

Zdenek Hanzalek

List of Publications by Year in descending order

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118
papers

1,206
citations

471061

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h-index

500791

28
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121
all docs

121
docs citations

121
times ranked

1030
citing authors

#	ARTICLE	IF	CITATIONS
1	Energy Efficient Scheduling for Cluster-Tree Wireless Sensor Networks With Time-Bounded Data Flows: Application to IEEE 802.15.4/ZigBee. IEEE Transactions on Industrial Informatics, 2010, 6, 438-450.	7.2	100
2	Profinet IO IRT Message Scheduling With Temporal Constraints. IEEE Transactions on Industrial Informatics, 2010, 6, 369-380.	7.2	73
3	A Simulation Model for the IEEE 802.15.4 protocol: Delay/Throughput Evaluation of the GTS Mechanism. , 2007, , .		56
4	Formal verification of multitasking applications based on timed automata model. Real-Time Systems, 2008, 38, 39-65.	1.1	53
5	Low-Cost Reconfigurable Control System for Small UAVs. IEEE Transactions on Industrial Electronics, 2011, 58, 880-889.	5.2	41
6	Energy Optimization of Robotic Cells. IEEE Transactions on Industrial Informatics, 2017, 13, 92-102.	7.2	41
7	Production scheduling with alternative process plans. European Journal of Operational Research, 2012, 217, 300-311.	3.5	36
8	Enhancing Schedulability and Throughput of Time-Triggered Traffic in IEEE 802.1Qbv Time-Sensitive Networks. IEEE Transactions on Communications, 2020, 68, 7023-7038.	4.9	34
9	Modular software architecture for flexible reservation mechanisms on heterogeneous resources. Journal of Systems Architecture, 2011, 57, 366-382.	2.5	33
10	Profinet IO IRT Message Scheduling. , 2009, , .		31
11	Case study on distributed and fault tolerant system modeling based on timed automata. Journal of Systems and Software, 2009, 82, 1678-1694.	3.3	27
12	Algorithms for robust production scheduling with energy consumption limits. Computers and Industrial Engineering, 2017, 112, 391-408.	3.4	27
13	Accelerating the Branch-and-Price Algorithm Using Machine Learning. European Journal of Operational Research, 2018, 271, 1055-1069.	3.5	27
14	Solving the Resource Constrained Project Scheduling Problem using the parallel Tabu Search designed for the CUDA platform. Journal of Parallel and Distributed Computing, 2015, 77, 58-68.	2.7	26
15	Optimizing energy consumption of robotic cells by a Branch & Bound algorithm. Computers and Operations Research, 2019, 102, 52-66.	2.4	25
16	An Energy Efficient Schedule for IEEE 802.15.4/ZigBee Cluster Tree WSN with Multiple Collision Domains and Period Crossing Constraint. IEEE Transactions on Industrial Informatics, 2018, 14, 12-23.	7.2	20
17	A parallel algorithm for gradient training of feedforward neural networks. Parallel Computing, 1998, 24, 823-839.	1.3	19
18	Using Two Independent Channels With Gateway for FlexRay Static Segment Scheduling. IEEE Transactions on Industrial Informatics, 2016, 12, 1887-1895.	7.2	19

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19	Incorporating order acceptance, pricing and equity considerations in the scheduling of cloud manufacturing systems: matheuristic methods. International Journal of Production Research, 2021, 59, 2009-2027.	4.9	18
20	Large-scale periodic scheduling in time-sensitive networks. Computers and Operations Research, 2022, 137, 105512.	2.4	18
21	TORSCHÉ Scheduling toolbox for Matlab. , 2006, , .		17
22	Solving production scheduling with earliness/tardiness penalties by constraint programming. Journal of Intelligent Manufacturing, 2011, 22, 553-562.	4.4	17
23	Measurement automation and result processing in timing analysis of a Linux-based CAN-to-CAN gateway. , 2011, , .		15
24	Constraint programming approaches to joint routing and scheduling in time-sensitive networks. Computers and Industrial Engineering, 2021, 157, 107317.	3.4	15
25	Control System for Unmanned Aerial Vehicles. Industrial Informatics, 2009 INDIN 2009 7th IEEE International Conference on, 2007, , .	0.0	14
26	An efficient configuration methodology for time-division multiplexed single resources. , 2015, , .		14
27	Time-Triggered Co-Scheduling of Computation and Communication with Jitter Requirements. IEEE Transactions on Computers, 2018, 67, 115-129.	2.4	14
28	A hybrid learning-based meta-heuristic algorithm for scheduling of an additive manufacturing system consisting of parallel SLM machines. International Journal of Production Research, 2022, 60, 6205-6225.	4.9	14
29	Time symmetry of resource constrained project scheduling with general temporal constraints and take-give resources. Annals of Operations Research, 2017, 248, 209-237.	2.6	13
30	Towards predictable execution model on ARM-based heterogeneous platforms. , 2017, , .		13
31	A cyclic scheduling problem with an undetermined number of parallel identical processors. Computational Optimization and Applications, 2011, 48, 71-90.	0.9	12
32	Match-up scheduling of mixed-criticality jobs: Maximizing the probability of jobs execution. European Journal of Operational Research, 2017, 262, 46-59.	3.5	12
33	A novel approach for nurse rostering based on a parallel algorithm. European Journal of Operational Research, 2016, 251, 624-639.	3.5	11
34	Tool Supporting the Co-design of Control Systems and Their Real-time Implementation: Current Status and Future Directions. , 2006, , .		11
35	Tool supporting the co-design of control systems and their real-time implementation: Current status and future directions. , 2006, , .		10
36	In-Network Distributed Algorithm for Energy Optimal Routing Based on Dual Decomposition of Linear Programming. IEEE Transactions on Communications, 2012, 60, 1634-1645.	4.9	10

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37	A comparison of Linux CAN drivers and their applications. , 2010, , .		9
38	Aircraft Control System Validation via Hardware-in-the-Loop Simulation. Journal of Aircraft, 2011, 48, 1466-1468.	1.7	9
39	Efficient Algorithm for Jitter Minimization in Time-Triggered Periodic Mixed-Criticality Message Scheduling Problem. , 2016, , .		9
40	An analysis of the non-preemptive mixed-criticality match-up scheduling problem. Journal of Scheduling, 2016, 19, 601-607.	1.3	9
41	Scalable and efficient configuration of time-division multiplexed resources. Journal of Systems and Software, 2016, 113, 44-58.	3.3	9
42	On parallel dedicated machines scheduling under energy consumption limit. Computers and Industrial Engineering, 2021, 159, 107209.	3.4	9
43	Light Controlled Intersection Model Based on the Continuous Petri Net. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 519-525.	0.4	8
44	The impact of core precedences in a cyclic RCPSP with precedence delays. Journal of Scheduling, 2015, 18, 275-284.	1.3	8
45	Survey on Periodic Scheduling for Time-triggered Hard Real-time Systems. ACM Computing Surveys, 2022, 54, 1-32.	16.1	8
46	Analysis of Real Time Operating System Based Applications. Lecture Notes in Computer Science, 2004, , 219-233.	1.0	8
47	Use of the fieldbus systems in academic setting. , 0, , .		7
48	Multi-variant time constrained FlexRay static segment scheduling. , 2014, , .		7
49	Combining PREM compilation and ILP scheduling for high-performance and predictable MPSoC execution. , 2018, , .		7
50	Scheduling with uncertain processing times in mixed-criticality systems. European Journal of Operational Research, 2019, 279, 687-703.	3.5	7
51	An Energy-efficient Distributed TDMA Scheduling Algorithm for ZigBee-like Cluster-tree WSNs. ACM Transactions on Sensor Networks, 2020, 16, 1-41.	2.3	7
52	TORSCHÉ Scheduling Toolbox for Matlab. , 2006, , .		7
53	Optimal flow routing in multi-hop sensor networks with real-time constraints through linear programming.. , 2007, , .		6
54	Deadline constrained cyclic scheduling on pipelined dedicated processors considering multiprocessor tasks and changeover times. Mathematical and Computer Modelling, 2008, 47, 925-942.	2.0	6

#	ARTICLE	IF	CITATIONS
55	Experiments for real-time communication contracts in IEEE 802.11e EDCA networks. , 2008, , .		6
56	Combining PREM compilation and static scheduling for high-performance and predictable MPSoC execution. Parallel Computing, 2019, 85, 27-44.	1.3	6
57	Control Performance Optimization for Application Integration on Automotive Architectures. IEEE Transactions on Computers, 2021, 70, 1059-1073.	2.4	6
58	Integrated Environment for Embedded Control Systems Design. , 2007, , .		5
59	Case study on combined validation of safety & security requirements. , 2014, , .		5
60	A polynomial-time scheduling approach to minimise idle energy consumption: An application to an industrial furnace. Computers and Operations Research, 2021, 128, 105167.	2.4	5
61	Scheduling jobs with normally distributed processing times on parallel machines. European Journal of Operational Research, 2021, , .	3.5	5
62	Scheduling of Iterative Algorithms with Matrix Operations for Efficient FPGA Designâ€”Implementation of Finite Interval Constant Modulus Algorithm. Journal of Signal Processing Systems, 2007, 46, 35-53.	1.0	4
63	Simulation study of energy efficient scheduling for IEEE 802.15.4/ZigBee cluster-tree Wireless Sensor Networks with time-bounded data flows. , 2010, , .		4
64	Energy-Aware Navigation and Guidance Algorithms for Unmanned Aerial Vehicles. , 2011, , .		4
65	Performance evaluation of Linux CAN-related system calls. , 2014, , .		4
66	Roster evaluation based on classifiers for the nurse rostering problem. Journal of Heuristics, 2016, 22, 667-697.	1.1	4
67	Makespan minimization of Time-Triggered traffic on a TTEthernet network. , 2017, , .		4
68	Car Racing Line Optimization with Genetic Algorithm using Approximate Homeomorphism. , 2021, , .		4
69	FPGA based tester tool for hybrid real-time systems. Microprocessors and Microsystems, 2008, 32, 447-459.	1.8	3
70	Open Physical Models in Control Engineering Education. International Journal of Electrical Engineering and Education, 2010, 47, 448-459.	0.4	3
71	A polynomial scheduling algorithm for IEEE 802.15.4/ ZigBee cluster tree WSN with one collision domain and period crossing constraint. , 2014, , .		3
72	A multistage approach for an employee timetabling problem with a high diversity of shifts as a solution for a strongly varying workforce demand. Computers and Operations Research, 2014, 49, 117-129.	2.4	3

#	ARTICLE	IF	CITATIONS
73	Scheduling of safety-critical time-constrained traffic with F-shaped messages. , 2017, , .		3
74	Distributed Real Time TDMA Scheduling Algorithm for Tree Topology WSNs. IFAC-PapersOnLine, 2017, 50, 5926-5933.	0.5	3
75	Multi-Variant Scheduling of Critical Time-Triggered Communication in Incremental Development Process: Application to FlexRay. IEEE Transactions on Vehicular Technology, 2019, 68, 155-169.	3.9	3
76	Scheduling of Parallel 3D-Printing Machines with Incompatible Job Families: A Matheuristic Algorithm. IFIP Advances in Information and Communication Technology, 2021, , 51-61.	0.5	3
77	Makespan Minimization with Sequence-dependent Non-overlapping Setups. , 2019, , .		3
78	Testbed for thermal and performance analysis in MPSoC systems. , 0, , .		3
79	Analysis of OSEK/VDX Based Automotive Applications. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 197-202.	0.4	2
80	Optimization of finite interval CMA implementation for FPGA. , 0, , .		2
81	Distributed algorithm for energy optimal multi-commodity network flow routing in sensor networks. , 2010, , .		2
82	Power of pre-processing: production scheduling with variable energy pricing and power-saving states. Constraints, 2020, 25, 300-318.	0.4	2
83	Thermal-Aware Scheduling for MPSoC in the Avionics Domain: Tooling and Initial Results. , 2021, , .		2
84	Scheduling on Dedicated Machines with Energy Consumption Limit. , 2019, , .		2
85	Accelerated RRT* and Its Evaluation on Autonomous Parking. , 2019, , .		2
86	Modeling of Systems with Delays Using Hybrid Petri Nets. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 177-182.	0.4	1
87	An algorithm for the evolution graph of extended hybrid Petri nets. , 0, , .		1
88	Testing of Hybrid Real-time Systems Using FPGA Platform. , 2006, , .		1
89	Efficient FPGA Implementation of Equalizer for Finite Interval Constant Modulus Algorithm. , 2006, , .		1
90	Modular architecture for real-time contract-based framework. , 2009, , .		1

#	ARTICLE	IF	CITATIONS
91	FlexRay static segment scheduling on two independent channels with gateway. , 2015, , .		1
92	Adaptive online scheduling of tasks with anytime property on heterogeneous resources. Computers and Operations Research, 2016, 76, 95-117.	2.4	1
93	Grouping tasks to save energy in a cyclic scheduling problem: A complexity study. European Journal of Operational Research, 2020, 284, 445-459.	3.5	1
94	Determining MPSoC layout from thermal camera images. , 2021, , .		1
95	Integrated Workforce Allocation and Scheduling in a Reconfigurable Manufacturing System Considering Cloud Manufacturing. IFIP Advances in Information and Communication Technology, 2021, , 535-543.	0.5	1
96	Non-overlapping Sequence-Dependent Setup Scheduling with Dedicated Tasks. Communications in Computer and Information Science, 2020, , 23-46.	0.4	1
97	On the Complexity of a Periodic Scheduling Problem with Precedence Relations. Lecture Notes in Computer Science, 2020, , 107-124.	1.0	1
98	Data-driven Algorithm for Scheduling with Total Tardiness. , 2020, , .		1
99	Model Checking of Multitasking Real-Time Applications Based on the Timed Automata Model Using One Clock. , 2010, , 194-218.		1
100	Exact Approach to the Scheduling of F-shaped Tasks with Two and Three Criticality Levels. , 2017, , .		1
101	On Idle Energy Consumption Minimization in Production: Industrial Example and Mathematical Model. , 2020, , .		1
102	Parallel Parking: Optimal Entry and Minimum Slot Dimensions. , 2022, , .		1
103	STPN Model of Physical and MAC Layer of Lon WorksÂ®. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 331-336.	0.4	0
104	Processor Expert Enhances Matlab Simulink Facilities for Embedded Software Rapid Development. , 2006, , .		0
105	Los-Cost Avionics System for Ultra-Light Aircrafts. , 2006, , .		0
106	Optimisation of applications for FPGAs with PowerPC processor using priced timed automata. , 2008, , .		0
107	Alternative process plans in wire harnesses production. , 2010, , .		0
108	Distributed Algorithm for Real-Time Energy Optimal Routing Based on Dual Decomposition of Linear Programming. International Journal of Distributed Sensor Networks, 2012, 8, 346163.	1.3	0

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109	Mixed-criticality scheduling of messages in time-triggered protocols. , 2014, , .		0
110	ZigBee cluster tree formation for time-bounded data flows in one collision domain. , 2015, , .		0
111	Robust scheduling for manufacturing with energy consumption limits. , 2016, , .		0
112	Minimization of useless work in resource failure recovery of workflow schedules. , 2017, , .		0
113	The triangle scheduling problem. Journal of Scheduling, 2018, 21, 305-312.	1.3	0
114	An Exact Scheduling Algorithm for Convergecast and Broadcast in Tree Topology WSNs : -An Application to DSME-IEEE 802.15.4e-. , 2021, , .		0
115	Scheduling of Production with Alternative Process Plans. , 2015, , 1187-1204.		0
116	Total Setup Time Minimisation in Production Scheduling with Alternatives. Lecture Notes in Computer Science, 2017, , 11-23.	1.0	0
117	Scheduling Jobs with Stochastic Processing Time on Parallel Identical Machines. , 2019, , .		0
118	Computing the execution probability of jobs with replication in mixed-criticality schedules. Annals of Operations Research, 2022, 309, 209-232.	2.6	0