

Adnan Abu-Mahfouz

List of Publications by Citations

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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.

146
papers

3,089
citations

29
h-index

51
g-index

191
ext. papers

4,288
ext. citations

3.8
avg, IF

6.47
L-index

#	Paper	IF	Citations
146	A Survey on 5G Networks for the Internet of Things: Communication Technologies and Challenges. <i>IEEE Access</i> , 2018 , 6, 3619-3647	3.5	603
145	A Survey on Software-Defined Wireless Sensor Networks: Challenges and Design Requirements. <i>IEEE Access</i> , 2017 , 5, 1872-1899	3.5	254
144	Software Defined Networking for Improved Wireless Sensor Network Management: A Survey. <i>Sensors</i> , 2017 , 17,	3.8	116
143	From Industry 4.0 to Agriculture 4.0: Current Status, Enabling Technologies, and Research Challenges. <i>IEEE Transactions on Industrial Informatics</i> , 2021 , 17, 4322-4334	11.9	104
142	Software defined wireless sensor networks application opportunities for efficient network management: A survey. <i>Computers and Electrical Engineering</i> , 2018 , 66, 274-287	4.3	97
141	Towards Achieving a Reliable Leakage Detection and Localization Algorithm for Application in Water Piping Networks: An Overview. <i>IEEE Access</i> , 2017 , 5, 20272-20285	3.5	67
140	IoT devices and applications based on LoRa/LoRaWAN 2017 ,		63
139	IoT in the Wake of COVID-19: A Survey on Contributions, Challenges and Evolution. <i>IEEE Access</i> , 2020 , 8, 186821-186839	3.5	62
138	. <i>IEEE Access</i> , 2017 , 5, 19084-19098	3.5	60
137	A Review of Machine Learning Approaches to Power System Security and Stability. <i>IEEE Access</i> , 2020 , 8, 113512-113531	3.5	59
136	Smart water meter system for user-centric consumption measurement 2015 ,		56
135	A Survey of Anomaly Detection in Industrial Wireless Sensor Networks with Critical Water System Infrastructure as a Case Study. <i>Sensors</i> , 2018 , 18,	3.8	56
134	A Simple Security Architecture for Smart Water Management System. <i>Procedia Computer Science</i> , 2016 , 83, 1164-1169	1.6	49
133	Distance Bounding: A Practical Security Solution for Real-Time Location Systems. <i>IEEE Transactions on Industrial Informatics</i> , 2013 , 9, 16-27	11.9	44
132	LoRa and LoRaWAN testbeds: A review 2017 ,		39
131	Real-time Dynamic Hydraulic Model for Potable Water Loss Reduction. <i>Procedia Engineering</i> , 2016 , 154, 99-106		39
130	Leakage Detection and Estimation Algorithm for Loss Reduction in Water Piping Networks. <i>Water (Switzerland)</i> , 2017 , 9, 773	3	38

129	Localised information fusion techniques for location discovery in wireless sensor networks. <i>International Journal of Sensor Networks</i> , 2018 , 26, 12	0.8	37
128	A Survey on Adaptive Data Rate Optimization in LoRaWAN: Recent Solutions and Major Challenges. <i>Sensors</i> , 2020 , 20,	3.8	36
127	Pressure Management of Water Distribution Systems via the Remote Real-Time Control of Variable Speed Pumps. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2017 , 143, 04017045	2.8	33
126	Integrated treatment of acid mine drainage using BOF slag, lime/soda ash and reverse osmosis (RO): Implication for the production of drinking water. <i>Desalination</i> , 2017 , 424, 45-52	10.3	33
125	A survey on low-power wide area networks for IoT applications. <i>Telecommunication Systems</i> , 2019 , 71, 249-274	2.3	33
124	Security in software-defined wireless sensor networks: Threats, challenges and potential solutions 2017 ,		33
123	An efficient distributed localisation algorithm for wireless sensor networks: based on smart reference-selection method. <i>International Journal of Sensor Networks</i> , 2013 , 13, 94	0.8	32
122	Overview, Comparative Assessment and Recommendations of Forecasting Models for Short-Term Water Demand Prediction. <i>Water (Switzerland)</i> , 2017 , 9, 887	3	31
121	A Survey on LPWAN Technologies in WBAN for Remote Health-Care Monitoring. <i>Sensors</i> , 2019 , 19,	3.8	31
120	Parameter-Less Remote Real-Time Control for the Adjustment of Pressure in Water Distribution Systems. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2017 , 143, 04017050	2.8	29
119	Fragmentation-Based Distributed Control System for Software-Defined Wireless Sensor Networks. <i>IEEE Transactions on Industrial Informatics</i> , 2019 , 15, 901-910	11.9	29
118	A Survey on Data Imputation Techniques: Water Distribution System as a Use Case. <i>IEEE Access</i> , 2018 , 6, 63279-63291	3.5	29
117	ns-2 extension to simulate localization system in wireless sensor networks 2011 ,		28
116	. <i>IEEE Access</i> , 2017 , 5, 6661-6667	3.5	26
115	Evaluating the LoRaWAN Protocol Using a Permanent Outdoor Testbed. <i>IEEE Sensors Journal</i> , 2019 , 19, 4726-4733	4	26
114	A key distribution scheme using elliptic curve cryptography in wireless sensor networks 2016 ,		26
113	Attack detection in water distribution systems using machine learning. <i>Human-centric Computing and Information Sciences</i> , 2019 , 9,	5.4	25
112	2015 ,		23

111	Evaluating ALWadHA for providing secure localisation for wireless sensor networks 2013 ,		22
110	2017 ,		21
109	A Survey on the Viability of Confirmed Traffic in a LoRaWAN. <i>IEEE Access</i> , 2020 , 8, 9296-9311	3.5	20
108	Real-time Adjustment of Pressure to Demand in Water Distribution Systems: Parameter-less P-controller Algorithm. <i>Procedia Engineering</i> , 2016 , 154, 391-397		20
107	Utilising artificial intelligence in software defined wireless sensor network 2017 ,		20
106	Comprehensive Review of SDN Controller Placement Strategies. <i>IEEE Access</i> , 2020 , 8, 170070-170092	3.5	20
105	Estimation of Water Demand in Water Distribution Systems Using Particle Swarm Optimization. <i>Water (Switzerland)</i> , 2017 , 9, 593	3	18
104	Overlay Virtualized Wireless Sensor Networks for Application in Industrial Internet of Things: A Review. <i>Sensors</i> , 2018 , 18,	3.8	18
103	A comparative analysis of local and global adaptive threshold estimation techniques for energy detection in cognitive radio. <i>Physical Communication</i> , 2018 , 29, 1-11	2.2	17
102	Techno-Economic Feasibility of Hybrid Solar Photovoltaic and Battery Energy Storage Power System for a Mobile Cellular Base Station in Soshanguve, South Africa. <i>Energies</i> , 2018 , 11, 1572	3.1	17
101	Toward developing a distributed autonomous energy management system (DAEMS) 2015 ,		16
100	WaterGrid-Sense: A LoRa-Based Sensor Node for Industrial IoT Applications. <i>IEEE Sensors Journal</i> , 2020 , 20, 2722-2729	4	16
99	. <i>IEEE Sensors Journal</i> , 2021 , 21, 6761-6774	4	15
98	Machine Learning Techniques for Traffic Identification and Classification in SDWSN: A Survey 2018 ,		15
97	An Effective Spectrum Handoff Based on Reinforcement Learning for Target Channel Selection in the Industrial Internet of Things. <i>Sensors</i> , 2019 , 19,	3.8	14
96	Solving Management Problems in Water Distribution Networks: A Survey of Approaches and Mathematical Models. <i>Water (Switzerland)</i> , 2019 , 11, 562	3	14
95	Efficient controller placement and reelection mechanism in distributed control system for software defined wireless sensor networks. <i>Transactions on Emerging Telecommunications Technologies</i> , 2019 , 30, e3588	1.9	14
94	Cognitive Radio in Low Power Wide Area Network for IoT Applications: Recent Approaches, Benefits and Challenges. <i>IEEE Transactions on Industrial Informatics</i> , 2020 , 16, 7489-7498	11.9	14

93	Analysis of the Narrow Band Internet of Things (NB-IoT) Technology 2019 ,		13
92	Real Time Security Assessment of the Power System Using a Hybrid Support Vector Machine and Multilayer Perceptron Neural Network Algorithms. <i>Sustainability</i> , 2019 , 11, 3586	3.6	13
91	IoT-Enabled Solid Waste Management in Smart Cities. <i>Smart Cities</i> , 2021 , 4, 1004-1017	3.3	13
90	Predictive Uncertainty Estimation in Water Demand Forecasting Using the Model Conditional Processor. <i>Water (Switzerland)</i> , 2018 , 10, 475	3	12
89	Software defined wireless sensor networks security challenges 2017 ,		12
88	The Fourth industrial revolution in the food industry-Part I: Industry 4.0 technologies.. <i>Critical Reviews in Food Science and Nutrition</i> , 2022 , 1-17	11.5	12
87	Localised Information Fusion Techniques for Location Discovery in Wireless Sensor Networks. <i>International Journal of Sensor Networks</i> , 2017 , 1, 1	0.8	12
86	Real-Time Dynamic Hydraulic Model of Water Distribution Networks. <i>Water (Switzerland)</i> , 2019 , 11, 470	3	11
85	Artificial Intelligence Techniques for Cognitive Sensing in Future IoT: State-of-the-Art, Potentials, and Challenges. <i>Journal of Sensor and Actuator Networks</i> , 2020 , 9, 21	3.8	11
84	2017 ,		11
83	Towards achieving efficient MAC protocols for WBAN-enabled IoT technology: a review. <i>Eurasip Journal on Wireless Communications and Networking</i> , 2021 , 2021,	3.2	11
82	. <i>IEEE Access</i> , 2020 , 8, 188641-188672	3.5	10
81	Cryptography Methods for Software-Defined Wireless Sensor Networks 2018 ,		9
80	A Review of Metaheuristic Techniques for Optimal Integration of Electrical Units in Distribution Networks. <i>IEEE Access</i> , 2021 , 9, 5046-5068	3.5	9
79	Analysis of IoT-Enabled Solutions in Smart Waste Management 2018 ,		9
78	Pressure Management Strategies for Water Loss Reduction in Large-Scale Water Piping Networks: A Review. <i>Springer Water</i> , 2018 , 465-480	0.3	8
77	CACC: Context-aware congestion control approach for lightweight CoAP/UDP-based Internet of Things traffic. <i>Transactions on Emerging Telecommunications Technologies</i> , 2020 , 31, e3822	1.9	8
76	Wireless Power Transfer for IoT Devices - A Review 2019 ,		8

75	SDNMM: A Generic SDN-Based Modular Management System for Wireless Sensor Networks. <i>IEEE Systems Journal</i> , 2020 , 14, 2347-2357	4.3	8
74	Topology Discovery Protocol for Software Defined Wireless Sensor Network: Solutions and Open Issues 2018 ,		8
73	Modelling noise and pulse width modulation interference in indoor visible light communication channels. <i>AEU - International Journal of Electronics and Communications</i> , 2019 , 106, 40-47	2.8	7
72	Low Power Wide Area Network, Cognitive Radio and the Internet of Things: Potentials for Integration. <i>Sensors</i> , 2020 , 20,	3.8	7
71	Impact of Pressure-Driven Demand on Background Leakage Estimation in Water Supply Networks. <i>Water (Switzerland)</i> , 2019 , 11, 1600	3	7
70	A Survey on the Security of Low Power Wide Area Networks: Threats, Challenges, and Potential Solutions. <i>Sensors</i> , 2020 , 20,	3.8	7
69	A Review of LoRaWAN Simulators: Design Requirements and Limitations 2019 ,		7
68	Computational and experimental study for the desalination of petrochemical industrial effluents using direct contact membrane distillation. <i>Applied Water Science</i> , 2019 , 9, 1	5	6
67	Performance analysis of correlated multi-channels in cognitive radio sensor network based smart grid 2017 ,		6
66	Energy-Aware Hybrid MAC Protocol for IoT Enabled WBAN Systems. <i>IEEE Sensors Journal</i> , 2021 , 1-1	4	6
65	Real-time Dynamic Hydraulic Model for Water Distribution Networks: Steady State Modelling 2016 ,		6
64	A Review of Research Works on Supervised Learning Algorithms for SCADA Intrusion Detection and Classification. <i>Sustainability</i> , 2021 , 13, 9597	3.6	6
63	Data Imputation in Wireless Sensor Networks Using a Machine Learning-Based Virtual Sensor. <i>Journal of Sensor and Actuator Networks</i> , 2020 , 9, 25	3.8	5
62	New Discrete Cuckoo Search Optimization Algorithms for Effective Route Discovery in IoT-Based Vehicular Ad-Hoc Networks. <i>IEEE Access</i> , 2020 , 8, 145469-145488	3.5	5
61	Adaptive threshold techniques for cognitive radio-based low power wide area network. <i>Transactions on Emerging Telecommunications Technologies</i> , 2020 , 31, e3908	1.9	4
60	Energy Consumption Challenges in Clustered Cognitive Radio Sensor Networks: A Review 2019 ,		4
59	A Review of Artificial Intelligence Based Intrusion Detection for Software-Defined Wireless Sensor Networks 2019 ,		4
58	A Review of Gateway Placement Algorithms on Internet of Things 2019 ,		4

57	Improving northbound interface communication in SDWSN 2017 ,		4
56	Wireless gas sensing in South African underground platinum mines 2014 ,		4
55	Towards Cognitive Radio in Low Power Wide Area Network for Industrial IoT Applications 2019 ,		4
54	Programmable Node in Software-Defined Wireless Sensor Networks: A Review 2018 ,		4
53	. <i>IEEE Access</i> , 2021 , 9, 28237-28250	3-5	4
52	Analysis of SDN-Based Security Challenges and Solution Approaches for SDWSN Usage 2019 ,		3
51	A delay-aware spectrum handoff scheme for prioritized time-critical industrial applications with channel selection strategy. <i>Computer Communications</i> , 2019 , 144, 112-123	5-1	3
50	Wireless Power Transfer for LoRa Low-Power wide-area Networks (LPWANs) 2019 ,		3
49	Technology Coexistence in LPWANs-A Comparative Analysis for Spectrum Optimization 2019 ,		3
48	Burst leakage-pressure dependency in water piping networks: Its impact on leak openings 2017 ,		3
47	Behavioural Intrusion Detection in Water Distribution Systems Using Neural Networks. <i>IEEE Access</i> , 2020 , 8, 190403-190416	3-5	3
46	Secure Firmware Updates in the Internet of Things: A survey 2019 ,		3
45	A Distributed Control System for Software Defined Wireless Sensor Networks Through Containerisation 2019 ,		3
44	Exploring Control-Message Quenching in SDN-based Management of 6LoWPANs 2019 ,		3
43	RPL-Based on Load Balancing Routing objective Functions for IoTs in Distributed Networks 2019 ,		3
42	A LoRaWAN IoT enabled Trash Bin Level Monitoring System. <i>IEEE Transactions on Industrial Informatics</i> , 2021 , 1-1	11-9	3
41	A Survey on Vehicle Security Systems: Approaches and Technologies 2018 ,		3
40	Analysis of Notable Security Issues in SDWSN 2018 ,		3

39	Analysis of Energy Inefficiency Challenges in Cognitive Radio Sensor Networks 2018 ,		3
38	Efficient Two Stage Spectrum Sensing for Cognitive Radios 2018 ,		3
37	Energy-efficient distributed heterogeneous clustered spectrum-aware cognitive radio sensor network for guaranteed quality of service in smart grid. <i>International Journal of Distributed Sensor Networks</i> , 2021 , 17, 155014772110283	1.7	3
36	Performance measurements of communication access technologies and improved cognitive radio model for smart grid communication. <i>Transactions on Emerging Telecommunications Technologies</i> , 2019 , 30, e3653	1.9	2
35	A Comparison of Data Aggregation Techniques in Software-Defined Wireless Sensor Network 2019 ,		2
34	A cuckoo search optimization-based forward consecutive mean excision model for threshold adaptation in cognitive radio. <i>Soft Computing</i> , 2020 , 24, 9683-9704	3.5	2
33	Adaptability of Assistive Mobility Devices and the Role of the Internet of Medical Things: Comprehensive Review. <i>JMIR Rehabilitation and Assistive Technologies</i> , 2021 , 8, e29610	3.2	2
32	2016 ,		2
31	Device Authentication Schemes in IoT: A Review 2019 ,		2
30	A Sea Rescue Operation System Based On LoRa 2019 ,		2
29	Power system events classification using genetic algorithm based feature weighting technique for support vector machine. <i>Heliyon</i> , 2021 , 7, e05936	3.6	2
28	Miscellaneous Energy Profile Management Scheme for Optimal Integration of Electric Vehicles in a Distribution Network Considering Renewable Energy Sources 2021 ,		2
27	Software Defined Wireless Sensor Networks Mangement and Security Challenges: A Review 2018 ,		2
26	AC INDUCED CORROSION ASSESSMENT OF BURIED PIPELINES NEAR HVTLs: A CASE STUDY OF SOUTH AFRICA. <i>Progress in Electromagnetics Research B</i> , 2018 , 81, 45-61	0.7	2
25	Transactive Energy: State-of-the-Art in Control Strategies, Architectures, and Simulators. <i>IEEE Access</i> , 2021 , 9, 131552-131573	3.5	2
24	A Survey on Machine Learning Software-Defined Wireless Sensor Networks (ML-SDWSNs): Current Status and Major Challenges. <i>IEEE Access</i> , 2022 , 10, 23560-23592	3.5	2
23	Long Short Term Memory Water Quality Predictive Model Discrepancy Mitigation Through Genetic Algorithm Optimisation and Ensemble Modeling. <i>IEEE Access</i> , 2022 , 10, 24638-24658	3.5	2
22	Peer-to-Peer Energy Trading in Smart Energy Communities: A Lyapunov-based Energy Control and Trading System. <i>IEEE Access</i> , 2022 , 1-1	3.5	2

21	Data Aggregation in Software-Defined Wireless Sensor Networks: A Review 2019 ,		1
20	Enabling a Battery-Less Sensor Node Using Dedicated Radio Frequency Energy Harvesting for Complete Off-Grid Applications. <i>Energies</i> , 2020 , 13, 5402	3.1	1
19	Comparative Study of Artificial Intelligence Based Intrusion Detection for Software-Defined Wireless Sensor Networks 2019 ,		1
18	A Review of Wireless Sensor Network Localisation Based on Software Defined Networking 2019 ,		1
17	Blockchain-Based Security Model for LoRaWAN Firmware Updates. <i>Journal of Sensor and Actuator Networks</i> , 2022 , 11, 5	3.8	1
16	A Critical Review of IoT-Connected Healthcare and Information Security in South Africa. <i>Lecture Notes in Networks and Systems</i> , 2022 , 739-746	0.5	1
15	Fog Orchestrator as an Enabler for Security in Fog Computing: A Review 2019 ,		1
14	Amplitude quantization method for autonomous threshold estimation in self-reconfigurable cognitive radio systems. <i>Physical Communication</i> , 2021 , 44, 101256	2.2	1
13	Software-Defined Power Grids: A Survey on Opportunities and Taxonomy for Microgrids. <i>IEEE Access</i> , 2021 , 9, 98973-98991	3.5	1
12	AI-Enabled Threat Intelligence and Hunting Microservices for Distributed Industrial IoT System. <i>IEEE Transactions on Industrial Informatics</i> , 2021 , 1-1	11.9	1
11	SurveilNet: A Lightweight Anomaly Detection System for Cooperative IoT Surveillance Networks. <i>IEEE Sensors Journal</i> , 2021 , 1-1	4	1
10	An optimization-based congestion control for constrained application protocol. <i>International Journal of Network Management</i> , e2178	1.8	1
9	Improved Two-Stage Spectrum Sensing for Cognitive Radio Networks. <i>Journal of Advanced Computational Intelligence and Intelligent Informatics</i> , 2019 , 23, 1052-1062	0.4	0
8	Radio Resource Allocation Improvements in Cognitive Radio Sensor Network for Smart Grid: Investigative Study and Solutions. <i>International Journal of Sensors, Wireless Communications and Control</i> , 2021 , 11, 666-688	0.4	0
7	A Spreading Factor Congestion Status-Aware Adaptive Data Rate Algorithm. <i>Journal of Sensor and Actuator Networks</i> , 2021 , 10, 70	3.8	0
6	An Updated Survey on the Convergence of Distributed Ledger Technology and Artificial Intelligence: Current State, Major Challenges and Future Direction. <i>IEEE Access</i> , 2022 , 1-1	3.5	0
5	Histogram partitioning algorithms for adaptive and autonomous threshold estimation in cognitive radio-based industrial wireless sensor networks. <i>Transactions on Emerging Telecommunications Technologies</i> , 2019 , 30, e3679	1.9	
4	Robustness of Parameter-Less Remote Real-Time Pressure Control in Water Distribution Systems. <i>Springer Water</i> , 2018 , 449-463	0.3	

- 3 Effect of Pipe Materials on Background Leakage Estimate Using Graph-Based Hydraulic Model: An Extended Study **2019**, 245-254
- 2 A Survey of Intelligent Agro-climate Decision Support Tool for Small-Scale Farmers: An Integration of Indigenous Knowledge, Mobile Phone Technology and Smart Sensors. *Lecture Notes in Networks and Systems*, **2021**, 715-730 0.5
- 1 Performance Evaluation of Spreading Factors in LoRa Networks. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering*, **2021**, 203-215 0.2