Xavier Vilajosana

List of Publications by Year
in descending order

119 papers	4,306 citations	257450 24 h-index	197818 49 g-index
127 all docs	127 docs citations	127 times ranked	3650 citing authors

#	Article	IF	Citations
1	Exploiting the Solar Energy Surplus for Edge Computing. IEEE Transactions on Sustainable Computing, 2022, 7, 135-143.	3.1	4
2	YSF: A 6TiSCH Scheduling Function Minimizing Latency of Data Gathering in IIoT. IEEE Internet of Things Journal, 2022, 9, 8607-8615.	8.7	8
3	On the Sustainability of Virtual Platforms: A Behavioral Intervention. IEEE Access, 2022, 10, 29194-29206.	4.2	2
4	Constrained Localization: A Survey. IEEE Access, 2022, 10, 49297-49321.	4.2	9
5	Towards Measurement Range Extension of UHF RFID Temperature Sensors for Industrial Applications. , 2022, , .		1
6	Toward Low-Cost RF-Based Bulk Fabric Classification for the Textile Industry. IEEE Sensors Journal, 2022, 22, 16586-16594.	4.7	6
7	A Channel Measurement Campaign for mmWave Communication in Industrial Settings. IEEE Transactions on Wireless Communications, 2021, 20, 299-315.	9.2	31
8	QuickCal: Assisted Calibration for Crystal-Free Micromotes. IEEE Internet of Things Journal, 2021, 8, 1846-1858.	8.7	4
9	LR-FHSS: Overview and Performance Analysis. IEEE Communications Magazine, 2021, 59, 30-36.	6.1	23
10	Standards-Compliant Multi-Protocol On-Board Unit for the Evaluation of Connected and Automated Mobility Services in Multi-Vendor Environments. Sensors, 2021, 21, 2090.	3.8	5
11	Towards Dependable IoT via Interface Selection: Predicting Packet Delivery at the End Node in LoRaWAN Networks. Sensors, 2021, 21, 2707.	3.8	6
12	Towards Reliable IEEE 802.15.4g SUN with Re-transmission Shaping and Adaptive Modulation Selection. Journal of Signal Processing Systems, 2021, 93, 1027-1044.	2.1	3
13	Int5Gent: An integrated end-to-end system platform for verticals and data plane solutions beyond 5G. , 2021, , .		3
14	WiLD: Wireless Passive Moisture Sensing Under Moving Conditions for Smart Manufacturing. IEEE Sensors Journal, 2021, 21, 19541-19549.	4.7	6
15	Semantics for Connectivity Management in IoT Sensing. Lecture Notes in Computer Science, 2021, , 297-311.	1.3	5
16	Energy modeling and adaptive sampling algorithms for energyâ€harvesting powered nodes with sampling rate limitations. Transactions on Emerging Telecommunications Technologies, 2020, 31, e3754.	3.9	11
17	IETF 6TiSCH: A Tutorial. IEEE Communications Surveys and Tutorials, 2020, 22, 595-615.	39.4	114
18	5G Cross-Border Operation for Connected and Automated Mobility: Challenges and Solutions. Future Internet, 2020, 12, 5.	3.8	23

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19	Improving Link Reliability of IEEE 802.15.4g SUN with Adaptive Modulation Diversity. , 2020, , .		5
20	5GCroCo Barcelona Trial Site for Cross-border Anticipated Cooperative Collision Avoidance. , 2020, , .		6
21	Reliability through modulation diversity: can combining multiple IEEE 802.15.4-2015 SUN modulations improve PDR?. , 2020, , .		8
22	A Dataset to Evaluate IEEE 802.15.4g SUN for Dependable Low-Power Wireless Communications in Industrial Scenarios. Data, 2020, 5, 64.	2.3	4
23	Industrial IoT with Crystal-Free Mote-on-Chip. , 2020, , .		2
24	Model-Aware Collision Resolution for High-Order Orthogonal Modulations. IEEE Wireless Communications Letters, 2020, 9, 957-961.	5.0	0
25	6TiSCH on SCÎ¼M: Running a Synchronized Protocol Stack without Crystals. Sensors, 2020, 20, 1912.	3.8	9
26	Characterising foliage influence on LoRaWAN pathloss in a tropical vegetative environment. IET Wireless Sensor Systems, 2020, 10, 198-207.	1.7	11
27	Industrial Internet of Things: Specificities and challenges. Internet Technology Letters, 2020, 3, e172.	1.9	2
28	Improving Link Reliability of IEEE 802.15.4g SUN with Re-Transmission Shaping. , 2020, , .		0
29	Simulating 6TiSCH networks. Transactions on Emerging Telecommunications Technologies, 2019, 30, e3494.	3.9	57
30	Exploring the Performance Boundaries of NB-IoT. IEEE Internet of Things Journal, 2019, 6, 5702-5712.	8.7	101
31	OpenTestBed: Poor Man's IoT Testbed. , 2019, , .		19
32	Experimental Clock Calibration on a Crystal-Free Mote-on-a-Chip. , 2019, , .		7
33	Experimental Interference Robustness Evaluation of IEEE 802.15.4-2015 OQPSK-DSSS and SUN-OFDM Physical Layers for Industrial Communications. Electronics (Switzerland), 2019, 8, 1045.	3.1	12
34	Dynamic Channel Calibration on a Crystal-Free Mote-on-a-Chip. IEEE Access, 2019, 7, 120884-120900.	4.2	9
35	Ubiquitous moisture sensing in automaker industry based on standard UHF RFID tags. , 2019, , .		13
36	6TiSCH: Industrial Performance for IPv6 Internet-of-Things Networks. Proceedings of the IEEE, 2019, 107, 1153-1165.	21.3	38

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37	A Square Peg in a Round Hole: The Complex Path for Wireless in the Manufacturing Industry. IEEE Communications Magazine, 2019, 57, 109-115.	6.1	24
38	Constructive Interference in 802.15.4: A Tutorial. IEEE Communications Surveys and Tutorials, 2019, 21, 217-237.	39.4	20
39	Developing a Low-Cost Thermal Camera for Industrial Predictive Maintenance Applications. Lecture Notes on Data Engineering and Communications Technologies, 2019, , 182-193.	0.7	0
40	On the Suitability of 6TiSCH for wireless seismic data streaming. Internet Technology Letters, 2018, 1, e20.	1.9	2
41	Improving Reliability and Scalability of LoRaWANs Through Lightweight Scheduling. IEEE Internet of Things Journal, 2018, 5, 1830-1842.	8.7	169
42	Using SmartMesh IP in Smart Agriculture and Smart Building applications. Computer Communications, 2018, 121, 83-90.	5.1	19
43	CCR: Cost-aware cell relocation in 6TiSCH networks. Transactions on Emerging Telecommunications Technologies, 2018, 29, e3211.	3.9	7
44	Broadcasting strategies in 6TiSCH networks. Internet Technology Letters, 2018, 1, e15.	1.9	23
45	Aggressive Fragmentation Strategy for Enhanced Network Performance in Dense LPWANs. , 2018, , .		3
46	Supporting the IoT Business Value Through the Platformization of Pilots. IEEE Pervasive Computing, 2018, 17, 29-39.	1.3	1
47	Why Channel Hopping Makes Sense, even with IEEE802.15.4 OFDM at 2.4 GHz. , 2018, , .		1
48	Evaluation of IEEE802.15.4g for Environmental Observations. Sensors, 2018, 18, 3468.	3.8	27
49	IoTBench: Towards a Benchmark for Low-Power Wireless Networking. , 2018, , .		26
50	Overview of IEEE802.15.4g OFDM and its applicability to smart building applications. , 2018, , .		17
51	An analysis of packet fragmentation impact in LPWAN. , 2018, , .		11
52	F-Interop Platform and Tools: Validating IoT Implementations Faster. Lecture Notes in Computer Science, 2018, , 332-343.	1.3	4
53	Authenticated Preambles for Denial of Service Mitigation in LPWANs. Lecture Notes in Computer Science, 2018, , 199-210.	1.3	1
54	Accurate Clock Discipline For Long-Term Synchronization Intervals. IEEE Sensors Journal, 2017, 17, 2249-2258.	4.7	7

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55	Teaching Communication Technologies and Standards for the Industrial IoT? Use 6TiSCH!. , 2017, 55, 132-137.		32
56	Understanding the Limits of LoRaWAN. , 2017, 55, 34-40.		943
57	I3Mote: An Open Development Platform for the Intelligent Industrial Internet. Sensors, 2017, 17, 986.	3.8	25
58	Enabling SDN in VANETs: What is the Impact on Security?. Sensors, 2016, 16, 2077.	3.8	33
59	Rover. , 2016, , .		2
60	Lessons Learned from the 6TiSCH Plugtests. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2016, , 415-426.	0.3	3
61	Addressing Mobility in RPL With Position Assisted Metrics. IEEE Sensors Journal, 2016, 16, 2151-2161.	4.7	44
62	Distributed PID-Based Scheduling for 6TiSCH Networks. IEEE Communications Letters, 2016, 20, 1006-1009.	4.1	64
63	LLSF: Low Latency Scheduling Function for 6TiSCH Networks. , 2016, , .		43
64	VirtuWind: virtual and programmable industrial network prototype deployed in operational wind park. Transactions on Emerging Telecommunications Technologies, 2016, 27, 1281-1288.	3.9	25
65	Determinism through Path Diversity: Why Packet Replication Makes Sense. , 2016, , .		13
66	OpenWSN & OpenMote: Demo'ing a Complete Ecosystem for the Industrial Internet of Things. , 2016, , .		11
67	(Not so) intuitive results from a smart agriculture low-power wireless mesh deployment. , 2016, , .		6
68	Simple Distributed Scheduling With Collision Detection in TSCH Networks. IEEE Sensors Journal, 2016, 16, 5848-5849.	4.7	34
69	Industrial Wireless IP-Based Cyber â€“Physical Systems. Proceedings of the IEEE, 2016, 104, 1025-1038.	21.3	70
70	Early Scavenger Dimensioning in Wireless Industrial Monitoring Applications. IEEE Internet of Things Journal, 2016, 3, 170-178.	8.7	13
71	A Benchmark for Low-power Wireless Networking. , 2016, , .		8
72	Lessons learned from large-scale dense IEEE802.15.4 connectivity traces. , 2015, , .		12

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73	When Scavengers Meet Industrial Wireless. IEEE Transactions on Industrial Electronics, 2015, 62, 2994-3003.	7.9	27
74	LPDQ: A self-scheduled TDMA MAC protocol for one-hop dynamic low-power wireless networks. Pervasive and Mobile Computing, 2015, 20, 84-99.	3.3	26
75	Lean Sensing: Exploiting Contextual Information for Most Energy-Efficient Sensing. IEEE Transactions on Industrial Informatics, 2015, 11, 1156-1165.	11.3	9
76	OpenMote: Open-Source Prototyping Platform for the Industrial IoT. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2015, , 211-222.	0.3	61
77	Standardized Low-Power Wireless Communication Technologies for Distributed Sensing Applications. Sensors, 2014, 14, 2663-2682.	3.8	27
78	Experimental Energy Consumption of Frame Slotted ALOHA and Distributed Queuing for Data Collection Scenarios. Sensors, 2014, 14, 13416-13436.	3.8	3
79	Novel Routing Approach for the TSCH Mode of IEEE 802.15.14e in Wireless Sensor Networks with Mobile Nodes. , 2014, , .		9
80	6TiSCH: deterministic IP-enabled industrial internet (of things). , 2014, 52, 36-41.		210
81	Generic empiric propagation model for low power wireless networks operating at the 868 MHz band in smart cities. IET Microwaves, Antennas and Propagation, 2014, 8, 1143-1153.	1.4	8
82	A Realistic Energy Consumption Model for TSCH Networks. IEEE Sensors Journal, 2014, 14, 482-489.	4.7	130
83	Arp@: Remote experiences with real embedded systems. Computer Applications in Engineering Education, 2014, 22, 639-648.	3.4	1
84	Adaptive Synchronization in IEEE802.15.4e Networks. IEEE Transactions on Industrial Informatics, 2014, 10, 795-802.	11.3	89
85	Balancing Power Consumption in IoT Devices by Using Variable Packet Size. , 2014, , .		6
86	Demonstrating Low-Power Distributed Queuing for active RFID communications at 433 MHz. , 2014, , .		2
87	On the suitability of the 433â€‰MHz band for M2M lowâ€power wireless communications: propagation aspects. Transactions on Emerging Telecommunications Technologies, 2014, 25, 1154-1168.	3.9	28
88	6TiSCH Wireless Industrial Networks: Determinism Meets IPv6. Smart Sensors, Measurement and Instrumentation, 2014, , 111-141.	0.6	39
89	PlanetLab@UOC: A real lab over the Internet to experiment with distributed systems. Computer Applications in Engineering Education, 2013, 21, 265-275.	3.4	8
90	Bootstrapping smart cities through a self-sustainable model based on big data flows. , 2013, 51, 128-134.		179

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91	Standardized Protocol Stack for the Internet of (Important) Things. IEEE Communications Surveys and Tutorials, 2013, 15, 1389-1406.	39.4	581
92	Decentralized resource discovery mechanisms for distributed computing in peer-to-peer environments. ACM Computing Surveys, 2013, 45, 1-40.	23.0	6
93	IETF 6TSCH: Combining IPv6 Connectivity with Industrial Performance. , 2013, , .		41
94	On the use of the 433 MHz band to improve the energy efficiency of M2M communications. , 2013, , .		2
95	Label switching over IEEE802.15.4e networks. Transactions on Emerging Telecommunications Technologies, 2013, 24, 458-475.	3.9	53
96	jxSensor: A Sensor Network Integration Layer for JXTA. , 2012, , .		0
97	OpenWSN: a standardsâ€based lowâ€power wireless development environment. Transactions on Emerging Telecommunications Technologies, 2012, 23, 480-493.	3.9	228
98	SWAP Project: Beyond the State of the Art on Harvested Energy-Powered Wireless Sensors Platform Design. , 2011, , .		9
99	Wireless sensors as a tool to explore avalanche internal dynamics: Experiments at the WeissflÃ¼hjoch Snow Chute. Cold Regions Science and Technology, 2011, 65, 242-250.	3.5	7
100	Optimal Rate Allocation in Cluster-Tree WSNs. Sensors, 2011, 11, 3611-3639.	3.8	1
101	ZERO: Probabilistic Routing for Deploy and Forget Wireless Sensor Networks. Sensors, 2010, 10, 8920-8937.	3.8	8
102	Flexible Resource Discovery for Decentralized P2P and Volunteer Computing Systems. , 2010, , .		7
103	A Multi-lane Double Auction for Economic-Based Service Management in the Cloud. Studies in Computational Intelligence, 2010, , 117-148.	0.9	1
104	Design of a Motion Detector to Monitor Rowing Performance Based on Wireless Sensor Networks. , 2009, , .		7
105	REMOTE, a Wireless Sensor Network Based System to Monitor Rowing Performance. Sensors, 2009, 9, 7069-7082.	3.8	29
106	Simulation and Modelling of a Multi-lane Double Auction Mechanism to Allocate Computational Resources in the Grid. , 2009, , .		0
107	Design of a Configurable Auction Server for Resource Allocation in Grid. , 2009, , .		7
108	A bidding specification for Grid resources. International Journal of Grid and Utility Computing, 2009, 1, 194.	0.2	0

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109	DyMRA: A Decentralized Resource Allocation Framework for Collaborative Learning Environments. Studies in Computational Intelligence, 2009, , 147-169.	0.9	2
110	SR-1: A simulation-based algorithm for the Capacitated Vehicle Routing Problem. , 2008, , .		27
111	Information and Regulation in Decentralized Marketplaces for P2P-Grids. , 2008, , .		0
112	The Grid4All Ontology for the Retrieval of Traded Resources in a Market-Oriented Grid. , 2008, , .		1
113	Bidding Support for Computational Resources. , 2008, , .		0
114	Towards Decentralized Resource Allocation for Collaborative Peer to Peer Learning. , 2008, , .		2
115	The Grid4All ontology for the retrieval of traded resources in a market-oriented grid. International Journal of Web and Grid Services, 2008, 4, 418.	0.5	2
116	Grid4All: Open Market Places for Democratic Grids. Lecture Notes in Computer Science, 2008, , 197-207.	1.3	1
117	LaCOLLA: Middleware for Self-Sufficient Online Collaboration. IEEE Internet Computing, 2007, 11, 56-64.	3.3	11
118	Towards an Open Grid Marketplace Framework for Resources Trade. , 2007, , 1322-1330.		5
119	DyMRA: Dynamic Market Deployment for Decentralized Resource Allocation. , 2007, , 53-63.		1