoperative Insulin Infusion Protocol via In-Silico Simulation. , 2013, , .		3
76	Towards Assurance Cases for Resilient Control Systems. , 2014, , .		3
77	Advanced Split-TCP with End-to-End Protocol Semantics over Wireless Networks. , 2016, , .		3
78	Estimation of Blood Oxygen Content Using Context-Aware Filtering. , 2016, , .		3
79	Clinician-in-the-Loop Annotation of ICU Bedside Alarm Data. , 2016, , .		3
80	A Graphical Language for Specifying and Analyzing Real-Time Systems. Integrated Computer-Aided Engineering, 1998, 5, 279-302.	4.6	2
81	Modular code generation from hybrid automata based on data dependency. , 0, , .		2
82	Unit & dynamic typing in hybrid systems modeling with CHARON. , 2006, , .		2
83	Distributed aspects of the artificial pancreas. , 2013, , .		2
84	Hierarchical multi-formalism proofs of cyber-physical systems. , 2015, , .		2
85	A Data-Driven Behavior Modeling and Analysis Framework for Diabetic Patients on Insulin Pumps. , 2015, , .		2
86	Formal synthesis of application and platform behaviors of embedded software systems. Software and Systems Modeling, 2015, 14, 839-859.	2.7	2
87	Trapfetch: A breakpoint-based prefetcher for both launch and run-time. , 2017, , .		2
88	Towards Overhead-Free Interface Theory for Compositional Hierarchical Real-Time Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2018, 37, 2869-2880.	2.7	2
89	Model Checking Resiliency and Sustainability of In-Vehicle Network for Real-Time Authenticity. Applied Sciences (Switzerland), 2021, 11, 1068.	2.5	2
90	End-to-end Application Performance Impact on Scheduler in CDMA-1XRTT Wireless System. , 0, , .		1

#	ARTICLE	IF	CITATIONS
91	Challenges and opportunities in deeply embedded systems security. ACM SIGBED Review, 2008, 5, 1-2.	1.8	1
92	Invited talk: Challenges in Medical Cyber-Physical Systems. , 2012, , .		1
93	Device Time, Data Logging, and Virtual Medical Devices. Journal of Medical Devices, Transactions of the ASME, 2012, 6, .	0.7	1
94	Functional Alarms for Systems of Interoperable Medical Devices. , 2014, 2014, 247-248.		1
95	Model Checking of Real-Time Properties of Resource-Bound Process Algebra. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, 2009, E92-A, 2781-2789.	0.3	1
96	A Real-Time Kernel for Distributed Multi-Robot Systems. , 1988, , .		1
97	Process algebraic approach to the parametric analysis of object scheduling in real-time systems. , 0, , .		0
98	Steering of real-time systems based on monitoring and checking. , 0, , .		0
99	Editorial: Special issue on real-time wireless sensor networks. Real-Time Systems, 2007, 37, 181-182.	1.3	0
100	Wandering Data: A Scalable, Durable System for Effective Visualization of Patient Health Data. , 2014, , .		0
101	Toward a Hybrid Sensor Fusion Using Probabilistic and Abstract Sensor Models. , 2016, , .		0
102	Maintaining Consistency Over A Network in Real-Time Applications. , 1989, , .		0
103	0585 Use of a Hybrid Closed Loop Insulin Delivery System Improves Sleep and Glycemic Control in Adults with Long-Standing Type 1 Diabetes and Hypoglycemia Unawareness. Sleep, 2022, 45, A257-A258.	1.1	0