Basem Shihada

List of Publications by Year
in descending order

166 papers	3,236 citations	236833 25 h-index	197736 49 g-index
174 all docs	174 docs citations	174 times ranked	3005 citing authors

#	Article	IF	Citations
1	What should 6G be?. Nature Electronics, 2020, 3, 20-29.	13.1	845
2	Terahertz Band: The Last Piece of RF Spectrum Puzzle for Communication Systems. IEEE Open Journal of the Communications Society, 2020, 1, 1-32.	4.4	279
3	Visible Light Communications via Intelligent Reflecting Surfaces: Metasurfaces vs Mirror Arrays. IEEE Open Journal of the Communications Society, 2021, 2, 1-20.	4.4	82
4	Space-Air-Ground Integrated Networks: Outage Performance Analysis. IEEE Transactions on Wireless Communications, 2020, 19, 7897-7912.	6.1	70
5	Energy Efficiency in TDMA-Based Next-Generation Passive Optical Access Networks. IEEE/ACM Transactions on Networking, 2014, 22, 850-863.	2.6	64
6	Real-Time Video Transmission Over Different Underwater Wireless Optical Channels Using a Directly Modulated 520â€‰â€‰nm Laser Diode. Journal of Optical Communications and Networking, 2017, 9, 826.	3.3	60
7	Learn-As-You-Fly: A Distributed Algorithm for Joint 3D Placement and User Association in Multi-UAVs Networks. IEEE Transactions on Wireless Communications, 2019, 18, 5831-5844.	6.1	60
8	Blockchain in IoT Systems: End-to-End Delay Evaluation. IEEE Internet of Things Journal, 2019, 6, 8332-8344.	5.5	48
9	Downlink Resource Allocation for Dynamic TDMA-Based VLC Systems. IEEE Transactions on Wireless Communications, 2019, 18, 108-120.	6.1	48
10	Sophisticated Online Learning Scheme for Green Resource Allocation in 5G Heterogeneous Cloud Radio Access Networks. IEEE Transactions on Mobile Computing, 2018, 17, 2423-2437.	3.9	47
11	End-to-End Performance Analysis of Underwater Optical Wireless Relaying and Routing Techniques Under Location Uncertainty. IEEE Transactions on Wireless Communications, 2020, 19, 1167-1181.	6.1	44
12	Energy Efficient Resource Allocation for Cognitive Radios: A Generalized Sensing Analysis. IEEE Transactions on Wireless Communications, 2015, 14, 2455-2469.	6.1	43
13	Energy-Efficient Power Allocation in Multitier 5G Networks Using Enhanced Online Learning. IEEE Transactions on Vehicular Technology, 2017, 66, 11086-11097.	3.9	40
14	Communication through Breath: Aerosol Transmission. IEEE Communications Magazine, 2019, 57, 33-39.	4.9	39
15	Dual Attention-Based Federated Learning for Wireless Traffic Prediction. , 2021, , .		36
16	Energy-Efficient Trajectory Optimization for UAV-Assisted IoT Networks. IEEE Transactions on Mobile Computing, 2022, 21, 4323-4337.	3.9	34
17	ARBR: Adaptive reinforcement-based routing for DTN. , 2010, , .		33
18	Optimal Node Placement in Underwater Wireless Sensor Networks. , 2013, , .		33

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19	A cooperative online learning scheme for resource allocation in 5G systems. , 2016, , .		33
20	Latency-Aware Offloading in Integrated Satellite Terrestrial Networks. IEEE Open Journal of the Communications Society, 2020, 1, 490-500.	4.4	33
21	Modeling of Viral Aerosol Transmission and Detection. IEEE Transactions on Communications, 2020, 68, 4859-4873.	4.9	33
22	A Software-Defined Opto-Acoustic Network Architecture for Internet of Underwater Things. IEEE Communications Magazine, 2020, 58, 88-94.	4.9	33
23	Aqua-Fi: Delivering Internet Underwater Using Wireless Optical Networks. IEEE Communications Magazine, 2020, 58, 84-89.	4.9	31
24	A Novel Message Scheduling Framework for Delay Tolerant Networks Routing. IEEE Transactions on Parallel and Distributed Systems, 2013, 24, 871-880.	4.0	30
25	UHD Video Transmission Over Bidirectional Underwater Wireless Optical Communication. IEEE Photonics Journal, 2018, 10, 1-14.	1.0	30
26	Enhanced Orthogonal Frequency-Division Multiplexing With Subcarrier Number Modulation. IEEE Internet of Things Journal, 2019, 6, 7907-7920.	5.5	30
27	Enhanced machine learning scheme for energy efficient resource allocation in 5G heterogeneous cloud radio access networks. , 2017, , .		29
28	Spectral Efficiency and Energy Harvesting in Multi-Cell SLIPT Systems. IEEE Transactions on Wireless Communications, 2020, 19, 3304-3318.	6.1	27
29	Transport control protocol in optical burst switched networks: issues, solutions, and challenges. IEEE Communications Surveys and Tutorials, 2008, 10, 70-86.	24.8	26
30	On Event Detection and Localization in Acyclic Flow Networks. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2013, 43, 708-723.	5.9	25
31	Buffer sizing in wireless networks: challenges, solutions, and opportunities. , 2016, 54, 130-137.		25
32	Max-Min Optimality of Service Rate Control in Closed Queueing Networks. IEEE Transactions on Automatic Control, 2013, 58, 1051-1056.	3.6	24
33	Energy Efficient Traffic Offloading in Multi-Tier Heterogeneous 5G Networks Using Intuitive Online Reinforcement Learning. IEEE Transactions on Green Communications and Networking, 2019, 3, 691-702.	3.5	20
34	Can blockchain link the future?. Digital Communications and Networks, 2022, 8, 687-694.	2.7	20
35	The Optimal and the Greedy: Drone Association and Positioning Schemes for Internet of UAVs. IEEE Internet of Things Journal, 2021, 8, 14066-14079.	5.5	20
36	A Journey From Improper Gaussian Signaling to Asymmetric Signaling. IEEE Communications Surveys and Tutorials, 2020, 22, 1539-1591.	24.8	19

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37	Channel Characterization of IRS-Based Visible Light Communication Systems. IEEE Transactions on Communications, 2022, 70, 1913-1926.	4.9	19
38	Self-Adaptive Contention Aware Routing Protocol for Intermittently Connected Mobile Networks. IEEE Transactions on Parallel and Distributed Systems, 2013, 24, 1422-1435.	4.0	18
39	Spectral-Efficiencyâ€"Illumination Pareto Front for Energy Harvesting Enabled VLC Systems. IEEE Transactions on Communications, 2019, 67, 8557-8572.	4.9	18
40	Improper Gaussian Signaling for Hardware Impaired Multihop Full-Duplex Relaying Systems. IEEE Transactions on Communications, 2019, 67, 1858-1871.	4.9	18
41	An Efficient Live TV Scheduling System forÂ4GÂLTEÂBroadcast. IEEE Systems Journal, 2017, 11, 2737-2748.	2.9	17
42	Location-Aware, Context-Driven QoS for IoT Applications. IEEE Systems Journal, 2020, 14, 232-243.	2.9	17
43	Whirlpool routing for mobility. , 2010, , .		16
44	M-Burst: A Framework of SRLG Failure Localization in All-Optical Networks. Journal of Optical Communications and Networking, 2012, 4, 628.	3.3	16
45	gTBS: A green Task-Based Sensing for energy efficient Wireless Sensor Networks. , 2016, , .		16
46	Design and Provision of Traffic Grooming for Optical Wireless Data Center Networks. IEEE Transactions on Communications, 2019, 67, 2245-2259.	4.9	16
47	Opportunistic Routing for Opto-Acoustic Internet of Underwater Things. IEEE Internet of Things Journal, 2022, 9, 2165-2179.	5.5	16
48	Downstream-based Scheduling for Energy Conservation in Green EPONs. Journal of Communications, 2012, 7, .	1.3	16
49	FLight: A Fast and Lightweight Elephant-Flow Detection Mechanism. , 2018, , .		15
50	Optical wireless data center networks: potentials, limitations, and prospects. , 2019, , .		15
51	A Novel Congestion Detection Scheme in TCP Over OBS Networks. Journal of Lightwave Technology, 2009, 27, 386-395.	2.7	14
52	Topology Optimization for 6G Networks: A Network Information-Theoretic Approach. IEEE Vehicular Technology Magazine, 2020, 15, 83-92.	2.8	14
53	On Outage Performance of Terahertz Wireless Communication Systems. IEEE Transactions on Communications, 2022, 70, 649-663.	4.9	14
54	Heterogeneous Traffic Offloading in Space-Air-Ground Integrated Networks. IEEE Access, 2021, 9, 165462-165475.	2.6	14

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55	A novel implementation of TCP Vegas for optical burst switched networks. Optical Switching and Networking, 2010, 7, 115-126.	1.2	13
56	Buffer Sizing in 802.11 Wireless Mesh Networks. , 2011, , .		13
57	A Novel Error Performance Analysis Methodology for OFDM-IM. IEEE Wireless Communications Letters, 2019, 8, 897-900.	3.2	13
58	A Distributed Mechanism for Joint 3D Placement and User Association in UAV-Assisted Networks. , 2019, , .		13
59	Practical and Dynamic Buffer Sizing Using <i>LearnQueue</i>. IEEE Transactions on Mobile Computing, 2019, 18, 1885-1897.	3.9	13
60	An empirical evaluation of bufferbloat in IEEE 802.11n wireless networks. , 2014, , .		12
61	SectOR: Sector-Based Opportunistic Routing Protocol for Underwater Optical Wireless Networks. , 2019, , .		12
62	A Jackson network model and threshold policy for joint optimization of energy and delay in multi-hop wireless networks. European Journal of Operational Research, 2015, 242, 778-787.	3.5	11
63	Design and provisioning of optical wireless data center networks: A traffic grooming approach. , 2018, , .		11
64	Adaptive Decision-Making Scheme for Cognitive Radio Networks. , 2014, , .		10
65	Modeling Co-Channel Interference in the THz Band. IEEE Transactions on Vehicular Technology, 2021, 70, 6319-6334.	3.9	10
66	Efficient Wireless Traffic Prediction at the Edge: A Federated Meta-Learning Approach. IEEE Communications Letters, 2022, 26, 1573-1577.	2.5	10
67	Mobile Sensor Networks for Leak and Backflow Detection in Water Distribution Systems. , 2014, , .		9
68	Fair packet scheduling in Wireless Mesh Networks. Ad Hoc Networks, 2014, 13, 414-427.	3.4	9
69	An energy efficient cognitive radio system with quantized soft sensing and duration analysis. , 2015, , .		9
70	Delay analysis of new-flow setup time in software defined networks. , 2018, , .		9
71	Queuing Delay Model for Video Transmission Over Multi-Channel Underwater Wireless Optical Networks. IEEE Access, 2019, 7, 10515-10522.	2.6	9
72	Relay Assisted OFDM With Subcarrier Number Modulation in Multi-Hop Cooperative Networks. IEEE Wireless Communications Letters, 2020, 9, 1869-1873.	3.2	9

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73	Revolutionizing Optical Wireless Communications via Smart Optics. IEEE Open Journal of the Communications Society, 2022, 3, 654-669.	4.4	9
74	BAIMD: A Responsive Rate Control for TCP over Optical Burst Switched (OBS) Networks. , 2006, , .		8
75	Threshold-based TCP Vegas over Optical Burst Switched Networks. Computer Communications and Networks (IC3N), Proceedings of the IEEE International Conference on, 2006, , .	0.0	8
76	CogWnet: A Resource Management Architecture for Cognitive Wireless Networks. , 2013, , .		8
77	End-to-end delay analysis in wireless sensor networks with service vacation. , 2014, , .		8
78	WQM. , 2014, , .		8
79	Energy Efficiency and SINR Maximization Beamformers for Spectrum Sharing With Sensing Information. IEEE Transactions on Wireless Communications, 2014, 13, 5095-5106.	6.1	8
80	Adaptive multi-objective Optimization scheme for cognitive radio resource management. , 2014, , .		8
81	iFrag: interference-aware frame fragmentation scheme for wireless sensor networks. Wireless Networks, 2014, 20, 2019-2036.	2.0	8
82	Green smartphone GPUs: Optimizing energy consumption using GPUFreq scaling governors. , 2015, , .		8
83	An Efficient Content Delivery System for 5G CRAN Employing Realistic Human Mobility. IEEE Transactions on Mobile Computing, 2019, 18, 742-756.	3.9	8
84	LightFDG: An Integrated Approach to Flow Detection and Grooming in Optical Wireless DCNs. IEEE Transactions on Network and Service Management, 2020, 17, 1153-1166.	3.2	8
85	On Telecommunication Service Imbalance and Infrastructure Resource Deployment. IEEE Wireless Communications Letters, 2021, 10, 2125-2129.	3.2	8
86	On the Capacity of Reconfigurable Intelligent Surface Assisted MIMO Symbiotic Communications. IEEE Transactions on Wireless Communications, 2022, 21, 1943-1959.	6.1	8
87	Towards Optimal Event Detection and Localization in Acyclic Flow Networks. Lecture Notes in Computer Science, 2012, , 179-196.	1.0	8
88	Monitoring burst (M-burst) &#x2014; A novel framework of failure localization in all-optical mesh networks. , 2011, , .		7
89	TMAC: Timestamp-Ordered MAC for CSMA/CA Wireless Mesh Networks. , 2011, , .		7
90	Deflating link buffers in a wireless mesh network. Ad Hoc Networks, 2014, 16, 266-280.	3.4	7

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91	Failure mitigation in software defined networking employing load type prediction. , 2017, , .		7
92	Hyperloop Communications: Challenges, Advances, and Approaches. IEEE Open Journal of the Communications Society, 2021, 2, 2413-2435.	4.4	7
93	A novel TCP with dynamic Burst-Contention Loss notification over OBS networks. Computer Networks, 2008, 52, 461-471.	3.2	6
94	Enhanced cognitive Radio Resource Management for LTE systems. , 2013, , .		6
95	Energy efficient scheme for cognitive radios utilizing soft sensing. , 2014, , .		6
96	Optimal Cross-Layer Design for Energy Efficient D2D Sharing Systems. IEEE Transactions on Wireless Communications, 2017, 16, 839-855.	6.1	6
97	Energy-Efficient Fixed-Gain AF Relay Assisted OFDM With Index Modulation. IEEE Wireless Communications Letters, 2020, 9, 1509-1513.	3.2	6
98	Energy Efficient Monitoring for Intrusion Detection in Battery-Powered Wireless Mesh Networks. Lecture Notes in Computer Science, 2011, , 44-57.	1.0	6
99	TCP-ENG: Dynamic Explicit Congestion Notification for TCP over OBS Networks. , 2007, , .		5
100	FAST TCP over optical burst switched networks: Modeling and stability analysis. Optical Switching and Networking, 2013, 10, 107-118.	1.2	5
101	Green frame aggregation scheme for Wi-Fi networks. , 2015, , .		5
102	Green partial packet recovery in wireless sensor networks. Journal of Network and Computer Applications, 2015, 58, 267-279.	5.8	5
103	Outage Analysis of Spectrum Sharing Over M-Block Fading With Sensing Information. IEEE Transactions on Vehicular Technology, 2017, 66, 3071-3087.	3.9	5
104	Enhanced Huffman Coded OFDM With Index Modulation. IEEE Transactions on Wireless Communications, 2020, 19, 2489-2503.	6.1	5
105	Viral Aerosol Concentration Characterization and Detection in Bounded Environments. IEEE Transactions on Molecular, Biological, and Multi-Scale Communications, 2021, 7, 185-199.	1.4	5
106	MAC-Layer Active Dropping for Real-Time Video Streaming in 4G Access Networks. IEEE Systems Journal, 2010, 4, 561-572.	2.9	4
107	The efficacy of centralized flow rate control in 802.11-based wireless mesh networks. Eurasip Journal on Wireless Communications and Networking, 2013, 2013, .	1.5	4
108	Energy efficient SDN commodity switch based practical flow forwarding method. , 2016, , .		4

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109	Battling Latency in Modern Wireless Networks. IEEE Access, 2018, 6, 26131-26143.	2.6	4
110	Intelligent Edge: An Instantaneous Detection of IoT Traffic Load. , 2018, , .		4
111	Power Allocation for Relayed OFDM With Index Modulation Assisted by Artificial Neural Network. IEEE Wireless Communications Letters, 2021, 10, 373-377.	3.2	4
112	A Power Saving Scheme for IEEE 802.15.3d THz Wireless Communication Links. IEEE Transactions on Mobile Computing, 2023, 22, 1912-1921.	3.9	4
113	When Probabilistic Shaping Realizes Improper Signaling for Hardware Distortion Mitigation. IEEE Transactions on Communications, 2021, 69, 5028-5042.	4.9	4
114	Energy-Aware Underwater Optical System With Combined Solar Cell and SPAD Receiver. IEEE Communications Letters, 2022, 26, 59-63.	2.5	4
115	Proactive Traffic Offloading in Dynamic Integrated Multisatellite Terrestrial Networks. IEEE Transactions on Communications, 2022, 70, 4671-4686.	4.9	4
116	Event localization in underwater wireless sensor networks using Monitoring Courses. , 2012, , .		3
117	Sleep-time sizing and scheduling in green passive optical networks. , 2012, , .		3
118	MAC-layer protocol for TCP fairness in Wireless Mesh Networks. , 2012, , .		3
119	Power and delay optimisation in multi-hop wireless networks. International Journal of Control, 2014, 87, 1252-1265.	1.2	3
120	Energy efficiency and SINR maximization beamformers for cognitive radio utilizing sensing information. , 2014, , .		3
121	A Practical Approach For Excess Bandwidth Distribution for EPONs. , 2014, , .		3
122	TV Broadcast Efficiency in 5G Networks from Subscriber Prospective. , 2015, , .		3
123	On the analysis of human mobility model for content broadcasting in 5G networks. , 2017, , .		3
124	SoftFG: A Dynamic Load Balancer for Soft Reconfiguration of Wireless Data Centers. , 2020, , .		3
125	Video Quality Prediction over Wireless 4G. Lecture Notes in Computer Science, 2013, , 414-425.	1.0	3
126	Big Communications: Connect the Unconnected. Frontiers in Communications and Networks, 2022, 3, .	1.9	3

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127	EMF-Aware Probabilistic Shaping Design for Hardware-Distorted Communication Systems. Frontiers in Communications and Networks, 2022, 3, .	1.9	3
128	Performance Evaluation of TCP Vegas over Optical Burst Switched Networks. , 2006, , .		2
129	A Novel False Congestion Detection Scheme for TCP over OBS Networks. , 2007, , .		2
130	Contention aware mobility prediction routing for intermittently connected mobile networks. Wireless Networks, 2013, 19, 2093-2108.	2.0	2
131	Green-Frag: Energy-efficient frame fragmentation scheme for wireless sensor networks. , 2013, , .		2
132	Empirical Evaluation of Superposition Coded Multicasting for Scalable Video. , 2013, , .		2
133	Buffer management in wireless full-duplex systems. , 2015, , .		2
134	An energy efficient hybrid interference-resilient frame fragmentation for wireless sensor networks. , 2015, , .		2
135	Parallel Void Thread in Long-Reach Ethernet Passive Optical Networks. Journal of Optical Communications and Networking, 2015, 7, 656.	3.3	2
136	Cognitive Aware Interference Mitigation Scheme for LTE Femtocells. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2015, , 607-619.	0.2	2
137	Dropping probability reduction in OBS networks: A simple approach. Optik, 2016, 127, 9947-9960.	1.4	2
138	LightFD: A Lightweight Flow Detection Mechanism for Traffic Grooming in Optical Wireless DCNs. , 2018, , .		2
139	On the Optimization of Multi-Cell SLIPT Systems. , 2018, , .		2
140	Analyzing Latency and Dropping in Today's Internet of Multimedia Things. , 2019, , .		2
141	Information-Theoretic Analysis of OFDM With Subcarrier Number Modulation. IEEE Transactions on Information Theory, 2021, 67, 7338-7354.	1.5	2
142	Prospect Theory for Human-Centric Communications. Frontiers in Communications and Networks, 2021, 2, .	1.9	2
143	Networking research for the Arab world. Communications of the ACM, 2021, 64, 114-119.	3.3	2
144	Paving the Way for Distributed Artificial Intelligence Over the Air. IEEE Open Journal of the Communications Society, 2022, 3, 1103-1118.	4.4	2

#	Article	IF	Citations
145	Decentralized control of transmission rates in energy-critical wireless networks. , 2013, , .		1
146	Efficient Power Allocation for Video over Superposition Coding. , 2013, , .		1
147	Reducing attendance time in LR-EPONs with differentiated services. , 2015, , .		1
148	Energy efficient cross layer design for spectrum sharing systems. , 2016, , .		1
149	Enhanced Online Q-Learning Scheme for Energy Efficient Power Allocation in Cognitive Radio Networks. , 2019, , .		1
150	Rethinking Blockchain Integration with the Industrial Internet of Things. IEEE Internet of Things Magazine, 2020, 3, 70-75.	2.0	1
151	Pre-6G Graduate Education of Communications Engineering. Frontiers in Communications and Networks, 2022, 2, .	1.9	1
152	On Outage Performance of Spectrum-Sharing Communication over M-Block Fading. , 2014, , .		0
153	TV Broadcast Efficiency in 5G Networks from Subscriber Prospective. , 2014, , .		0
154	On Outage Performance of Spectrum-Sharing Communication over M-Block Fading. , 2015, , .		0
155	Blind void filling in LR-EPONs: How efficient it can be?. , 2015, , .		0
156	Hybrid cognitive engine for radio systems adaptation. , 2017, , .		0
157	On Energy Efficiency of Prioritized IoT Systems. , 2017, , .		0
158	Supervised cognitive system: A new vision for cognitive engine design in wireless networks. , 2018, , .		0
159	A memory-oriented MAC-layer design for future IoT systems. Ad Hoc Networks, 2020, 108, 102276.	3.4	0
160	Toward Spectral and Energy Efficient 5G Networks Using Relayed OFDM With Index Modulation. Frontiers in Communications and Networks, 2021, 2, .	1.9	0
161	Accelerate Monte Carlo Simulation for Probability Measures by an Interrupt Mechanism. IEEE Communications Letters, 2021, 25, 2854-2858.	2.5	0
162	A Network Management Viewpoint on Security in E-Services. IFIP Advances in Information and Communication Technology, 2003, , 17-45.	0.5	0

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163	Optimizing Energy and Modulation Selection in Multi-Resolution Modulation For Wireless Video Broadcast/Multicast. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2010, , 67-79.	0.2	0
164	An Empirical Analysis of the Progress in Wireless Communication Generations. , 2020, , .		0
165	ICAQ: Adaptive QoS System for 5G and Beyond Applications. , 2020, , .		0
166	Lessons From the Commercial Failure of Project Loon for 6G Research Roadmap Design. Frontiers in Communications and Networks, 2022, 3, .	1.9	0