

Lothar Thiele

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/545493/publications.pdf>

Version: 2024-02-01

158
papers

10,616
citations

331259

21
h-index

168136

53
g-index

159
all docs

159
docs citations

159
times ranked

7866
citing authors

#	ARTICLE	IF	CITATIONS
1	Resource-Aware Stochastic Self-Triggered Model Predictive Control. , 2022, 6, 1262-1267.		2
2	Non-Intrusive Distributed Tracing of Wireless IoT Devices with the FlockLab ² Testbed. ACM Transactions on Internet of Things, 2022, 3, 1-31.	3.4	0
3	Robust Resource-Aware Self-Triggered Model Predictive Control. , 2022, 6, 1724-1729.		2
4	iSpray. , 2022, 6, 1-29.		1
5	Dataflow Driven Partitioning of Machine Learning Applications for Optimal Energy Use in Batteryless Systems. Transactions on Embedded Computing Systems, 2022, 21, 1-29.	2.1	2
6	Robustness of predictive energy harvesting systems: Analysis and adaptive prediction scaling. IET Computers and Digital Techniques, 2022, 16, 106-124.	0.9	5
7	SensorFormer: Efficient Many-to-Many Sensor Calibration With Learnable Input Subsampling. IEEE Internet of Things Journal, 2022, 9, 20577-20589.	5.5	3
8	Accurate Onboard Predictions for Indoor Energy Harvesting using Random Forests. , 2022, , .		6
9	Wireless Control for Smart Manufacturing: Recent Approaches and Open Challenges. Proceedings of the IEEE, 2021, 109, 441-467.	16.4	33
10	Schedulability of probabilistic mixed-criticality systems. Real-Time Systems, 2021, 57, 397-442.	1.1	0
11	Optimal Power Management for Energy Harvesting Systems with A Backup Power Source. , 2021, , .		10
12	Environment and Application Testbed for Low-Power Energy Harvesting System Design. IEEE Transactions on Industrial Electronics, 2021, 68, 11146-11156.	5.2	7
13	Joint Energy Management for Distributed Energy Harvesting Systems. , 2021, , .		4
14	Automatic Energy-Hotspot Detection and Elimination in Real-Time Deeply Embedded Systems. , 2021, , .		0
15	Thermoelectric Energy Harvesting From Gradients in the Earth Surface. IEEE Transactions on Industrial Electronics, 2020, 67, 9460-9470.	5.2	37
16	Real-Time and IoT “Why and How?“. , 2020, , .		0
17	Adaptive Loss-Aware Quantization for Multi-Bit Networks. , 2020, , .		19
18	Performance maximization of energy-variable self-powered (m, k)-firm real-time systems. Real-Time Systems, 2020, 56, 64-111.	1.1	4

#	ARTICLE	IF	CITATIONS
19	Increased reproducibility and comparability of data leak evaluations using ExOT. , 2020, , .		0
20	Maestro: Autonomous QoS Management for Mobile Applications Under Thermal Constraints. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2019, 38, 1557-1570.	1.9	13
21	Systematic identification of external influences in multi-year microseismic recordings using convolutional neural networks. Earth Surface Dynamics, 2019, 7, 171-190.	1.0	9
22	Feedback control goes wireless. , 2019, , .		34
23	ICT. , 2019, 3, 1-19.		22
24	Enhancing Multi-hop Sensor Calibration with Uncertainty Estimates. , 2019, , .		4
25	FFOB: efficient online mode-switch procrastination in mixed-criticality systems. Real-Time Systems, 2019, 55, 471-513.	1.1	17
26	Extending the Lifetime of Nano-Blimps via Dynamic Motor Control. Journal of Signal Processing Systems, 2019, 91, 339-361.	1.4	11
27	A decade of detailed observations (2008â€“2018) in steep bedrock permafrost at the Matterhorn HÃ¶rnliigrat (Zermatt, CH). Earth System Science Data, 2019, 11, 1203-1237.	3.7	28
28	Dataset. , 2019, , .		17
29	The 2017 Embedded Systems Week (ESWEEK). IEEE Design and Test, 2018, 35, 95-96.	1.1	0
30	Time-Critical Systems Design: A Survey. IEEE Design and Test, 2018, 35, 8-26.	1.1	19
31	Guest Editorsâ€™ Introduction: Special Issue on Time-Critical Systems Design. IEEE Design and Test, 2018, 35, 5-7.	1.1	0
32	W-Air. , 2018, 2, 1-25.		54
33	A Case for Atmospheric Transmittance: Solar Energy Prediction in Wireless Sensor Nodes. , 2018, , .		2
34	DOL-BIP-Critical: a tool chain for rigorous design and implementation of mixed-criticality multi-core systems. Design Automation for Embedded Systems, 2018, 22, 141-181.	0.7	2
35	Two-level bulk microfabrication of a mechanical broadband vibration amplitude-amplifier with ten coupled resonators. Journal of Micromechanics and Microengineering, 2018, 28, 045009.	1.5	0
36	A Survey on Sensor Calibration in Air Pollution Monitoring Deployments. IEEE Internet of Things Journal, 2018, 5, 4857-4870.	5.5	195

#	ARTICLE	IF	CITATIONS
37	Frequency Scaling As a Security Threat on Multicore Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2018, 37, 2497-2508.	1.9	7
38	The security risks of power measurements in multicores. , 2018, , .		3
39	Measurement and validation of energy harvesting IoT devices. , 2017, , .		29
40	Isolation scheduling on multicores: model and scheduling approaches. Real-Time Systems, 2017, 53, 614-667.	1.1	3
41	Implementation of Partitioned Mixed-Criticality Scheduling on a Multi-Core Platform. Transactions on Embedded Computing Systems, 2017, 16, 1-21.	2.1	6
42	Internet of Thingsâ€”The Quest for Trust. IEEE Design and Test, 2017, 34, 102-108.	1.1	3
43	SCAN. , 2017, 1, 1-21.		34
44	On The Design and Application of Thermal Isolation Servers. Transactions on Embedded Computing Systems, 2017, 16, 1-19.	2.1	3
45	Mitigating Erroneous Wake-ups. , 2017, , .		0
46	End-to-End Real-Time Guarantees in Wireless Cyber-Physical Systems. , 2016, , .		14
47	Mobile Ultrasound Imaging on Heterogeneous Multi-Core Platforms. , 2016, , .		5
48	RocketLogger. , 2016, , .		12
49	Towards the design of fault-tolerant mixed-criticality systems on multicores. , 2016, , .		16
50	Poster Abstract: A Heterogeneous System Architecture for Event-Triggered Wireless Sensing. , 2016, , .		0
51	Exploring Energy Saving for Mixed-Criticality Systems on Multi-Cores. , 2016, , .		40
52	Mixed-criticality scheduling on cluster-based manycores with shared communication and storage resources. Real-Time Systems, 2016, 52, 399-449.	1.1	39
53	Dynamic many-process applications on many-tile embedded systems and HPC clusters: The EURETILE programming environment and execution platforms. Journal of Systems Architecture, 2016, 69, 29-53.	2.5	10
54	Dynamic Energy Burst Scaling for Transiently Powered Systems. , 2016, , .		31

#	ARTICLE	IF	CITATIONS
55	An Isolation Scheduling Model for Multicores. , 2015, , .		12
56	A Calibration Based Thermal Modeling Technique for Complex Multicore Systems. , 2015, , .		3
57	A testbed for fine-grained tracing of time sensitive behavior in wireless sensor networks. , 2015, , .		12
58	Bolt. , 2015, , .		23
59	Deriving high-resolution urban air pollution maps using mobile sensor nodes. Pervasive and Mobile Computing, 2015, 16, 268-285.	2.1	204
60	Mixed-criticality runtime mechanisms and evaluation on multicores. , 2015, , .		14
61	Reducing multi-hop calibration errors in large-scale mobile sensor networks. , 2015, , .		62
62	Optimal Power Management with Guaranteed Minimum Energy Utilization for Solar Energy Harvesting Systems. , 2015, , .		16
63	Passive, Privacy-Preserving Real-Time Counting of Unmodified Smartphones via ZigBee Interference. , 2015, , .		11
64	Run and Be Safe: Mixed-Criticality Scheduling with Temporary Processor Speedup. , 2015, , .		13
65	On the scheduling of fault-tolerant mixed-criticality systems. , 2014, , .		4
66	AdaPNet. , 2014, , .		11
67	COOLIP: Simple yet effective job allocation for distributed thermally-throttled processors. , 2014, , .		0
68	Optimizing the NoC Slack Through Voltage and Frequency Scaling in Hard Real-Time Embedded Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2014, 33, 1632-1643.	1.9	13
69	Dynamic power management for long-term energy neutral operation of solar energy harvesting systems. , 2014, , .		61
70	Route selection for mobile sensor nodes on public transport networks. Journal of Ambient Intelligence and Humanized Computing, 2014, 5, 307-321.	3.3	16
71	Mapping mixed-criticality applications on multi-core architectures. , 2014, , .		6
72	Computing a language-based guarantee for timing properties of cyber-physical systems. , 2014, , .		0

#	ARTICLE	IF	CITATIONS
73	Pushing the spatio-temporal resolution limit of urban air pollution maps. , 2014, , .		63
74	Service adaptations for mixed-criticality systems. , 2014, , .		37
75	Computing a language-based guarantee for timing properties of cyber-physical systems. , 2014, , .		0
76	Deterministic memory sharing in Kahn process networks: Ultrasound imaging as a case study. , 2014, , .		2
77	Mapping mixed-criticality applications on multi-core architectures. , 2014, , .		3
78	COOLIP: Simple yet effective job allocation for distributed thermally-throttled processors. , 2014, , .		0
79	Component-based system design: analytic real-time interfaces for state-based component implementations. International Journal on Software Tools for Technology Transfer, 2013, 15, 155-170.	1.7	14
80	The Problem Bit. , 2013, , .		3
81	Efficient Worst-Case Temperature Evaluation for Thermal-Aware Assignment of Real-Time Applications on MPSoCs. Journal of Electronic Testing: Theory and Applications (JETTA), 2013, 29, 521-535.	0.9	8
82	A Satisfiability Approach to Speed Assignment for Distributed Real-Time Systems. , 2013, , .		4
83	Scheduling of mixed-criticality applications on resource-sharing multicore systems. , 2013, , .		58
84	Exploiting the parallelism of heterogeneous systems using dataflow graphs on top of OpenCL. , 2013, , .		25
85	On Modeling Low-Power Wireless Protocols Based on Synchronous Packet Transmissions. , 2013, , .		19
86	Model-Driven Accuracy Bounds for Noisy Sensor Readings. , 2013, , .		12
87	Interference Constraint Graph — A new specification for mixed-criticality systems. , 2013, , .		18
88	Behavioural composition constructively built server algorithms. ACM SIGBED Review, 2013, 10, 43-48.	1.8	1
89	The bus goes wireless: Routing-free data collection with QoS guarantees in sensor networks. , 2012, , .		2
90	Visualizing large sensor network data sets in space and time with vizzly. , 2012, , .		6

#	ARTICLE	IF	CITATIONS
91	Worst-Case Temperature Guarantees for Real-Time Applications on Multi-core Systems. , 2012, , .		29
92	Multi-objective mapping optimization via problem decomposition for many-core systems. , 2012, , .		23
93	An Algorithm for Online Reconfiguration of Resource Reservations for Hard Real-Time Systems. , 2012, , .		6
94	Quantifying the Effect of Rare Timing Events with Settling-Time and Overshoot. , 2012, , .		11
95	Route selection for mobile sensors with checkpointing constraints. , 2012, , .		6
96	Timing Analysis on a Processor with Temperature-Controlled Speed Scaling. , 2012, , .		7
97	Fast worst-case peak temperature evaluation for real-time applications on multi-core systems. , 2012, , .		3
98	MAMOT: Memory-Aware Mapping Optimization Tool for MPSoC. , 2012, , .		0
99	Thermally optimal stop-go scheduling of task graphs with real-time constraints. , 2011, , .		22
100	End-to-End Delay Minimization in Thermally Constrained Distributed Systems. , 2011, , .		4
101	Energy-Efficient Scheduling Algorithms for Periodic Power Management for Real-Time Event Streams. , 2011, , .		3
102	Applying real-time interface and calculus for dynamic power management in hard real-time systems. Real-Time Systems, 2011, 47, 163-193.	1.1	38
103	Approximating Pareto optimal compiler optimization sequencesâ€”a tradeâ€”off between WCET, ACET and code size. Software - Practice and Experience, 2011, 41, 1437-1458.	2.5	15
104	Platform synthesis and partitioning of real-time tasks for energy efficiency. Journal of Systems Architecture, 2011, 57, 573-583.	2.5	7
105	Thermal-aware global real-time scheduling and analysis on multicore systems. Journal of Systems Architecture, 2011, 57, 547-560.	2.5	12
106	Composing heterogeneous components for system-wide performance analysis. , 2011, , .		16
107	X-SENSE: Sensing in extreme environments. , 2011, , .		40
108	Real-Time Analysis of Servers for General Job Arrivals. , 2011, , .		4

#	ARTICLE	IF	CITATIONS
109	Mutation operator characterization: Exhaustiveness, locality, and bias. , 2011, , .		3
110	Guest Editorial Special Section on Power-Aware Computing. IEEE Transactions on Industrial Informatics, 2010, 6, 253-254.	7.2	6
111	Analytic real-time analysis and timed automata: a hybrid methodology for the performance analysis of embedded real-time systems. Design Automation for Embedded Systems, 2010, 14, 193-227.	0.7	34
112	Worst case delay analysis for memory interference in multicore systems. , 2010, , .		100
113	Multi-objective Exploration of Compiler Optimizations for Real-Time Systems. , 2010, , .		17
114	Dynamic Power-Aware Mapping of Applications onto Heterogeneous MPSoC Platforms. IEEE Transactions on Industrial Informatics, 2010, 6, 692-707.	7.2	88
115	Analysis, Comparison, and Optimization of Routing Protocols for Energy Harvesting Wireless Sensor Networks. , 2010, , .		60
116	Adaptive power management for real-time event streams. , 2010, , .		6
117	Energy-efficient real-time task scheduling with temperature-dependent leakage. , 2010, , .		0
118	Secondis: An Adaptive Dissemination Protocol for Synchronizing Wireless Sensor Networks. , 2010, , .		4
119	Generation and calibration of compositional performance analysis models for multi-processor systems. , 2009, , .		10
120	Adaptive Dynamic Power Management for Hard Real-Time Systems. , 2009, , .		32
121	Energy reduction techniques for systems with non-DVS components. , 2009, , .		3
122	NoSE: Efficient Maintenance and Initialization of Wireless Sensor Networks. , 2009, , .		4
123	Periodic power management schemes for real-time event streams. , 2009, , .		18
124	Efficient execution of Kahn process networks on multi-processor systems using protothreads and windowed FIFOs. , 2009, , .		24
125	Influence of different abstractions on the performance analysis of distributed hard real-time systems. Design Automation for Embedded Systems, 2009, 13, 27-49.	0.7	35
126	A Preference-Based Evolutionary Algorithm for Multi-Objective Optimization. Evolutionary Computation, 2009, 17, 411-436.	2.3	385

#	ARTICLE	IF	CITATIONS
127	Multiprocessor SoC software design flows. IEEE Signal Processing Magazine, 2009, 26, 64-71.	4.6	21
128	Thermal-Aware Global Real-Time Scheduling on Multicore Systems. , 2009, , .		71
129	An approximation scheme for energy-efficient scheduling of real-time tasks in heterogeneous multiprocessor systems. , 2009, , .		10
130	Design of a Solar-Harvesting Circuit for Batteryless Embedded Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2009, 56, 2519-2528.	3.5	226
131	Reliable mode changes in real-time systems with fixed priority or EDF scheduling. , 2009, , .		31
132	Proactive Speed Scheduling for Real-Time Tasks under Thermal Constraints. , 2009, , .		59
133	Feasibility Analysis of On-Line DVS Algorithms for Scheduling Arbitrary Event Streams. , 2009, , .		18
134	Coping with unreliable channels: Efficient link estimation for low-power wireless sensor networks. , 2008, , .		22
135	EvAnT: Analysis and Checking of Event Traces for Wireless Sensor Networks. , 2008, , .		6
136	Designing a High-Reliability Low-Power Status Monitoring Protocol. , 2007, , .		2
137	Composing Functional and State-Based Performance Models for Analyzing Heterogeneous Real-Time Systems. , 2007, , .		19
138	Automated Wireless Sensor Network Testing. , 2007, , .		12
139	S-XTC: A Signal-Strength Based Topology Control Algorithm for Sensor Networks. , 2007, , .		16
140	Windowed FIFOs for FPGA-based Multiprocessor Systems. , 2007, , .		9
141	Workload correlations in multi-processor hard real-time systems. Journal of Computer and System Sciences, 2007, 73, 207-224.	0.9	5
142	Special Issue on ASAP 2004 Conference. Journal of Signal Processing Systems, 2007, 49, 1-2.	1.0	0
143	Optimal temporal partitioning based on slowdown and retiming. , 2006, , .		1
144	Interface-Based Rate Analysis of Embedded Systems. , 2006, , .		21

#	ARTICLE	IF	CITATIONS
145	System architecture evaluation using modular performance analysis: a case study. <i>International Journal on Software Tools for Technology Transfer</i> , 2006, 8, 649-667.	1.7	154
146	An efficient, adaptive parameter variation scheme for metaheuristics based on the epsilon-constraint method. <i>European Journal of Operational Research</i> , 2006, 169, 932-942.	3.5	303
147	Design for Timing Predictability. <i>Real-Time Systems</i> , 2004, 28, 157-177.	1.1	113
148	Running time analysis of evolutionary algorithms on a simplified multiobjective knapsack problem. <i>Natural Computing</i> , 2004, 3, 37-51.	1.8	33
149	Sparse graphical Gaussian modeling of the isoprenoid gene network in <i>Arabidopsis thaliana</i> . <i>Genome Biology</i> , 2004, 5, R92.	13.9	290
150	Combining Convergence and Diversity in Evolutionary Multiobjective Optimization. <i>Evolutionary Computation</i> , 2002, 10, 263-282.	2.3	1,298
151	Generating an action notation environment from Montages descriptions. <i>International Journal on Software Tools for Technology Transfer</i> , 2001, 3, 431-455.	1.7	4
152	Comparison of Multiobjective Evolutionary Algorithms: Empirical Results. <i>Evolutionary Computation</i> , 2000, 8, 173-195.	2.3	4,646
153	Dynamic Min-Max Problems. <i>Discrete Event Dynamic Systems: Theory and Applications</i> , 1999, 9, 111-134.	0.6	7
154	System-Level Synthesis Using Evolutionary Algorithms. <i>Design Automation for Embedded Systems</i> , 1998, 3, 23-58.	0.7	157
155	A Comparison of Selection Schemes Used in Evolutionary Algorithms. <i>Evolutionary Computation</i> , 1996, 4, 361-394.	2.3	389
156	Algorithm-architecture co-design by example: a coprocessor for on-line arithmetic. <i>Microprocessing and Microprogramming</i> , 1995, 41, 339-357.	0.3	1
157	Linear systolic arrays for matrix computations. <i>Journal of Parallel and Distributed Computing</i> , 1989, 7, 28-39.	2.7	14
158	A systolic array for cyclic-by-rows Jacobi algorithms. <i>Journal of Parallel and Distributed Computing</i> , 1987, 4, 334-340.	2.7	10