

# Hiroaki Takada

## List of Publications by Year in descending order

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Version: 2024-02-01

87  
papers

920  
citations

759233

12  
h-index

610901

24  
g-index

87  
all docs

87  
docs citations

87  
times ranked

626  
citing authors

#	ARTICLE	IF	CITATIONS
1	Proposal and Quantitative Analysis of the CHStone Benchmark Program Suite for Practical C-based High-level Synthesis. Journal of Information Processing, 2009, 17, 242-254.	0.4	223
2	CHStone: A benchmark program suite for practical C-based high-level synthesis. , 2008, , .		95
3	Implementation and Evaluation of Local Dynamic Map in Safety Driving Systems. Journal of Transportation Technologies, 2015, 05, 102-112.	0.5	56
4	Security/Timing-Aware Design Space Exploration of CAN FD for Automotive Cyber-Physical Systems. IEEE Transactions on Industrial Informatics, 2019, 15, 1094-1104.	11.3	35
5	WCRT Analysis of CAN Messages in Gateway-Integrated In-Vehicle Networks. IEEE Transactions on Vehicular Technology, 2017, 66, 9623-9637.	6.3	32
6	Energy-aware task migration for multiprocessor real-time systems. Future Generation Computer Systems, 2016, 56, 220-228.	7.5	31
7	A New Specification of Software Components for Embedded Systems. , 2007, , .		26
8	Practical Energy-Aware Scheduling for Real-Time Multiprocessor Systems. , 2009, , .		24
9	Partitioning and allocation of scratch-pad memory for priority-based preemptive multi-task systems. , 2010, , .		24
10	Energy-Efficient Intra-task DVFS Scheduling Using Linear Programming Formulation. IEEE Access, 2019, , 1-1.	4.2	22
11	A Novel Mechanism for Effective Hardware Task Preemption in Dynamically Reconfigurable Systems. , 2010, , .		18
12	Comparison of Preemption Schemes for Partially Reconfigurable FPGAs. IEEE Embedded Systems Letters, 2012, 4, 45-48.	1.9	17
13	Wheeled Inverted Pendulum with Embedded Component System: A Case Study. , 2010, , .		15
14	Optimizing Extensibility of CAN FD for Automotive Cyber-Physical Systems. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 7875-7886.	8.0	15
15	Exact WCRT Analysis for Message-Processing Tasks on Gateway-Integrated In-Vehicle CAN Clusters. Transactions on Embedded Computing Systems, 2018, 17, 1-29.	2.9	14
16	DynamicMap <sup>2</sup> .0: A Traffic Data Management Platform Leveraging Clouds, Edges and Embedded Systems. International Journal of Intelligent Transportation Systems Research, 2020, 18, 77-89.	1.1	14
17	RTOS and Codesign Toolkit for Multiprocessor Systems-on-Chip. , 2007, , .		13
18	WCRT Analysis and Evaluation for Sporadic Message-Processing Tasks in Multicore Automotive Gateways. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2019, 38, 281-294.	2.7	13

#	ARTICLE	IF	CITATIONS
19	Balancing Bandwidth Utilization and Interrupts: Two Heuristic Algorithms for the Optimized Design of Automotive CPS. IEEE Transactions on Industrial Informatics, 2020, 16, 2382-2392.	11.3	12
20	Advanced SystemBuilder: A tool set for multiprocessor design space exploration. , 2010, , .		10
21	NEXCESS. ACM SIGBED Review, 2005, 2, 20-24.	1.8	9
22	Checkpoint Extraction Using Execution Traces for Intra-task DVFS in Embedded Systems. , 2011, , .		9
23	Worst Case Response Time Analysis for Messages in Controller Area Network with Gateway. IEICE Transactions on Information and Systems, 2013, E96-D, 1467-1477.	0.7	9
24	Collision Risk Assessment Service for Connected Vehicles: Leveraging Vehicular State and Motion Uncertainties. IEEE Internet of Things Journal, 2021, 8, 11548-11560.	8.7	9
25	Static Task Scheduling Algorithms Based on Greedy Heuristics for Battery-Powered DVS Systems. IEICE Transactions on Information and Systems, 2010, E93-D, 2737-2746.	0.7	8
26	Optimization of Component Connections for an Embedded Component System. , 2009, , .		7
27	Towards practical high-level synthesis from large behavioral descriptions. , 2010, , .		7
28	An Open-Source Flexible Scheduling Simulator for Real-Time Applications. , 2012, , .		7
29	A Generalized Framework for Energy Savings in Hard Real-Time Embedded Systems. IPSJ Transactions on System LSI Design Methodology, 2009, 2, 167-179.	0.8	6
30	Partitioning and Allocation of Scratch-Pad Memory in Priority-Based Multi-Task Systems. IPSJ Transactions on System LSI Design Methodology, 2009, 2, 180-188.	0.8	6
31	Execution-variance-aware task allocation for energy minimization on the big.LITTLE architecture. Sustainable Computing: Informatics and Systems, 2019, 22, 155-166.	2.2	6
32	Partitioning of Behavioral Descriptions with Exploiting Function-Level Parallelism. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, 2010, E93-A, 488-499.	0.3	6
33	Generic Memory Protection Mechanism for Embedded System and Its Application to Embedded Component Systems. , 2008, , .		5
34	A Generalized Framework for System-Wide Energy Savings in Hard Real-Time Embedded Systems. , 2008, , .		5
35	Effective Scheduling Algorithms for I/O Blocking with a Multi-Frame Task Model. IEICE Transactions on Information and Systems, 2009, E92-D, 1412-1420.	0.7	5
36	Fast design space exploration for mixed hardware-software embedded systems. , 2011, , .		5

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37	AEDSMS: Automotive Embedded Data Stream Management System. , 2015, , .		5
38	A Comparative Analysis of RTOS and Linux Scalability on an Embedded Many-core Processor. Journal of Information Processing, 2018, 26, 225-236.	0.4	5
39	Efficient Approach to Ensure Temporal Determinism in Automotive Control Systems. , 2018, , .		5
40	Energy-Aware Task Allocation for Heterogeneous Multiprocessor Systems by Using Integer Linear Programming. Journal of Information Processing, 2019, 27, 136-148.	0.4	5
41	A Fast Network-on-Chip Simulator with QEMU and SystemC. , 2012, , .		4
42	Extensibility-Aware Message Scheduling Algorithm for the Static Segment of the FlexRay. , 2012, , .		4
43	A Multi-purpose Group Signature for Vehicular Network Security. , 2014, , .		4
44	Gateway Modeling and Response Time Analysis on CAN Clusters of Automobiles. , 2015, , .		4
45	Real-time operating systems for multicore embedded systems. , 2008, , .		3
46	Improved Policies for Drowsy Caches in Embedded Processors. , 2008, , .		3
47	A case study on MPEG4 decoder design with SystemBuilder. , 2009, , .		3
48	Allocation of scratch-pad memory in priority-based multi-task systems. , 2009, , .		3
49	Rainbow: An OS Extension for Hardware Multitasking on Dynamically Partially Reconfigurable FPGAs. , 2011, , .		3
50	Android Platform Based on Vehicle Embedded Data Stream Processing. , 2013, , .		3
51	Implementation and Evaluation of Load Balancing Mechanism With Multiple Edge Server Cooperation for Dynamic Map System. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 7270-7280.	8.0	3
52	Partitioning and Allocation of Scratch-Pad Memory for Energy Minimization of Priority-Based Preemptive Multi-Task Systems. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, 2011, E94-A, 1954-1964.	0.3	3
53	Remedial Education of Embedded Software Specialists for Working People. IEJ Transactions on Fundamentals and Materials, 2006, 126, 563-569.	0.2	3
54	An Integrated Framework for Energy Optimization of Embedded Real-Time Applications. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, 2014, E97.A, 2477-2487.	0.3	3

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55	Practice and analysis of an extension course for training trainers of embedded software. ACM SIGBED Review, 2007, 4, 73-81.	1.8	2
56	Energy efficiency of scratch-pad memory in deep submicron domains: an empirical study. IEICE Electronics Express, 2008, 5, 1010-1016.	0.8	2
57	Hierarchical scheduling for integrating real-time applications with interrupt routines. , 2009, , .		2
58	Heuristics for Static Voltage Scheduling Algorithms on Battery-Powered DVS Systems. , 2009, , .		2
59	Efficient Design Space Exploration at System Level with Automatic Profiler Instrumentation. IPSJ Transactions on System LSI Design Methodology, 2010, 3, 179-193.	0.8	2
60	Aggressive Register Unsharing Based on SSA Transformation for Clock Enhancement in High-Level Synthesis. , 2010, , .		2
61	Integrated Scheduling for a Reliable Dual-OS Monitor. IPSJ Online Transactions, 2012, 5, 47-58.	0.1	2
62	A Fast Performance Estimation Framework for System-Level Design Space Exploration. IPSJ Transactions on System LSI Design Methodology, 2012, 5, 44-54.	0.8	2
63	Task Migration for Energy Saving in Real-Time Multiprocessor Systems. , 2014, , .		2
64	Automatic synthesis of inter-heterogeneous-processor communication implementation for programmable system-on-chip. , 2015, , .		2
65	Energy-Aware Task Allocation for Large Task Sets on Heterogeneous Multiprocessor Systems. , 2018, , .		2
66	Efficient Access Method for Multi-access Edge Servers in Dynamic Map Systems. International Journal of Intelligent Transportation Systems Research, 2022, 20, 252-265.	1.1	2
67	iSotEE: A Hypervisor Middleware for IoT-Enabled Resource-Constrained Reliable Systems. IEEE Access, 2022, 10, 8566-8576.	4.2	2
68	A Visual Modeling Environment for Embedded Component Systems. , 2007, , .		1
69	SSEST: Summer school on embedded system technologies. , 2007, , .		1
70	Dynamic Power Management for Embedded System Idle State in the Presence of Periodic Interrupt Services. IPSJ Transactions on System LSI Design Methodology, 2008, 1, 48-57.	0.8	1
71	Modeling power consumption of applications in wireless communication devices using OS level profiles. , 2009, , .		1
72	Automatic instrumentation of profilers for FPGA-based design space exploration. , 2009, , .		1

#	ARTICLE	IF	CITATIONS
73	Automatic communication synthesis with hardware sharing for design space exploration. , 2010, , .		1
74	Hardware multitasking in dynamically partially reconfigurable FPGA-based embedded systems. , 2011, , .		1
75	Efficient Algorithms for Extracting Pareto-optimal Hardware Configurations in DEPS Framework. IPSJ Transactions on System LSI Design Methodology, 2012, 5, 133-142.	0.8	1
76	An Integrated Framework for Topology Design of CAN Networks under Real-Time Constraints. , 2015, , .		1
77	Further Analysis with Linear Programming on Blocking Time Bounds for Partitioned Fixed Priority Multiprocessor Scheduling. Journal of Information Processing, 2018, 26, 540-548.	0.4	1
78	Energy Efficiency of Scratch-Pad Memory at 65 nm and Below: An Empirical Study. , 2008, , .		0
79	A generalized framework for energy savings in real-time multiprocessor systems. , 2008, , .		0
80	Behavioral partitioning with exploiting function-level parallelism. , 2008, , .		0
81	Embedded System Covalidation with RTOS Model and FPGA. IPSJ Transactions on System LSI Design Methodology, 2008, 1, 126-130.	0.8	0
82	Analyzing and optimizing energy efficiency of algorithms on DVS systems A first step towards algorithmic energy minimization. , 2009, , .		0
83	A Novel Framework for Effective Preemptive Hardware Multitasking on FPGAs. IEICE Transactions on Information and Systems, 2012, E95-D, 345-353.	0.7	0
84	Schedulability Analysis for Messages in Gateway-Interconnected Controller Area Network. , 2012, , .		0
85	HAZOP-based security analysis for embedded systems: Case study of open. , 2015, , .		0
86	Further analysis on blocking time bounds for partitioned fixed priority multiprocessor scheduling. , 2016, , .		0
87	Automatic Communication Synthesis with Hardware Sharing for Multi-Processor SoC Design. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, 2010, E93-A, 2509-2516.	0.3	0