Muhammad Zeeshan Shakir

List of Publications by Year
in descending order

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104 papers	2,558 citations	516215 16 h-index	315357 38 g-index
120 all docs	120 docs citations	120 times ranked	3624 citing authors

#	Article	IF	Citations
1	Solution Processable Holey Graphene Oxide and Its Derived Macrostructures for High-Performance Supercapacitors. Nano Letters, 2015, 15, 4605-4610.	4.5	426
2	FSO-Based Vertical Backhaul/Fronthaul Framework for 5G+ Wireless Networks. , 2018, 56, 218-224.		375
3	MmWave massive-MIMO-based wireless backhaul for the 5G ultra-dense network. IEEE Wireless Communications, 2015, 22, 13-21.	6.6	339
4	Backhaul-aware robust 3D drone placement in 5G+ wireless networks. , 2017, , .		195
5	Separation Framework: An Enabler for Cooperative and D2D Communication for Future 5G Networks. IEEE Communications Surveys and Tutorials, 2016, 18, 419-445.	24.8	109
6	A survey on energy trading in smart grid. , 2014, , .		73
7	Internet of Things (IoT) Based Indoor Air Quality Sensing and Predictive Analyticâ€"A COVID-19 Perspective. Electronics (Switzerland), 2021, 10, 184.	1.8	56
8	Green heterogeneous small-cell networks: toward reducing the CO₂ emissions of mobile communications industry using uplink power adaptation. , 2013, 51, 52-61.		54
9	Geometric mean decomposition based hybrid precoding for millimeter-wave massive MIMO. China Communications, 2018, 15, 229-238.	2.0	44
10	Highâ€Currentâ€Density Verticalâ€Tunneling Transistors from Graphene/Highly Doped Silicon Heterostructures. Advanced Materials, 2016, 28, 4120-4125.	11.1	43
11	Optimal 3D UAV base station placement by considering autonomous coverage hole detection, wireless backhaul and user demand. Journal of Communications and Networks, 2020, 22, 467-475.	1.8	40
12	A Distributed Approach for Networked Flying Platform Association with Small Cells in 5G+ Networks. , 2017, , .		36
13	Throughput analysis for cognitive radio networks with multiple primary users and imperfect spectrum sensing. IET Communications, 2012, 6, 2787-2795.	1.5	34
14	Blockchain-Based Energy Trading in Electric-Vehicle-Enabled Microgrids. IEEE Consumer Electronics Magazine, 2020, 9, 66-71.	2.3	32
15	Generalized Mean Detector for Collaborative Spectrum Sensing. IEEE Transactions on Communications, 2013, 61, 1242-1253.	4.9	31
16	Efficient k-NN Implementation for Real-Time Detection of Cough Events in Smartphones. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 1662-1671.	3.9	31
17	Coverage Gain and Device-to-Device User Density: Stochastic Geometry Modeling and Analysis. IEEE Communications Letters, 2015, 19, 1742-1745.	2.5	30
18	Expanding cellular coverage via cell-edge deployment in heterogeneous networks: spectral efficiency and backhaul power consumption perspectives. , 2014, 52, 140-149.		28

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19	The Cognitive Internet of Things: A Unified Perspective. Mobile Networks and Applications, 2015, 20, 72-85.	2.2	27
20	Water-Constrained Geographic Load Balancing in Data Centers. IEEE Transactions on Cloud Computing, 2017, 5, 208-220.	3.1	27
21	Machine Learning Based Approach for Indoor Localization Using Ultra-Wide Bandwidth (UWB) System for Industrial Internet of Things (IIoT). , 2020, , .		27
22	On the area spectral efficiency improvement of heterogeneous network by exploiting the integration of macro-femto cellular networks. , 2012, , .		22
23	Association of networked flying platforms with small cells for network centric 5G+ C-RAN. , 2017, , .		22
24	A Novel Airborne Self-Organising Architecture for 5G+ Networks. , 2017, , .		20
25	Area green efficiency (AGE) of two tier heterogeneous cellular networks. , 2012, , .		19
26	A MIH and SDN-based Framework for network selection in 5G HetNet: Backhaul requirement perspectives. , 2015, , .		18
27	Review on condition monitoring techniques for water pipelines. Measurement: Journal of the International Measurement Confederation, 2022, 193, 110895.	2.5	18
28	Nonorthogonal Multiple Access for 5G and Beyond. Wireless Communications and Mobile Computing, 2018, 2018, 1-2.	0.8	17
29	From D2D to Ds2D: Prolonging the Battery Life of Mobile Devices via Ds2D Communications. IEEE Wireless Communications, 2017, 24, 55-63.	6.6	16
30	Analytical Bounds on the Area Spectral Efficiency of Uplink Heterogeneous Networks Over Generalized Fading Channels. IEEE Transactions on Vehicular Technology, 2014, 63, 2306-2318.	3.9	15
31	Distance Based Cooperation Region for D2D Pair. , 2015, , .		14
32	Internet of Things (IoT) Enabled Architecture for Social Distancing During Pandemic. Frontiers in Communications and Networks, 2021, 2, .	1.9	14
33	On the Decision Threshold of Eigenvalue Ratio Detector Based on Moments of Joint and Marginal Distributions of Extreme Eigenvalues. IEEE Transactions on Wireless Communications, 2013, 12, 974-983.	6.1	13
34	Spectral and energy efficiency analysis of uplink heterogeneous networks with small-cells on edge. Physical Communication, 2014, 13, 27-41.	1.2	12
35	Towards Energy Efficient and Quality of Service Aware Cell Zooming in 5G Wireless Networks. , 2015, , .		11
36	Performance and User Association Optimization for UAV Relay-Assisted mm-Wave Massive MIMO Systems. IEEE Access, 2022, 10, 49611-49624.	2.6	11

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37	Narrowband Beamforming Algorithm for Smart Antennas. , 2007, , .		10
38	Spectral efficiency improvements in HetNets by exploiting device-to-device communications. , 2014, , .		10
39	Human Bond Communications: Architectures, Challenges, and Possibilities. IEEE Communications Magazine, 2019, 57, 19-25.	4.9	10
40	Artificial Neural Network (ANN) Enabled Internet of Things (IoT) Architecture for Music Therapy. Electronics (Switzerland), 2020, 9, 2019.	1.8	10
41	Resource Efficient Vehicle-to-Grid (V2G) Communication Systems for Electric Vehicle Enabled Microgrids. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 4171-4180.	4.7	10
42	Spatial modeling of Dengue prevalence and kriging prediction of Dengue outbreak in Khyber Pakhtunkhwa (Pakistan) using presence only data. Stochastic Environmental Research and Risk Assessment, 2020, 34, 1023-1036.	1.9	9
43	Collaborative spectrum sensing based on the ratio between largest eigenvalue and Geometric mean of eigenvalues. , 2011, , .		8
44	End-to-end downlink power consumption of heterogeneous small-cell networks based on the probabilistic traffic model. , 2014, , .		8
45	Spatial and Social Paradigms for Interference and Coverage Analysis in Underlay D2D Network. IEEE Transactions on Vehicular Technology, 2017, 66, 9328-9337.	3.9	8
46	New Development and Evaluation Model for Self-Regulated Smart Learning Environment in Higher Education. , 2019, , .		8
47	Downlink power consumption of HetNets based on the probabilistic traffic model of mobile users. , 2013, , .		7
48	An Artificial Neural Network (ANN)-Based Learning Agent for Classifying Learning Styles in Self-Regulated Smart Learning Environment. International Journal of Emerging Technologies in Learning, 2021, 16, 185.	0.8	7
49	Evaluating studentsâ€™ experiences in self-regulated smart learning environment. Education and Information Technologies, 2023, 28, 547-580.	3.5	7
50	Cognitive Radio Oriented Wireless Networks. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2015, , .	0.2	6
51	A Survey of Machine Learning Algorithms and Their Applications in Cognitive Radio. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2015, , 790-801.	0.2	6
52	IEEE 1900.7 Standard for White Space Dynamic Spectrum Access Radio Systems. , 2018, 56, 188-192.		6
53	S3TFPAS: Scalable shoulder surfing resistant textual-formula base password authentication system. , 2010, , .		5
54	On the interference suppression capabilities of cognitive enabled femto cellular networks. , 2012, , .		5

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55	On the Probabilistic Model for Primary and Secondary User Activity for OFDMA-Based Cognitive Radio Systems: Spectrum Occupancy and System Throughput Perspectives. IEEE Transactions on Wireless Communications, 2014, 13, 356-369.	6.1	5
56	IEEE Access Special Section Editorial: Mission Critical Public-Safety Communications: Architectures, Enabling Technologies, and Future Applications. IEEE Access, 2018, 6, 79258-79262.	2.6	5
57	Eigenvalue Ratio Detection Based On Exact Moments of Smallest and Largest Eigenvalues. , 2011, , .		4
58	Cognitive impairments in human brain due to wireless signals and systems: An experimental study using EEG signal analysis. , 2013, , .		4
59	Smart backhauling and fronthauling for 5G networks: from precoding to network architecture [Guest editorial]. IEEE Wireless Communications, 2015, 22, 10-12.	6.6	4
60	Efficient selection of source devices and radio interfaces for green Ds2D communications. , 2016, , .		4
61	EVaaS: A Novel On-Demand Outage Mitigation Framework for Electric Vehicle Enabled Microgrids. , 2018, , .		4
62	Resilience of airborne networks. , 2018, , .		4
63	Intracell Interference Characterization and Cluster Interference for D2D Communication. IEEE Transactions on Vehicular Technology, 2018, 67, 8536-8548.	3.9	4
64	A GPS-free Passive Acoustic Localization Scheme for Underwater Wireless Sensor Networks. , 2011, , .		3
65	On the reduction in specific absorption rate using uplink power adaptation in heterogeneous small-cell networks. , 2013, , .		3
66	IEEE 1900.7 standard for white space dynamic spectrum access radio systems. , 2015, , .		3
67	Fronthaul data compression for Uplink CoMP in cloud radio access network (Câ€RAN). Transactions on Emerging Telecommunications Technologies, 2016, 27, 1409-1425.	2.6	3
68	On the Traffic Offloading in Wi-Fi Supported Heterogeneous Wireless Networks. Journal of Signal Processing Systems, 2016, 83, 225-240.	1.4	3
69	3-D Placement Schemes of Multiple UAVs in NFP-based Wireless Networks. , 2018, , .		3
70	Remote Condition Monitoring: A Prototype Based on Pycom Development Board FiPy and Pysense. , 2019, , .		3
71	Public-Key Authentication for Cloud-based WBANs. , 2014, , .		3
72	On the optimum joint decoding capacity of Wyner Circular GCMAC by exploiting Hadamard inequality. , 2010, , .		2

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73	A scalable global positioning system-free localization scheme for underwater wireless sensor networks. Eurasip Journal on Wireless Communications and Networking, 2013, 2013, .	1.5	2
74	3D visualization to aid engineering education: A case study to visualize the impact of wireless signals on human brain. , 2014, , .		2
75	Emerging applications, services, and engineering for cellular cognitive systems: part II [Guest Editorial]. , 2015, 53, 66-68.		2
76	Spectral and energy efficient cognitive radioâ€aided heterogeneous cellular network with uplink power adaptation. Wireless Communications and Mobile Computing, 2016, 16, 2144-2162.	0.8	2
77	Empirical performance evaluation of FSO availability under different weather conditions. , 2017, , .		2
78	Fronthaul design for mmWave massive MIMO. , 2017, , 289-312.		2
79	Achievable rate of hybrid precoding for hardware impaired MIMO underground mine channel. Electronics Letters, 2019, 55, 425-426.	0.5	2
80	Guest Editorial: Design and Analysis of Communication Interfaces for Industry 4.0. IEEE Journal on Selected Areas in Communications, 2020, 38, 797-802.	9.7	2
81	Combined economic emission based resource allocation for electric vehicle enabled microgrids. IET Smart Grid, 2020, 3, 768-776.	1.5	2
82	Hadamard upper bound on optimum joint decoding capacity of Wyner Gaussian cellular MAC. Eurasip Journal on Wireless Communications and Networking, 2011, 2011, .	1.5	1
83	An Active 3-Dimensional Localization Scheme for Femtocell Subscribers Using E-UTRAN. , 2012, , .		1
84	K-tier heterogeneous small-cell networks: Towards balancing the spectrum usage and power consumption with aggressive frequency reuse. , 2013, , .		1
85	Statistical analysis of secondary users throughput for OFDMA cognitive radio networks. , 2013, , .		1
86	On the bits per joule optimization in cellular cognitive radio networks. , 2014, , .		1
87	Emerging applications, services and engineering for [Guest Editorial]. , 2015, 53, 32-34.		1
88	IEEE Access Special Section Editorial: Physical and Medium Access Control Layer Advances in 5G Wireless Networks. IEEE Access, 2017, 5, 27845-27849.	2.6	1
89	Mode selection schemes for D2D enabled unmanned aerial vehicleâ€based wireless networks. IET Communications, 2019, 13, 1397-1404.	1.5	1
90	Dynamic symbol allocation for spectral and energy efficient millimetre wave multiâ€antenna systems. Electronics Letters, 2019, 55, 157-159.	0.5	1

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91	Optimized Link Distribution Schemes for Ultrareliable and Low-Latent Communications in Multilayer Airborne Networks. IEEE Transactions on Industrial Informatics, 2020, 16, 5866-5873.	7.2	1
92	A Lightweight Permission-Based Blockchain for IoT Environments. , 2020, , .		1
93	WIP: Model of Self-Regulated Smart Learning Environment. , 2021, , .		1
94	Generalized Eigenvalue Based Spectrum Sensing. Lecture Notes in Electrical Engineering, 2012, , 139-176.	0.3	1
95	Studentsâ€™â€Ž Readiness for Self-Regulated Smart Learning Environment. International Journal of Technology in Education and Science, 2022, 6, 306-322.	0.7	1
96	Analytical upper bound on optimum joint decoding capacity of Wyner GCMAC using hadamard inequality. , 2011, , .		0
97	On the interference rejection capabilities of triangular antenna array for cellular base stations. , 2012, , .		0
98	On the capacity bounds of K-tier heterogeneous small-cell networks employing aggressive frequency reuse. , 2014, , .		0
99	Heterogeneous Ability-Centered Team Building to aid enquiry based learning in engineering classroom. , 2014, , .		0
100	On bounds for the cognitive multiple access Z-Interference Channel. , 2015, , .		0
101	Energy efficient heterogeneous networks. , 0, , 462-483.		0
102	Green networks: Energy efficient design for future generations of wireless networks. , 2012, , .		0
103	UAV-Enabled IoT Networks: Architecture, Opportunities, and Challenges. , 2021, , 263-288.		0
104	Interference Suppression Capabilities of Smart Cognitive-Femto Networks (SCFN). , 0, , 111-135.		0