Francisco Vasques

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

161 papers	1,263 citations	16 h-index	28 g-index
183 ext. papers	1,604 ext. citations	3.4 avg, IF	4.49 L-index

#	Paper	IF	Citations
161	A Survey of Emergencies Management Systems in Smart Cities. *IEEE Access*, **2022**, 1-1	3.5	2
160	Combining Network Coding and Retransmission Techniques to Improve the Communication Reliability of Wireless Sensor Network. *Information (Switzerland)*, **2021**, 12, 184	2.6	5
159	On the Use of Cameras for the Detection of Critical Events in Sensors-Based Emergency Alerting Systems. *Journal of Sensor and Actuator Networks*, **2020**, 9, 46	3.8	2
158	Modelling Coverage Failures Caused by Mobile Obstacles for the Selection of Faultless Visual Nodes in Wireless Sensor Networks. *IEEE Access*, **2020**, 8, 41537-41550	3.5	5
157	Special issue with selected papers from 2018 Brazilian Symposium on Computer Engineering (SBESC 2018). *Design Automation for Embedded Systems*, **2020**, 24, 1-2	0.6	
156	Automatic Assignment of Emergency Vehicles in Response to Sensors-based Generated Alarms in Smart City Scenarios **2020**,		1
155	FoV-Based Quality Assessment and Optimization for Area Coverage in Wireless Visual Sensor Networks. *IEEE Access*, **2020**, 8, 109568-109580	3.5	2
154	A Comprehensive Dependability Model for QoM-Aware Industrial WSN When Performing Visual Area Coverage in Occluded Scenarios. *Sensors*, **2020**, 20,	3.8	2
153	Dynamic Reconfiguration of Cluster-Tree Wireless Sensor Networks to Handle Communication Overloads in Disaster-Related Situations. *Sensors*, **2020**, 20,	3.8	4
152	Handling real-time communication in infrastructured IEEE 802.11 wireless networks: The RT-WiFi approach. *Journal of Communications and Networks*, **2019**, 21, 319-334	4.1	13
151	Real-Time Analysis of Time-Critical Messages in IEC 61850 Electrical Substation Communication Systems. *Energies*, **2019**, 12, 2272	3.1	4
150	RT-WiFi Approach to Handle Real-Time Communication: An Experimental Evaluation. *Lecture Notes in Computer Science*, **2019**, 290-303	0.9	0
149	Multi-criteria Analysis to Select Relay Nodes in the ORST Technique. *Lecture Notes in Computer Science*, **2019**, 167-182	0.9	0
148	A Distributed Multi-Tier Emergency Alerting System Exploiting Sensors-Based Event Detection to Support Smart City Applications. *Sensors*, **2019**, 20,	3.8	12
147	Experimental assessment of LNC-based cooperative communication schemes using commercial off-the-shelf wireless sensor network nodes. *International Journal of Communication Systems*, **2018**, 31, e3508	1.7	2
146	Automated Methodology for Dependability Evaluation of Wireless Visual Sensor Networks. *Sensors*, **2018**, 18,	3.8	11
145	An Optimized Relay Selection Technique to Improve the Communication Reliability in Wireless Sensor Networks. *Sensors*, **2018**, 18,	3.8	9

144	An Advanced Battery Model for WSN Simulation in Environments With Temperature Variations. *IEEE Sensors Journal*, **2018**, 18, 8179-8191	4	5
143	CT-SIM: A simulation model for wide-scale cluster-tree networks based on the IEEE 802.15.4 and ZigBee standards. *International Journal of Distributed Sensor Networks*, **2017**, 13, 155014771769847	1.7	5
142	Superframe Duration Allocation Schemes to Improve the Throughput of Cluster-Tree Wireless Sensor Networks. *Sensors*, **2017**, 17,	3.8	11
141	Alternative Path Communication in Wide-Scale Cluster-Tree Wireless Sensor Networks Using Inactive Periods. *Sensors*, **2017**, 17,	3.8	2
140	Recovery Effect in Low-Power Nodes of Wireless Sensor Networks. *Communications in Computer and Information Science*, **2017**, 45-62	0.3	
139	Enhancing the availability of wireless visual sensor networks: Selecting redundant nodes in networks with occlusion. *Applied Mathematical Modelling*, **2017**, 42, 223-243	4.5	16
138	Estimating the Lifetime of Wireless Sensor Network Nodes through the Use of Embedded Analytical Battery Models. *Journal of Sensor and Actuator Networks*, **2017**, 6, 8	3.8	25
137	A Temperature-Dependent Battery Model for Wireless Sensor Networks. *Sensors*, **2017**, 17,	3.8	23
136	A review of scalability and topological stability issues in IEEE 802.11s wireless mesh networks deployments. *International Journal of Communication Systems*, **2016**, 29, 671-693	1.7	11
135	A reference model for the timing analysis of heterogeneous automotive networks. *Computer Standards and Interfaces*, **2016**, 45, 13-25	3.5	6
134	Reliability Evaluation of Broadcast Protocols for FlexRay. *IEEE Transactions on Vehicular Technology*, **2016**, 65, 525-541	6.8	7
133	NetCoDer: A Retransmission Mechanism for WSNs Based on Cooperative Relays and Network Coding. *Sensors*, **2016**, 16,	3.8	14
132	Simulation models for IEC 61850 communication in electrical substations using GOOSE and SMV time-critical messages **2016**,		9
131	Experimental validation of a battery model for low-power nodes in Wireless Sensor Networks **2016**,		5
130	Outlier detection using k-means clustering and lightweight methods for Wireless Sensor Networks **2016**,		9
129	Timing Analysis of hybrid FlexRay, CAN-FD and CAN vehicular networks **2016**,		6
128	AdapTA: Adaptive timeslot allocation scheme for IEEE 802.15.4e LLDN mode **2016**,		2
127	Research trends in wireless visual sensor networks when exploiting prioritization. *Sensors*, **2015**, 15, 1760-84	3.8	22

126	A scheme for slot allocation of the FlexRay Static Segment based on response time analysis. *Computer Communications*, **2015**, 63, 65-76	5.1	7
125	A WSN data retransmission mechanism based on network coding and cooperative relayers **2015**,		4
124	DCRP: a scalable path selection and forwarding scheme for IEEE 802.11s wireless mesh networks. *Eurasip Journal on Wireless Communications and Networking*, **2015**, 2015,	3.2	2
123	A framework to support dependability evaluation of WSNs from AADL models **2015**,		3
122	Limitations of the IEEE 802.11 DCF, PCF, EDCA and HCCA to handle real-time traffic **2015**,		7
121	Optimal sensing redundancy for multiple perspectives of targets in wireless visual sensor networks **2015**,		7
120	Supporting Real-Time Communication in Large-Scale Wireless Sensor Networks **2015**, 7371-7380		
119	Routing Protocols for IEEE 802.11-Based Mesh Networks **2015**, 6295-6306		
118	Real-Time Communication Support in IEEE 802.11-Based Wireless Mesh Networks **2015**, 7247-7259		
117	Exploiting DHT's Properties to Improve the Scalability of Mesh Networks **2015**, 6177-6185		
116	Um Protocolo Gen□ico Eficiente de Energia para Aplica□□s em Redes de Sensores sem Fio sem Restri□□o de Tempo de Resposta. *Revista De Tecnologia Da Informa□□o E Comunica□□o*, **2015**, 5, 8-15		
115	Relevance-based balanced sink mobility in wireless visual sensor networks **2014**,		4
114	An approach to implement data fusion techniques in wireless sensor networks using genetic machine learning algorithms. *Information Fusion*, **2014**, 15, 90-101	16.7	48
113	Relevance-based partial reliability in wireless sensor networks. *Eurasip Journal on Wireless Communications and Networking*, **2014**, 2014,	3.2	2
112	Availability assessment of wireless visual sensor networks for target coverage **2014**,		7
111	Availability issues in wireless visual sensor networks. *Sensors*, **2014**, 14, 2795-821	3.8	39
110	Enhancing Redundancy in Wireless Visual Sensor Networks for Target Coverage **2014**,		5
109	Evaluating the impact of uncontrolled traffic sources upon real-time communication in IEEE 802.11s mesh networks **2014**,		2

108	An opportunistic approach to deal with real-time mesh communication in wireless sensor networks **2014**,		1
107	Quality of service provision assessment for DDBP approach in IEEE 802.15.4 networks **2014**,		1
106	Selecting redundant nodes when addressing availability in wireless visual sensor networks **2014**,		14
105	Real-time communication in IEEE 802.11s mesh networks: simulation assessment considering the interference of non-real-time traffic sources. *Eurasip Journal on Wireless Communications and Networking*, **2014**, 2014,	3.2	1
104	GLHOVE: A framework for uniform coverage monitoring using cluster-tree wireless sensor networks **2013**,		3
103	(m,k)-firm pattern spinning to improve the GTS allocation of periodic messages in IEEE 802.15.4 networks. *Eurasip Journal on Wireless Communications and Networking*, **2013**, 2013,	3.2	9
102	A new MAC scheme specifically suited for real-time industrial communication based on IEEE 802.11e. *Computers and Electrical Engineering*, **2013**, 39, 1684-1704	4.3	18
101	Adaptive Monitoring Relevance in Camera Networks for Critical Surveillance Applications. *International Journal of Distributed Sensor Networks*, **2013**, 9, 836721	1.7	21
100	Energy consumption and spatial diversity trade-off in autonomic Wireless Sensor Networks: The (m,k)-Gur Game approach **2013**,		4
99	Partial energy-efficient hop-by-hop retransmission in wireless sensor networks **2013**,		1
98	Energy-Efficient Packet Relaying in Wireless Image Sensor Networks Exploiting the Sensing Relevancies of Source Nodes and DWT Coding. *Journal of Sensor and Actuator Networks*, **2013**, 2, 424-448	3.8	8
97	Polynomial Approximation of the Battery Discharge Function in IEEE 802.15.4 Nodes: Case Study of MicaZ. *Advances in Intelligent Systems and Computing*, **2013**, 901-910	0.4	2
96	Modeling the reliability of a group membership protocol for dual-scheduled time division multiple access networks. *Computer Standards and Interfaces*, **2012**, 34, 281-291	3.5	4
95	Comparing RT-WiFi and HCCA approaches to handle real-time traffic in open communication environments **2012**,		2
94	Guaranteed Time Slot allocation for periodic messages with (m, k)-firm constraints in IEEE 802.15.4 networks **2012**,		1
93	Expansion of the available use classes in IEEE 802.15.4 networks for usage in the industrial environment **2012**,		1
92	Experimental evaluation of multiple retransmission schemes in IEEE 802.15.4 wireless sensor networks **2012**,		6
91	A routing mechanism based on the sensing relevancies of source nodes for time-critical applications in visual sensor networks **2012**,		7

90	Assessment of the Interference caused by uncontrolled traffic sources upon real-time communication in IEEE 802.11-based mesh networks **2012**,		4
89	Real-Time Industrial Communication over IEEE802.11e Wireless Local Area Networks. *IEEE Latin America Transactions*, **2012**, 10, 1844-1849	0.7	3
88	QoV: Assessing the monitoring quality in visual sensor networks **2012**,		5
87	Reliability and availability evaluation of Wireless Sensor Networks for industrial applications. *Sensors*, **2012**, 12, 806-38	3.8	121
86	Effect of frame size on energy consumption in wireless image sensor networks **2012**,		8
85	Guaranteeing real-time message deadlines in the FlexRay static segment using a on-line scheduling approach **2012**,		5
84	A semi-reliable energy-efficient retransmission mechanism based on the sensing relevancies of source nodes for wireless image sensor networks **2012**,		1
83	Enforcing the timing behavior of real-time stations in legacy bus-based industrial Ethernet networks. *Computer Standards and Interfaces*, **2011**, 33, 249-261	3.5	7
82	Preliminary results on the assessment of WirelessHART networks in transient fault scenarios **2011**,		2
81	A coordination layer to handle real-time communication in Wi-Fi networks with uncontrolled traffic sources **2011**,		7
80	WorldFip. *The Electrical Engineering Handbook*, **2011**, 1-18		
79	Survey of Real-Time Communication in CSMA-Based Networks. *Network Protocols and Algorithms*, **2010**, 2,	0.3	4
78	A TDMA-based mechanism for real-time communication in IEEE 802.11e networks **2010**,		12
77	Implementing the wireless FTT protocol: A feasibility analysis **2010**,		1
76	Assessment of the IEEE 802.11e EDCA Protocol Limitations when Dealing with Real-Time Communication. *Eurasip Journal on Wireless Communications and Networking*, **2010**, 2010,	3.2	11
75	A new AODV-based routing protocol adequate for monitoring applications in oil & gas production environments **2010**,		4
74	A forcing collision resolution approach able to prioritize traffic in CSMA-based networks. *Computer Communications*, **2010**, 33, 54-64	5.1	4
73	Using BDI-Agents with Coordination without Communication to Increase Lifetime, Preserving Autonomy and Flexibility in Wireless Sensor Networks. *Lecture Notes in Computer Science*, **2010**, 243-252	0.9	

72	DHT-based Cluster Routing Protocol for IEEE802.11s Mesh networks **2009**,		4
71	A DHT-based approach for Path Selection and Message Forwarding in IEEE 802.11s industrial Wireless Mesh Networks **2009**,		8
70	The impact of control delay upon the performance of a DC-motor control: Comparison of a centralized vs. a network-based approach **2009**,		1
69	Reliable communication for DuST networks **2009**,		1
68	Distributed DBP: A (m,k)-firm based distributed approach for QoS provision in IEEE 802.15.4 networks **2009**,		7
67	A proposal of real-time publish-subscribe scheme compatible with 802.11e wireless networks **2009**,		1
66	Technical and economical assessment of the use of wireless gateways in industrial networks **2009**,		1
65	Genetic Machine Learning algorithms in the optimization of communication efficiency in Wireless Sensor Networks **2009**,		8
64	Dynamic GTS Scheduling of Periodic Skippable Slots in IEEE 802.15.4 Wireless Sensor Networks. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 110-117		
63	Challenges in Health Smart Homes **2008**,		9
62	Limitations of the IEEE 802.11e EDCA protocol when supporting real-time communication **2008**,		8
61	A TDMA-based mechanism to enforce real-time behavior in WiFi networks **2008**,		7
60	On the timeliness of multi-hop non-beaconed ZigBee broadcast communications **2008**,		1
59	Performance evaluation of a compression algorithm for wireless sensor networks in monitoring applications **2008**,		14
58	Guest Editorial Special Section on Communication in Automation—Part I. *IEEE Transactions on Industrial Informatics*, **2008**, 4, 2-5	11.9	1
57	A 2-tier architecture to support real-time communication in CSMA-based networks **2008**,		2
56	VTP-CSMA: A Virtual Token Passing Approach for Real-Time Communication in IEEE 802.11 Wireless Networks. *IEEE Transactions on Industrial Informatics*, **2007**, 3, 215-224	11.9	41
55	Real-Time Communication for Smart Sensor Networks: A CAN Based Solution. *Industrial Informatics, 2009 INDIN 2009 7th IEEE International Conference on*, **2007**,		3

54	GSC: A REAL-TIME COMMUNICATION SCHEME FOR IEEE 802.11E INDUSTRIAL SYSTEMS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2007**, 40, 111-118		
53	IMPLEMENTATION OF AN EVENT-TRIGGERED SMART SENSOR NETWORK ARCHITECTURE BASED ON THE IEEE 802.15.4 STANDARD. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2007**, 40, 279-284		
52	An Event-Triggered Smart Sensor Network Architecture. *Industrial Informatics, 2009 INDIN 2009 7th IEEE International Conference on*, **2007**,		1
51	Formal Verification of a Group Membership Protocol Using Model Checking **2007**, 471-488		0
50	A Reliability Evaluation of a Group Membership Protocol. *Lecture Notes in Computer Science*, **2007**, 397-410	11.9	10
49	Editorial Special Section on Communication in Automation. *IEEE Transactions on Industrial Informatics*, **2006**, 2, 73-77		
48	A Stochastic Petri Net Model for the Simulation Analysis of the IEEE 802.11e EDCA Communication Protocol **2006**,		9
47	Simulation Analysis of the IEEE 802.11e EDCA Protocol for an Industrially-Relevant Real-Time Communication Scenario **2006**,		14
46	Real-Time Communication in 802.11 Networks: The Virtual Token Passing VTP-CSMA Approach. *Local Computer Networks (LCN), Proceedings of the IEEE Conference on*, **2006**,		4
45	A group membership protocol for communication systems with both static and dynamic scheduling **2006**,		4
44	A Model Based on a Stochastic Petri Net Approach for Dependability Evaluation of Controller Area Networks **2006**, 150-157		
43	Probabilistic Timing Analysis of the h-Beb Collision Resolution Algorithm **2006**, 107-114		1
42	PROBABILISTIC TIMING ANALYSIS OF THE h-BEB COLLISION RESOLUTION ALGORITHM. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 107-114		2
41	A MODEL BASED ON A STOCHASTIC PETRI NET APPROACH FOR DEPENDABILITY EVALUATION OF CONTROLLER AREA NETWORKS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 150-157		2
40	Replication Management in Reliable Real-Time Systems. *Real-Time Systems*, **2004**, 26, 261-296	1.3	8
39	A Quality-of-Service (QoS) Based Approach for the Communication Support in Network-Based Control Systems: An On-Going Project. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2004**, 37, 641-646		
38	Reliable real-time communication in CAN networks. *IEEE Transactions on Computers*, **2003**, 52, 1594-1607	2.5	34
37	Communication Response Time in P-NET Networks: Worst-Case Analysis Considering the Actual Token Utilization. *Real-Time Systems*, **2002**, 22, 229-249	1.3	5

36	MULTI-MASTER PROFIBUS DP MODELLING AND WORST CASE ANALYSIS-BASED EVALUATION. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2002**, 35, 343-348		4
35	Schedulability analysis of real-time traffic in WorldFIP networks: an integrated approach. *IEEE Transactions on Industrial Electronics*, **2002**, 49, 1165-1174	8.9	29
34	Using Ravenscar to support fault-tolerant real-time applications. *ACM SIGAda Ada Letters*, **2002**, XXII, 47-52	0.4	2
33	Transparent Environment for Replicated Ravenscar Applications. *Lecture Notes in Computer Science*, **2002**, 297-308	0.9	
32	Distributed computing for the factory-floor: a real-time approach using WorldFIP networks. *Computers in Industry*, **2001**, 44, 11-31	11.6	16
31	An Architecture for Reliable Distributed Computer-Controlled Systems. *IFIP Advances in Information and Communication Technology*, **2001**, 43-52	0.5	
30	Reliable Communication in Distributed Computer-Controlled Systems. *Lecture Notes in Computer Science*, **2001**, 136-147	0.9	1
29	Programming atomic multicast in CAN. *ACM SIGAda Ada Letters*, **2001**, XXI, 79-84	0.4	
28	Distributed Computer-Controlled Systems: The Dear-COTS Approach. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2000**, 33, 113-120		1
27	Designing Real-Time Systems Based on Mono-Master Profibus-DP Networks. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2000**, 33, 19-26		2
26	Engineering Real-Time Applications with WorldFIP: Analysis and Tools. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2000**, 33, 245-250		1
25	Replica management in real-time Ada 95 applications **1999**,		1
24	Replica management in real-time Ada 95 applications. *ACM SIGAda Ada Letters*, **1999**, XIX, 21-27	0.4	
23	To Ada or not to Ada. *ACM SIGAda Ada Letters*, **1999**, XIX, 37-43	0.4	
22	Cycle time properties of the PROFIBUS timed-token protocol. *Computer Communications*, **1999**, 22, 1206-1216	5.1	41
21	Supporting real-time distributed computer-controlled systems with multi-hop P-NET networks. *Control Engineering Practice*, **1999**, 7, 1015-1025	3.9	13
20	. *IEEE Transactions on Industrial Electronics*, **1999**, 46, 1241-1251	8.9	115
19	From task scheduling in single processor environments to message scheduling in a PROFIBUS fieldbus network. *Lecture Notes in Computer Science*, **1999**, 339-352	0.9	4

18	Analysis of the Worst-Case Real Token Rotation Time in PROFIBUS Networks **1999**, 359-366	3
17	Setting Target Rotation Time in Profibus Based Real-Time Distributed Applications. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **1998**, 31, 1-6	
16	Multi-□*ACM SIGAda Ada Letters*, **1998**, XVIII, 52-60	0.4
15	**1994**,	6
14	Guaranteeing real-time message deadlines in PROFIBUS networks	16
13	Real-time communication in unconstrained shared Ethernet networks: the virtual token-passing approach	10
12	Real-time traffic separation in shared Ethernet networks: simulation analysis of the h-BEB collision resolution algorithm	3
11	A comparison of the communication impact in CAN and TTP/C networks when supporting steer-by-wire systems	2
10	Evaluation of the timing properties of two control networks: CAN and PROFIBUS	6
9	Schedulability analysis of messages in a CAN network applied to an unmanned airship	2
8	Real-time communications over hybrid wired/wireless PROFIBUS-based networks	19
7	Non pre-emptive scheduling of messages on SMTV token-passing networks	4
6	Integrating inaccessibility in response time analysis of CAN networks	18
5	Timing analysis of reliable real-time communication in CAN networks	10
4	Pre-run-time schedulability analysis of P-NET fieldbus networks	2
3		4
2		13
1	Wireless IEEE 802.11-Based Networking Approaches for Industrial Networked Systems286-305	