

Iain John Bate

List of Publications by Year in descending order

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Version: 2024-02-01

60
papers

444
citations

1307594

7
h-index

1474206

9
g-index

60
all docs

60
docs citations

60
times ranked

318
citing authors

#	ARTICLE	IF	CITATIONS
1	A Bailout Protocol for Mixed Criticality Systems. , 2015, , .		37
2	Open Challenges for Probabilistic Measurement-Based Worst-Case Execution Time. IEEE Embedded Systems Letters, 2017, 9, 69-72.	1.9	36
3	Achieving Appropriate Test Coverage for Reliable Measurement-Based Timing Analysis. , 2016, , .		34
4	Component-Based Safety Analysis of FPGAs. IEEE Transactions on Industrial Informatics, 2010, 6, 195-205.	11.3	26
5	Optimized Frame Packing for Embedded Systems. IEEE Embedded Systems Letters, 2012, 4, 65-68.	1.9	23
6	Extending a Task Allocation Algorithm for Graceful Degradation of Real-Time Distributed Embedded Systems. , 2008, , .		22
7	Stressing Search with Scenarios for Flexible Solutions to Real-Time Task Allocation Problems. IEEE Transactions on Software Engineering, 2010, 36, 704-718.	5.6	21
8	Issues of using wireless sensor network to monitor urban air quality. , 2017, , .		18
9	Minimising Task Migration and Priority Changes in Mode Transitions. , 2007, , .		16
10	WCET Analysis of Modern Processors Using Multi-Criteria Optimisation. , 2009, , .		16
11	WCET analysis of modern processors using multi-criteria optimisation. Empirical Software Engineering, 2011, 16, 5-28.	3.9	13
12	Improving the Dependability of Sensornets. , 2013, , .		12
13	Improving the reliability of real-time embedded systems using innate immune techniques. Evolutionary Intelligence, 2008, 1, 113-132.	3.6	11
14	Valid Application of EVT in Timing Analysis by Randomising Execution Time Measurements. , 2017, , .		11
15	A self-adaptive fault-tolerant systems for a dependable Wireless Sensor Networks. Design Automation for Embedded Systems, 2014, 18, 223-250.	1.0	9
16	Guaranteed Loop Bound Identification from Program Traces for WCET. , 2009, , .		8
17	Bio-inspired Error Detection for Complex Systems. , 2011, , .		8
18	An Efficient Experimental Methodology for Configuring Search-Based Design Algorithms. , 2007, , .		7

#	ARTICLE	IF	CITATIONS
19	Timing-Accurate General-Purpose I/O for Multi- and Many-Core Systems: Scheduling and Hardware Support. , 2020, , .		7
20	An improved lightweight synchronisation primitive for sensornets. , 2009, , .		6
21	Multi-modal routing to tolerate failures. , 2011, , .		6
22	The Nature and Content of Safety Contracts: Challenges and Suggestions for a Way Forward. , 2014, , .		6
23	Assuring Safety for Component Based Software Engineering. , 2014, , .		6
24	Compensating Adaptive Mixed Criticality Scheduling. , 2022, , .		6
25	Towards New Methods for Developing Real-Time Systems: Automatically Deriving Loop Bounds Using Machine Learning. , 2006, , .		5
26	Timing Analyzing for Systems with Task Execution Dependencies. , 2010, , .		5
27	Validation of performance data using experimental verification process in wireless sensor network. , 2012, , .		5
28	Making an ALARP Decision of Sufficient Testing. , 2014, , .		5
29	An Opportunistic Transmission Protocol for Body Sensor Networks using RSSI and on-board accelerometer. , 2015, , .		5
30	TACO. , 2018, , .		5
31	Comparing design of experiments and evolutionary approaches to multi-objective optimisation of sensornet protocols. , 2009, , .		4
32	Energy Efficient Duty Allocation Protocols for Wireless Sensor Networks. , 2009, , .		4
33	Developing Safe and Dependable Sensornets. , 2011, , .		4
34	Deriving Safety Contracts to Support Architecture Design of Safety Critical Systems. , 2015, , .		4
35	A framework for multi-core schedulability analysis accounting for resource stress and sensitivity. Real-Time Systems, 2022, 58, 456-508.	1.3	4
36	Anomaly detection inspired by immune network theory: A proposal. , 2009, , .		3

#	ARTICLE	IF	CITATIONS
37	A statistical response-time analysis of complex real-time embedded systems by using timing traces. , 2011, , .		3
38	Deriving Hierarchical Safety Contracts. , 2015, , .		3
39	Using Safety Contracts to Guide the Maintenance of Systems and Safety Cases. , 2017, , .		3
40	Establishing Confidence and Understanding Uncertainty in Real-Time Systems. , 2020, , .		3
41	New Directions in Worst-Case Execution Time analysis. , 2008, , .		2
42	LIPS: A Protocol Suite for Homeostatic Sensor-net Management. , 2011, , .		2
43	Identifying usage anomalies for ECG-based sensor nodes. , 2016, , .		2
44	Understanding Behavioural Tradeoffs in Large-Scale Sensor-net Design. , 2009, , .		1
45	Accurate Determination of Loop Iterations for Worst-Case Execution Time Analysis. IEEE Transactions on Computers, 2010, 59, 1520-1532.	3.4	1
46	Maintaining Stable Node Populations in Long-Lifetime Sensor-nets. , 2010, , .		1
47	Learning Bayesian Networks for Improved Instruction Cache Analysis. , 2010, , .		1
48	Efficient Task Allocation to FPGAs in the Safety Critical Domain. , 2011, , .		1
49	Video subset selection for measurement based Worst Case Execution Time analysis. , 2011, , .		1
50	Using Feedback Control within WSN's to meet Application Requirements. , 2013, , .		1
51	Analysis-Runtime Co-design for Adaptive Mixed Criticality Scheduling. , 2022, , .		1
52	Utilising Application Flexibility in Energy Aware Computing. , 2008, , .		0
53	Semi-Automated Safety Analysis for Field Programmable Gate Arrays. , 2009, , .		0
54	Tuning Complex Sensor-net Systems Using Principled Engineering Methods. , 2009, , .		0

#	ARTICLE	IF	CITATIONS
55	Assessment of trace-differences in timing analysis for Complex Real-Time Embedded Systems. , 2011, , .		0
56	Editorial for the special issue on search-based software engineering. Software - Practice and Experience, 2011, 41, 467-468.	3.6	0
57	Probabilistic Instruction Cache Analysis Using Bayesian Networks. , 2011, , .		0
58	A Control Theoretic Approach for Workflow Management. , 2012, , .		0
59	Extending optimistic transmission protocol for other movement patterns. , 2015, , .		0
60	Mixed Criticality on Multi-cores Accounting for Resource Stress and Resource Sensitivity. , 2022, , .		0