

# Chenyang Lu

## List of Publications by Year in descending order

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132  
papers

7,585  
citations

201674

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h-index

133252

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134  
all docs

134  
docs citations

134  
times ranked

4417  
citing authors

#	ARTICLE	IF	CITATIONS
1	Virtualization-Aware Traffic Control for Soft Real-Time Network Traffic on Xen. IEEE/ACM Transactions on Networking, 2022, 30, 257-270.	3.8	4
2	Continuous real-time prediction of surgical case duration using a modular artificial neural network. British Journal of Anaesthesia, 2022, 128, 829-837.	3.4	20
3	Optimal Dynamic Transmission Scheduling for Wireless Networked Control Systems. IEEE Transactions on Control Systems Technology, 2022, 30, 2360-2376.	5.2	6
4	Predicting physician burnout using clinical activity logs: Model performance and lessons learned. Journal of Biomedical Informatics, 2022, 127, 104015.	4.3	11
5	Cross-trial prediction of depression remission using problem-solving therapy: A machine learning approach. Journal of Affective Disorders, 2022, , .	4.1	3
6	A Survey on Network Security for Cyber-Physical Systems: From Threats to Resilient Design. IEEE Communications Surveys and Tutorials, 2022, 24, 1534-1573.	39.4	23
7	Predicting Post-Operative Complications with Wearables. , 2022, 6, 1-27.		3
8	Multi-Task Learning for Randomized Controlled Trials. , 2022, 6, 1-23.		7
9	Use of Machine Learning to Develop and Evaluate Models Using Preoperative and Intraoperative Data to Identify Risks of Postoperative Complications. JAMA Network Open, 2021, 4, e212240.	5.9	106
10	Predicting Outcomes in Patients Undergoing Pancreatectomy Using Wearable Technology and Machine Learning: Prospective Cohort Study. Journal of Medical Internet Research, 2021, 23, e23595.	4.3	26
11	RespWatch. , 2021, , .		13
12	Comparing stress prediction models using smartwatch physiological signals and participant self-reports. Computer Methods and Programs in Biomedicine, 2021, 208, 106207.	4.7	12
13	Analysis and elimination of noise-induced temperature error in processor thermal control. Real-Time Systems, 2020, 56, 1-27.	1.3	1
14	Exploring Edge Computing for Multitier Industrial Control. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 3506-3518.	2.7	22
15	Adaptive Data Replication in Real-Time Reliable Edge Computing for Internet of Things. , 2020, , .		10
16	Feasibility Study of Monitoring Deterioration of Outpatients Using Multimodal Data Collected by Wearables. ACM Transactions on Computing for Healthcare, 2020, 1, 1-22.	5.0	7
17	Synthesizing Fault-Tolerant Schedule for Time-Triggered Network Without Hot Backup. IEEE Transactions on Industrial Electronics, 2019, 66, 1345-1355.	7.9	3
18	Real-Time Middleware for Cyber-Physical Event Processing. ACM Transactions on Cyber-Physical Systems, 2019, 3, 1-25.	2.5	2

#	ARTICLE	IF	CITATIONS
19	Predicting Latency Distributions of Aperiodic Time-Critical Services. , 2019, , .		0
20	CapNet. ACM Transactions on Sensor Networks, 2019, 15, 1-34.	3.6	4
21	Wireless Network Design for Control Systems: A Survey. IEEE Communications Surveys and Tutorials, 2018, 20, 978-1013.	39.4	303
22	Fast Real-Time Scheduling for Ethernet-Based Train Control Networks. , 2018, , .		1
23	A smart actuation architecture for wireless networked control systems. , 2018, , .		4
24	A Flexible Retransmission Policy for Industrial Wireless Sensor Actuator Networks. , 2018, , .		19
25	Efficient Holistic Control over Industrial Wireless Sensor-Actuator Networks. , 2018, , .		14
26	Wireless whispering-gallery-mode sensor for thermal sensing and aerial mapping. Light: Science and Applications, 2018, 7, 62.	16.6	58
27	Using wearable technology to predict health outcomes: a literature review. Journal of the American Medical Informatics Association: JAMIA, 2018, 25, 1221-1227.	4.4	60
28	Conservative Channel Reuse in Real-Time Industrial Wireless Sensor-Actuator Networks. , 2018, , .		10
29	Low-Power Wide-Area Network Over White Spaces. IEEE/ACM Transactions on Networking, 2018, 26, 1893-1906.	3.8	28
30	Guest editorial: special issue on embedded and real-time computing systems and applications. Real-Time Systems, 2017, 53, 855-856.	1.3	0
31	Real-time middleware for cyber-physical event processing. , 2017, , .		1
32	Mixed-criticality federated scheduling for parallel real-time tasks. Real-Time Systems, 2017, 53, 760-811.	1.3	36
33	Handling scheduling uncertainties through traffic shaping in Time-Triggered train networks. , 2017, , .		0
34	Maximizing Network Lifetime of WirelessHART Networks under Graph Routing. , 2016, , .		33
35	Benchmark problem in active structural control with wireless sensor network. Structural Control and Health Monitoring, 2016, 23, 20-34.	4.0	22
36	Wireless Routing and Control: A Cyber-Physical Case Study. , 2016, , .		28

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37	Real-Time Wireless Sensor-Actuator Networks for Industrial Cyber-Physical Systems. Proceedings of the IEEE, 2016, 104, 1013-1024.	21.3	293
38	Global EDF scheduling for parallel real-time tasks. Real-Time Systems, 2015, 51, 395-439.	1.3	42
39	Incorporating emergency alarms in reliable wireless process control. , 2015, , .		44
40	End-to-End Communication Delay Analysis in Industrial Wireless Networks. IEEE Transactions on Computers, 2015, 64, 1361-1374.	3.4	113
41	Implementation and Experimentation of Industrial Wireless Sensor-Actuator Network Protocols. Lecture Notes in Computer Science, 2015, , 234-241.	1.3	12
42	Mortality Prediction in ICUs Using A Novel Time-Slicing Cox Regression Method. AMIA ... Annual Symposium proceedings, 2015, 2015, 1289-95.	0.2	5
43	Near optimal rate selection for wireless control systems. Transactions on Embedded Computing Systems, 2014, 13, 1-25.	2.9	41
44	Cyber-Physical Codesign of Distributed Structural Health Monitoring with Wireless Sensor Networks. IEEE Transactions on Parallel and Distributed Systems, 2014, 25, 63-72.	5.6	154
45	Parallel Real-Time Scheduling of DAGs. IEEE Transactions on Parallel and Distributed Systems, 2014, 25, 3242-3252.	5.6	138
46	Analysis of EDF scheduling for Wireless Sensor-Actuator Networks. , 2014, , .		35
47	Distributed Channel Allocation Protocols for Wireless Sensor Networks. IEEE Transactions on Parallel and Distributed Systems, 2014, 25, 2264-2274.	5.6	57
48	Real-Time Query Scheduling for Wireless Sensor Networks. IEEE Transactions on Computers, 2013, 62, 1850-1865.	3.4	26
49	Multi-core real-time scheduling for generalized parallel task models. Real-Time Systems, 2013, 49, 404-435.	1.3	121
50	Optimal and efficient adaptation in distributed real-time systems with discrete rates. Real-Time Systems, 2013, 49, 339-366.	1.3	0
51	A real-time scheduling service for parallel tasks. , 2013, , .		47
52	Outstanding Paper Award: Analysis of Global EDF for Parallel Tasks. , 2013, , .		64
53	Localized and configurable topology control in lossy wireless sensor networks. Ad Hoc Networks, 2013, 11, 1345-1358.	5.5	14
54	Self-Adapting MAC Layer for Wireless Sensor Networks. , 2013, , .		23

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55	Prioritizing local inter-domain communication in Xen. , 2013, , .		6
56	Real-World Empirical Studies on Multi-Channel Reliability and Spectrum Usage for Home-Area Sensor Networks. IEEE Transactions on Network and Service Management, 2013, 10, 56-69.	4.9	23
57	Adaptive service provisioning for enhanced energy efficiency and flexibility in wireless sensor networks. Science of Computer Programming, 2013, 78, 195-217.	1.9	10
58	An integrated data mining approach to real-time clinical monitoring and deterioration warning. , 2012, , .		45
59	Toward MAC Protocol Service over the air. , 2012, , .		0
60	MCFlow: A Real-Time Multi-core Aware Middleware for Dependent Task Graphs. , 2012, , .		7
61	Practical control of transmission power for Wireless Sensor Networks. , 2012, , .		21
62	Submodular game for distributed application allocation in shared sensor networks. , 2012, , .		7
63	Implementation and Evaluation of Mixed-Criticality Scheduling Approaches for Periodic Tasks. , 2012, , .		20
64	Near Optimal Rate Selection for Wireless Control Systems. , 2012, , .		23
65	A holistic approach to decentralized structural damage localization using wireless sensor networks. Computer Communications, 2012, 36, 29-41.	5.1	38
66	Sensor Placement Algorithms for Fusion-Based Surveillance Networks. IEEE Transactions on Parallel and Distributed Systems, 2011, 22, 1407-1414.	5.6	33
67	Multi-channel reliability and spectrum usage in real homes: Empirical studies for home-area sensor networks. , 2011, , .		6
68	Multi-core Real-Time Scheduling for Generalized Parallel Task Models. , 2011, , .		109
69	Dynamic Conflict-Free Transmission Scheduling for Sensor Network Queries. IEEE Transactions on Mobile Computing, 2011, 10, 734-748.	5.8	30
70	Priority Assignment for Real-Time Flows in WirelessHART Networks. , 2011, , .		24
71	Medical Data Mining for Early Deterioration Warning in General Hospital Wards. , 2011, , .		25
72	End-to-End Delay Analysis for Fixed Priority Scheduling in WirelessHART Networks. , 2011, , .		59

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73	ARCH: Practical Channel Hopping for Reliable Home-Area Sensor Networks. , 2011, , .		30
74	Wireless Sensor Networks for Healthcare. Proceedings of the IEEE, 2010, 98, 1947-1960.	21.3	516
75	Robust control-theoretic thermal balancing for server clusters. , 2010, , .		11
76	Configurable Middleware for Distributed Real-Time Systems with Aperiodic and Periodic Tasks. IEEE Transactions on Parallel and Distributed Systems, 2010, 21, 393-404.	5.6	10
77	Real-Time Scheduling for WirelessHART Networks. , 2010, , .		184
78	Efficient Coverage Maintenance Based on Probabilistic Distributed Detection. IEEE Transactions on Mobile Computing, 2010, 9, 1346-1360.	5.8	20
79	Multi-Application Deployment in Shared Sensor Networks Based on Quality of Monitoring. , 2010, , .		55
80	Structural damage localization with tolerance to large time synchronization errors in WSNs. , 2009, , .		0
81	Towards unified radio power management for wireless sensor networks. Wireless Communications and Mobile Computing, 2009, 9, 313-323.	1.2	13
82	Real-Time Performance and Middleware for Multiprocessor and Multicore Linux Platforms. , 2009, , .		12
83	Towards Controllable Distributed Real-Time Systems with Feasible Utilization Control. IEEE Transactions on Computers, 2009, 58, 1095-1110.	3.4	6
84	An Integrated Planning and Adaptive Resource Management Architecture for Distributed Real-Time Embedded Systems. IEEE Transactions on Computers, 2009, 58, 1485-1499.	3.4	13
85	Enhanced Coordination in Sensor Networks through Flexible Service Provisioning. Lecture Notes in Computer Science, 2009, , 66-85.	1.3	25
86	Hierarchical control of multiple resources in distributed real-time and embedded systems. Real-Time Systems, 2008, 39, 237-282.	1.3	13
87	A Holistic Approach to Decentralized Structural Damage Localization Using Wireless Sensor Networks. , 2008, , .		46
88	Control-Based Adaptive Middleware for Real-Time Image Transmission over Bandwidth-Constrained Networks. IEEE Transactions on Parallel and Distributed Systems, 2008, 19, 779-793.	5.6	14
89	Fast Sensor Placement Algorithms for Fusion-Based Target Detection. , 2008, , .		39
90	Towards predictable wireless cyber-physical applications. ACM SIGBED Review, 2008, 5, 1-2.	1.8	0

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91	Robust topology control for indoor wireless sensor networks. , 2008, , .		65
92	Introduction to Control Theory And Its Application to Computing Systems. , 2008, , 185-215.		61
93	Real-Time Query Scheduling for Wireless Sensor Networks. , 2007, , .		55
94	Optimal Discrete Rate Adaptation for Distributed Real-Time Systems. , 2007, , .		31
95	Localized and Configurable Topology Control in Lossy Wireless Sensor Networks. , 2007, , .		6
96	Design and Performance Evaluation of Configurable Component Middleware for End-to-End Adaptation of Distributed Real-Time Embedded Systems. , 2007, , .		9
97	Middleware Support for Aperiodic Tasks in Distributed Real-Time Systems. , 2007, , .		10
98	DEUCON: Decentralized End-to-End Utilization Control for Distributed Real-Time Systems. IEEE Transactions on Parallel and Distributed Systems, 2007, 18, 996-1009.	5.6	66
99	On Controllability and Feasibility of Utilization Control in Distributed Real-Time Systems. Real-Time Systems (ECRTS), Proceedings of the Euromicro Workshop on, 2007, , .	0.0	8
100	Link Layer Support for Unified Radio Power Management in Wireless Sensor Networks. , 2007, , .		5
101	FC-ORB: A robust distributed real-time embedded middleware with end-to-end utilization control. Journal of Systems and Software, 2007, 80, 938-950.	4.5	27
102	Editorial: Special issue on real-time wireless sensor networks. Real-Time Systems, 2007, 37, 181-182.	1.3	0
103	Hierarchical control of multiple resources in distributed real-time and embedded systems. , 2006, , .		17
104	Dynamic Conflict-free Query Scheduling for Wireless Sensor Networks. , 2006, , .		33
105	Distributed Utilization Control for Real-Time Clusters with Load Balancing. , 2006, , .		28
106	Feedback Control Architecture and Design Methodology for Service Delay Guarantees in Web Servers. IEEE Transactions on Parallel and Distributed Systems, 2006, 17, 1014-1027.	5.6	139
107	Feedback utilization control in distributed real-time systems with end-to-end tasks. IEEE Transactions on Parallel and Distributed Systems, 2005, 16, 550-561.	5.6	111
108	Design and Analysis of Spatiotemporal Multicast Protocols for Wireless Sensor Networks. Telecommunication Systems, 2004, 26, 129-160.	2.5	16

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109	A utilization bound for aperiodic tasks and priority driven scheduling. IEEE Transactions on Computers, 2004, 53, 334-350.	3.4	89
110	Real-time communication and coordination in embedded sensor networks. Proceedings of the IEEE, 2003, 91, 1002-1022.	21.3	323
111	Integrated coverage and connectivity configuration in wireless sensor networks. , 2003, , .		903
112	Feedback performance control in software services. IEEE Control Systems, 2003, 23, 74-90.	0.8	162
113	Mobicast: Just-in-Time Multicast for Sensor Networks under Spatiotemporal Constraints. Lecture Notes in Computer Science, 2003, , 442-457.	1.3	38
114	Feedback Control Real-Time Scheduling: Framework, Modeling, and Algorithms*. Real-Time Systems, 2002, 23, 85-126.	1.3	413
115	The case for feedback control real-time scheduling. , 0, , .		138
116	Performance specifications and metrics for adaptive real-time systems. , 0, , .		56
117	Feedback control scheduling in distributed real-time systems. , 0, , .		56
118	Schedulability analysis and utilization bounds for highly scalable real-time services. , 0, , .		44
119	A feedback control approach for guaranteeing relative delays in Web servers. , 0, , .		109
120	ControlWare: a middleware architecture for feedback control of software performance. , 0, , .		62
121	RAP: a real-time communication architecture for large-scale wireless sensor networks. , 0, , .		192
122	An adaptive control framework for QoS guarantees and its application to differentiated caching. , 0, , .		44
123	SPEED: a stateless protocol for real-time communication in sensor networks. , 0, , .		411
124	Feedback control real-time scheduling in orb middleware. , 0, , .		21
125	Feedback control with queueing-theoretic prediction for relative delay guarantees in web servers. , 0, , .		76
126	VESR:an aspect-based composition tool for real-time systems. , 0, , .		54



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127	Reliable multicast via face-aware routing. , 0, , .		21
128	Middleware specialization for memory-constrained networked embedded systems. , 0, , .		19
129	Damage Detection and Correlation-Based Localization Using Wireless Mote Sensors. , 0, , .		11
130	A Spatiotemporal Query Service for Mobile Users in Sensor Networks. , 0, , .		25
131	Decentralized Utilization Control in Distributed Real-Time Systems. , 0, , .		6
132	Enhancing the Robustness of Distributed Real-Time Middleware via End-to-End Utilization Control. , 0, , .		2