

Julian Proenza

List of Publications by Year in descending order

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89
papers

568
citations

933447

10
h-index

839539

18
g-index

91
all docs

91
docs citations

91
times ranked

286
citing authors

#	ARTICLE	IF	CITATIONS
1	An Active Star Topology for Improving Fault Confinement in CAN Networks. IEEE Transactions on Industrial Informatics, 2006, 2, 78-85.	11.3	57
2	Quantitative Comparison of the Error-Containment Capabilities of a Bus and a Star Topology in CAN Networks. IEEE Transactions on Industrial Electronics, 2011, 58, 802-813.	7.9	40
3	Combining Operational Flexibility and Dependability in FTT-CAN. IEEE Transactions on Industrial Informatics, 2006, 2, 95-102.	11.3	36
4	Orthogonal, Fault-Tolerant, and High-Precision Clock Synchronization for the Controller Area Network. IEEE Transactions on Industrial Informatics, 2008, 4, 92-101.	11.3	31
5	Using Timed Automata for Modeling Distributed Systems with Clocks: Challenges and Solutions. IEEE Transactions on Software Engineering, 2013, 39, 857-868.	5.6	20
6	The design of the CANbids architecture. , 2012, , .		16
7	Towards a time redundancy mechanism for critical frames in time-sensitive networking. , 2017, , .		16
8	Towards a Flexible Time-Triggered replicated star for ethernet. , 2013, , .		15
9	Fault Tolerance in Highly Reliable Ethernet-Based Industrial Systems. Proceedings of the IEEE, 2019, 107, 977-1010.	21.3	15
10	Guest Editorial Special Section on Communication in Automation. IEEE Transactions on Industrial Informatics, 2016, 12, 1817-1821.	11.3	14
11	Boosting the Robustness of Controller Area Networks: CANcentrate and ReCANcentrate. Computer, 2009, 42, 66-73.	1.1	13
12	An architecture for physical injection of complex fault scenarios in CAN networks. , 0, , .		11
13	Guest Editorial Special Section on Industrial Communication Systems. IEEE Transactions on Industrial Informatics, 2010, 6, 365-368.	11.3	11
14	A Fault-Tolerant Ethernet for Hard Real-Time Adaptive Systems. IEEE Transactions on Industrial Informatics, 2019, 15, 2980-2991.	11.3	11
15	Towards Efficient Probabilistic Scheduling Guarantees for Real-Time Systems Subject to Random Errors and Random Bursts of Errors. , 2013, , .		10
16	sfiCAN: A Star-Based Physical Fault-Injection Infrastructure for CAN Networks. IEEE Transactions on Vehicular Technology, 2014, 63, 1335-1349.	6.3	10
17	A proposal for managing the redundancy provided by the flexible time-triggered replicated star for ethernet. , 2014, , .		10
18	HERMES: Heuristic Multi-queue Scheduler for TSN Time-Triggered Traffic with Zero Reception Jitter Capabilities. , 2022, , .		9

#	ARTICLE	IF	CITATIONS
19	Hardware support for fault tolerance in triple redundant CAN controllers. , 0, , .		8
20	Hardware design of a high-precision and fault-tolerant clock subsystem for CAN networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 39-46.	0.4	8
21	Towards preventing error propagation in a real-time Ethernet switch. , 2013, , .		8
22	Design and Verification of a Media Redundancy Management Driver for a CAN Star Topology. IEEE Transactions on Industrial Informatics, 2013, 9, 237-245.	11.3	8
23	A proposal for master replica control in the flexible time-triggered replicated star for ethernet. , 2014, , .		8
24	Design and Experimental Evaluation of the Proactive Transmission of Replicated Frames Mechanism over Time-Sensitive Networking. Sensors, 2021, 21, 756.	3.8	8
25	Reliability improvement achievable in CAN-based systems by means of the ReCANcentrate replicated star topology. , 2010, , .		7
26	A proposal for flexible, real-time and consistent multicast in FTT/HaRTES Switched Ethernet. , 2013, , .		7
27	Appropriate consistent replicated voting for increased reliability in a node replication scheme over FTT. , 2014, , .		7
28	Simulation of the Proactive Transmission of Replicated Frames Mechanism over TSN. , 2019, , .		7
29	Comparing Admission Control Architectures for Real-Time Ethernet. IEEE Access, 2020, 8, 105521-105534.	4.2	7
30	Towards extending the OMNeT++INET framework for simulating fault injection in ethernet-based Flexible Time-Triggered systems. , 2014, , .		6
31	An Architecture for Highly Reliable Fault-Tolerant Adaptive Distributed Embedded Systems. Computer, 2020, 53, 38-46.	1.1	6
32	LETRA: Mapping Legacy Ethernet-Based Traffic into TSN Traffic Classes. , 2021, , .		6
33	Dependable Automotive CAN Networks. Industrial Information Technology Series, 2008, , 130-181.	0.2	5
34	Managing redundancy in CAN-based networks supporting N-Version Programming. Computer Standards and Interfaces, 2009, 31, 120-127.	5.4	5
35	Using FTT-ethernet for the coordinated dispatching of tasks and messages for node replication. , 2014, , .		5
36	Quantitative characterization of the reliability of simplex buses and stars to compare their benefits in fieldbuses. Reliability Engineering and System Safety, 2015, 138, 163-175.	8.9	5

#	ARTICLE	IF	CITATIONS
37	Designing fault-diagnosis and reintegration to prevent node redundancy attrition in highly reliable control systems based on FTT-Ethernet. , 2016, , .		5
38	A low-cost fail-safe circuit for fault-tolerant control systems. , 0, , .		4
39	Experimental Assessment of ReCANcentrate, a Replicated Star Topology for CAN. , 2006, , .		4
40	Designing and verifying media management in ReCANcentrate. , 2008, , .		4
41	A first design for CANSistant: A mechanism to prevent inconsistent omissions in CAN in the presence of multiple errors. , 2009, , .		4
42	Probabilistic scheduling guarantees in distributed real-time systems under error bursts. , 2012, , .		4
43	Towards a reliability analysis of the design space for the communication subsystem of FT4FTT. , 2014, , .		4
44	Achieving elementary cycle synchronization between masters in the flexible time-triggered replicated star for ethernet. , 2014, , .		4
45	Reconfiguration Strategies for Critical Adaptive Distributed Embedded Systems. , 2018, , .		4
46	Mixing Time and Spatial Redundancy Over Time Sensitive Networking. , 2018, , .		4
47	Clock Synchronization in Integrated TSN-EtherCAT Networks. , 2020, , .		4
48	A cost-effective hardware architecture for fail-safe autonomous underwater vehicles. , 0, , .		3
49	Design and implementation of a redundancy manager for triple redundant CAN controllers. , 0, , .		3
50	Towards understanding the sensitivity of the reliability achievable by simplex and replicated star topologies in CAN. , 2011, , .		3
51	Injection of aggregated error flags as a means to guarantee consistent error detection in CAN. , 2011, , .		3
52	Using FTT and stars to simplify node replication in CAN-based systems. , 2012, , .		3
53	Towards an experimental assessment of the slave elementary cycle synchronization in the Flexible Time-Triggered Replicated Star for Ethernet. , 2014, , .		3
54	A model for quantifying the reliability of highly-reliable distributed systems based on fieldbus replicated buses. , 2014, , .		3

#	ARTICLE	IF	CITATIONS
55	Experimental evaluation of network component crashes and trigger message omissions in the Flexible Time-Triggered Replicated Star for Ethernet. , 2015, , .		3
56	A first qualitative comparison of the admission control in FTT-SE, HaRTES and AVB. , 2016, , .		3
57	Towards a dynamic task allocation scheme for highly-reliable adaptive distributed embedded systems. , 2017, , .		3
58	Towards a Fault-Tolerant Architecture Based on Time Sensitive Networking. , 2018, , .		3
59	Analyzing atomic broadcast in TTCAN networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 147-150.	0.4	2
60	Modelling MajorCAN with UPPAAL. , 2007, , .		2
61	First prototype and experimental assessment of media management in ReCANcentrate. , 2010, , .		2
62	First implementation and test of a node replication scheme on top of the flexible time-triggered replicated star for ethernet. , 2016, , .		2
63	Exploring the use of Deep Reinforcement Learning to allocate tasks in Critical Adaptive Distributed Embedded Systems. , 2021, , .		2
64	Demonstrating the feasibility of media management in ReCANcentrate. , 2009, , .		1
65	First quantitative results of the dependability improvement achieved by ReCANcentrate. , 2009, , .		1
66	Designing sfCAN: A star-based physical fault injector for CAN. , 2011, , .		1
67	Towards dynamic fault tolerance on FTT-based distributed embedded systems. , 2013, , .		1
68	Towards a layered architecture for the Flexible Time-Triggered Replicated Star for Ethernet. , 2015, , .		1
69	An OMNET++ model to asses node fault-tolerance mechanisms for FTT-Ethernet DESs. , 2015, , .		1
70	First experimental evaluation of the consistent replicated voting in the hard real-time ethernet switching architecture. , 2015, , .		1
71	Improving maintenance of FT4FTT: Extending it to monitor and log its available redundancy via internet. , 2016, , .		1
72	A first performance analysis of the Admission Control in the HaRTES Ethernet switch. , 2016, , .		1

#	ARTICLE	IF	CITATIONS
73	Analysing Termination and Consistency in the AVB™s Stream Reservation Protocol. , 2019, , .		1
74	Temporal Replication of Messages for Adaptive Systems using a Holistic Approach. , 2019, , .		1
75	Modeling and Verification of Master/Slave Clock Synchronization Using Hybrid Automata and Model-Checking. Lecture Notes in Computer Science, 2007, , 307-326.	1.3	1
76	Using Timed Automata for Modeling the Clocks of Distributed Embedded Systems. , 2010, , 172-193.		1
77	Reliability Analysis of the Proactive Transmission of Replicated Frames Mechanism over Time-Sensitive Networking. Sensors, 2021, 21, 8427.	3.8	1
78	COTS-based hardware support to timeliness in CAN networks. , 0, , .		0
79	Analytical Assessment of the Precision Degradation Caused by Faults in a Fault-Tolerant Master/Slave Clock Synchronization Service for CAN. , 2008, , .		0
80	Maintaining data consistency in ReCANcentrate during hub decouplings. , 2008, , .		0
81	Towards the integration of flexible-time-triggered communication and replicated star topologies in CAN. , 2011, , .		0
82	Developing TOBE-CAN: Total order broadcast enforcement in CAN. , 2012, , .		0
83	A first qualitative evaluation of star replication schemes for FTT-CAN. , 2012, , .		0
84	11th WFCS 2015 on a Mediterranean Island [Society News]. IEEE Industrial Electronics Magazine, 2015, 9, 51-52.	2.6	0
85	First implementation and test of reintegration mechanisms for node replicas in the FT4FTT Architecture. , 2016, , .		0
86	Formal Verification of the FTTRS Mechanisms for the Consistent Update of the Traffic Schedule. , 2019, , .		0
87	First exploration of the potential of diverse training and voting for increasing the accuracy of CNNs. , 2019, , .		0
88	Correction to "Comparing Admission Control Architectures for Real-Time Ethernet". IEEE Access, 2020, 8, 136260-136260.	4.2	0
89	CSRP: An Enhanced Protocol for Consistent Reservation of Resources in AVB/TSN. IEEE Transactions on Industrial Informatics, 2021, 17, 3640-3650.	11.3	0