

# Ala Al-Fuqaha

## List of Publications by Year in descending order

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Version: 2024-02-01

149  
papers

12,371  
citations

201674

27  
h-index

76900

74  
g-index

156  
all docs

156  
docs citations

156  
times ranked

12419  
citing authors

#	ARTICLE	IF	CITATIONS
1	Internet of Things: A Survey on Enabling Technologies, Protocols, and Applications. IEEE Communications Surveys and Tutorials, 2015, 17, 2347-2376.	39.4	5,614
2	Unmanned Aerial Vehicles (UAVs): A Survey on Civil Applications and Key Research Challenges. IEEE Access, 2019, 7, 48572-48634.	4.2	1,221
3	Deep Learning for IoT Big Data and Streaming Analytics: A Survey. IEEE Communications Surveys and Tutorials, 2018, 20, 2923-2960.	39.4	905
4	Blockchain for AI: Review and Open Research Challenges. IEEE Access, 2019, 7, 10127-10149.	4.2	596
5	Smart Cities: A Survey on Data Management, Security, and Enabling Technologies. IEEE Communications Surveys and Tutorials, 2017, 19, 2456-2501.	39.4	383
6	Semisupervised Deep Reinforcement Learning in Support of IoT and Smart City Services. IEEE Internet of Things Journal, 2018, 5, 624-635.	8.7	293
7	Enabling Cognitive Smart Cities Using Big Data and Machine Learning: Approaches and Challenges. , 2018, 56, 94-101.		259
8	Secure and Robust Machine Learning for Healthcare: A Survey. IEEE Reviews in Biomedical Engineering, 2021, 14, 156-180.	18.0	230
9	Unsupervised Machine Learning for Networking: Techniques, Applications and Research Challenges. IEEE Access, 2019, 7, 65579-65615.	4.2	206
10	Software-Defined Networking for RSU Clouds in Support of the Internet of Vehicles. IEEE Internet of Things Journal, 2015, 2, 133-144.	8.7	184
11	Toward better horizontal integration among IoT services. , 2015, 53, 72-79.		141
12	Securing Connected & Autonomous Vehicles: Challenges Posed by Adversarial Machine Learning and the Way Forward. IEEE Communications Surveys and Tutorials, 2020, 22, 998-1026.	39.4	140
13	Leveraging Machine Learning and Big Data for Smart Buildings: A Comprehensive Survey. IEEE Access, 2019, 7, 90316-90356.	4.2	125
14	A survey on particle swarm optimization with emphasis on engineering and network applications. Evolutionary Intelligence, 2019, 12, 113-129.	3.6	107
15	Intelligent building control systems for thermal comfort and energy-efficiency: A systematic review of artificial intelligence-assisted techniques. Renewable and Sustainable Energy Reviews, 2021, 144, 110969.	16.4	98
16	Softwarization of Internet of Things Infrastructure for Secure and Smart Healthcare. Computer, 2017, 50, 74-79.	1.1	91
17	Generative Adversarial Networks For Launching and Thwarting Adversarial Attacks on Network Intrusion Detection Systems. , 2019, , .		81
18	Reinforcement learning for resource provisioning in the vehicular cloud. IEEE Wireless Communications, 2016, 23, 128-135.	9.0	78

#	ARTICLE	IF	CITATIONS
19	Parameters optimization of deep learning models using Particle swarm optimization. , 2017, , .		70
20	Systematization of Knowledge (SoK): A Systematic Review of Software-Based Web Phishing Detection. IEEE Communications Surveys and Tutorials, 2017, 19, 2797-2819.	39.4	64
21	Developing future human-centered smart cities: Critical analysis of smart city security, Data management, and Ethical challenges. Computer Science Review, 2022, 43, 100452.	15.3	62
22	Intelligent Fusion of Deep Features for Improved Waste Classification. IEEE Access, 2020, 8, 96495-96504.	4.2	52
23	The Duo of Artificial Intelligence and Big Data for Industry 4.0: Applications, Techniques, Challenges, and Future Research Directions. IEEE Internet of Things Journal, 2022, 9, 12861-12885.	8.7	50
24	Budgeted Online Selection of Candidate IoT Clients to Participate in Federated Learning. IEEE Internet of Things Journal, 2021, 8, 5938-5952.	8.7	42
25	Opportunistic Channel Selection Strategy for Better QoS in Cooperative Networks with Cognitive Radio Capabilities. IEEE Journal on Selected Areas in Communications, 2008, 26, 156-167.	14.0	41
26	Active Learning Based Federated Learning for Waste and Natural Disaster Image Classification. IEEE Access, 2020, 8, 208518-208531.	4.2	40
27	Exploiting Unlabeled Data in Smart Cities using Federated Edge Learning. , 2020, , .		38
28	Challenges and Countermeasures for Adversarial Attacks on Deep Reinforcement Learning. IEEE Transactions on Artificial Intelligence, 2022, 3, 90-109.	4.7	37
29	A Student Primer on How to Thrive in Engineering Education during and beyond COVID-19. Education Sciences, 2020, 10, 236.	2.6	36
30	SDN Flow Entry Management Using Reinforcement Learning. ACM Transactions on Autonomous and Adaptive Systems, 2018, 13, 1-23.	0.8	35
31	RSU cloud and its resource management in support of enhanced vehicular applications. , 2014, , .		30
32	Particle Swarm Optimized Federated Learning For Industrial IoT and Smart City Services. , 2020, , .		30
33	A Survey on Spectrum Management for Unmanned Aerial Vehicles (UAVs). IEEE Access, 2022, 10, 11443-11499.	4.2	29
34	Securing Machine Learning in the Cloud: A Systematic Review of Cloud Machine Learning Security. Frontiers in Big Data, 2020, 3, 587139.	2.9	28
35	Trust-Based Cloud Machine Learning Model Selection for Industrial IoT and Smart City Services. IEEE Internet of Things Journal, 2021, 8, 2943-2958.	8.7	27
36	Role of Deep LSTM Neural Networks and Wi-Fi Networks in Support of Occupancy Prediction in Smart Buildings. , 2017, , .		25

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37	Optimizing an artificial immune system algorithm in support of flow-Based internet traffic classification. Applied Soft Computing Journal, 2017, 54, 1-22.	7.2	24
38	Online Auction of Cloud Resources in Support of the Internet of Things. IEEE Internet of Things Journal, 2017, 4, 1583-1596.	8.7	23
39	Topology Control Schema for Better QoS in Hybrid RF/FSO Mesh Networks. IEEE Transactions on Communications, 2012, 60, 1398-1406.	7.8	22
40	Energy efficient cross-layer routing protocol in Wireless Sensor Networks based on fuzzy logic. , 2013, , .		22
41	Adaptive Security for Intelligent Transport System Applications. IEEE Intelligent Transportation Systems Magazine, 2018, 10, 110-120.	3.8	22
42	The Adversarial Machine Learning Conundrum: Can the Insecurity of ML Become the Achilles' Heel of Cognitive Networks?. IEEE Network, 2020, 34, 196-203.	6.9	21
43	Biomedical IoT: Enabling Technologies, Architectural Elements, Challenges, and Future Directions. IEEE Access, 2022, 10, 31306-31339.	4.2	21
44	Fine-Grained Data Selection for Improved Energy Efficiency of Federated Edge Learning. IEEE Transactions on Network Science and Engineering, 2022, 9, 3258-3271.	6.4	20
45	A Fuzzy-Based Hierarchical Energy Efficient Routing Protocol for Large Scale Mobile Ad Hoc Networks (FEER). , 2006, , .		19
46	Towards extended safety in connected vehicles. , 2013, , .		19
47	Black-box Adversarial Machine Learning Attack on Network Traffic Classification. , 2019, , .		19
48	Using hierarchical statistical analysis and deep neural networks to detect covert timing channels. Applied Soft Computing Journal, 2019, 82, 105546.	7.2	19
49	The Frontiers of Deep Reinforcement Learning for Resource Management in Future Wireless HetNets: Techniques, Challenges, and Research Directions. IEEE Open Journal of the Communications Society, 2022, 3, 322-365.	6.9	19
50	Geo-encryption protocol for mobile networks. Computer Communications, 2007, 30, 2510-2517.	5.1	18
51	On Efficient Network Planning and Routing in Large-Scale MANETs. IEEE Transactions on Vehicular Technology, 2009, 58, 3796-3801.	6.3	18
52	A Precise Indoor Localization Approach based on Particle Filter and Dynamic Exclusion Techniques. Network Protocols and Algorithms, 2013, 5, 50.	1.0	18
53	Evolutionary Game Theory Perspective on Dynamic Spectrum Access Etiquette. IEEE Access, 2018, 6, 13142-13157.	4.2	15
54	Robust Insider Attacks Countermeasure for Hadoop: Design and Implementation. IEEE Systems Journal, 2018, 12, 1874-1885.	4.6	15

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55	Routing Framework for All-Optical DWDM Metro and Long-Haul Transport Networks With Sparse Wavelength Conversion Capabilities. IEEE Journal on Selected Areas in Communications, 2004, 22, 1443-1459.	14.0	14
56	Detection of Masquerade Attacks on Wireless Sensor Networks. , 2007, , .		14
57	A new generic model for signal propagation in Wi-Fi and WiMAX environments. , 2008, , .		14
58	Sentiment Analysis from Images of Natural Disasters. Lecture Notes in Computer Science, 2019, , 104-113.	1.3	14
59	Visual Sentiment Analysis from Disaster Images in Social Media. Sensors, 2022, 22, 3628.	3.8	14
60	Traffic grooming, routing, and wavelength assignment in WDM transport networks with sparse grooming resources. Computer Communications, 2007, 30, 3508-3524.	5.1	13
61	Design of a Social Collaboration and Precise Localization Services for the Blind and Visually Impaired. Procedia Computer Science, 2013, 21, 282-291.	2.0	13
62	Adversarial Attacks on Cognitive Self-Organizing Networks: The Challenge and the Way Forward. , 2018, , .		13
63	Genetic Approach for Traffic Grooming, Routing, and Wavelength Assignment in WDM Optical Networks with Sparse Grooming Resources. , 2006, , .		12
64	Gyroscope drift correction based on TDoA technology in support of Pedestrian Dead Reckoning. , 2012, , .		12
65	An intelligent data fusion technique based on the particle filter to perform precise outdoor localization. International Journal of Pervasive Computing and Communications, 2013, 9, 163-183.	1.3	12
66	Smart Cities from the Perspective of Systems. Systems, 2022, 10, 77.	2.3	12
67	A genetic approach for trajectory planning in non-autonomous Mobile Ad-Hoc Networks with QoS requirements. , 2010, , .		11
68	Empowering networking research and experimentation through Software-Defined Networking. Journal of Network and Computer Applications, 2016, 70, 140-155.	9.1	11
69	Client Selection Approach in Support of Clustered Federated Learning over Wireless Edge Networks. , 2021, , .		11
70	Distributed topology control in large-scale hybrid RF/FSO networks: SIMT GPU-based particle swarm optimization approach. International Journal of Communication Systems, 2013, 26, 888-911.	2.5	10
71	Exploiting Context Severity to Achieve Opportunistic Service Differentiation in Vehicular Ad hoc Networks. IEEE Transactions on Vehicular Technology, 2014, 63, 2901-2915.	6.3	10
72	A Survey on the Use of Preferences for Virtual Machine Placement in Cloud Data Centers. ACM Computing Surveys, 2022, 54, 1-39.	23.0	10

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73	Exploiting Client-Side Collected Measurements to Perform QoS Assessment of IaaS. IEEE Transactions on Mobile Computing, 2015, 14, 1876-1887.	5.8	9
74	Secure Plug-in Electric Vehicle (PEV) Charging in a Smart Grid Network. Energies, 2017, 10, 1024.	3.1	9
75	Path Planning in Support of Smart Mobility Applications Using Generative Adversarial Networks. , 2018, , .		9
76	Adversarial Machine Learning Attack on Modulation Classification. , 2019, , .		9
77	Analysis of Asymmetric Dual-Hop Energy Harvesting-Based Wireless Communication Systems in Mixed Fading Environments. IEEE Transactions on Green Communications and Networking, 2021, 5, 261-277.	5.5	9
78	Threshold-Based Data Exclusion Approach for Energy-Efficient Federated Edge Learning. , 2021, , .		9
79	AI-Based Radio Resource Allocation in Support of the Massive Heterogeneity of 6G Networks. , 2021, , .		9
80	A New Hierarchical and Adaptive Protocol for Minimum-Delay V2V Communication. , 2009, , .		8
81	From Channel Selection to Strategy Selection: Enhancing VANETs Using Socially-Inspired Foraging and Deference Strategies. IEEE Transactions on Vehicular Technology, 2018, 67, 8919-8933.	6.3	8
82	Tamp-X: Attacking explainable natural language classifiers through tampered activations. Computers and Security, 2022, 120, 102791.	6.0	8
83	A new queuing strategy for large scale ATM switches. , 2001, 39, 142-146.		7
84	Using Energy-Efficient Overlays to Reduce Packet Error Rates in Wireless Ad-Hoc Networks. , 2006, , .		7
85	A service location problem with QoS constraints. , 2007, , .		7
86	Automating the Configuration of MapReduce: A Reinforcement Learning Scheme. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 4183-4196.	9.3	7
87	Client-side architecture for mobile service QoS monitoring using Generalized Extreme Value theorem. , 2011, , .		6
88	The role of hierarchical entropy analysis in the detection and time-scale determination of covert timing channels. , 2015, , .		6
89	Social deference and hunger as mechanisms for starvation avoidance in cognitive radio societies. , 2016, , .		6
90	Managing a cluster of IoT brokers in support of smart city applications. , 2017, , .		6

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91	Severity-Based Prioritized Processing of Packets with Application in VANETs. IEEE Transactions on Mobile Computing, 2020, 19, 484-496.	5.8	6
92	Optimal hierarchical energy efficient design for MANETs. , 2006, , .		5
93	NISO2-5: Constructing an Efficient Mobility Profile of Ad-Hoc Node for Mobility-Pattern-Based Anomaly Detection in MANET. IEEE Global Telecommunications Conference (GLOBECOM), 2006, , .	0.0	5
94	Mobility Support for Geo-Encryption. , 2007, , .		5
95	Efficient failure prediction in autonomic networks based on trend and frequency analysis of anomalous patterns. International Journal of Network Management, 2013, 23, 186-213.	2.2	5
96	Online Algorithm for Opportunistic Handling of Received Packets in Vehicular Networks. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 285-296.	8.0	5
97	Active learning for event detection in support of disaster analysis applications. Signal, Image and Video Processing, 2021, 15, 1081-1088.	2.7	5
98	Leveraging the Force of Formative Assessment and Feedback for Effective Engineering Education. , 0, , .		5
99	New multiprotocol WDM/CDMA-based optical switch architecture. , 0, , .		4
100	WSN14-6: Minimizing Wireless Connection BER through the Dynamic Distribution of Budgeted Power. IEEE Global Telecommunications Conference (GLOBECOM), 2006, , .	0.0	4
101	A Model for Cooperative Mobility and Budgeted QoS in MANETs with Heterogenous Autonomy Requirements. , 2008, , .		4
102	Prediction of performance degradation in telecommunication networks using Joint Clustering and association analysis techniques. , 2010, , .		4
103	An efficient artificial landmark-based system for indoor and outdoor identification and localization. , 2011, , .		4
104	Two novel learning algorithms to solve the spectrum sharing problem in cognitive radio networks. , 2012, , .		4
105	Towards a client-side QoS monitoring and assessment using Generalized Pareto Distribution in a cloud-based environment. , 2013, , .		4
106	Optimization of power and migration cost in virtualized data centers. , 2016, , .		4
107	Using MapReduce and hierarchical entropy analysis to speed-up the detection of covert timing channels. , 2017, , .		4
108	Using phase shift fingerprints and inertial measurements in support of precise localization in urban areas. Personal and Ubiquitous Computing, 2019, 23, 861-872.	2.8	4

#	ARTICLE	IF	CITATIONS
109	Outcome-based (Engineering) Education (OBE): International Accreditation Practices. , 0, , .		4
110	Using Lagrangean Relaxation for Service Location Planning with QoS Constraints in Large-Scale Networks. , 2008, , .		3
111	Bayesian-Based Game Theoretic Model to Guarantee Cooperativeness in Hybrid RF/FSO Mesh Networks. , 2009, , .		3
112	Failure Prediction Based on Multi-Scale Frequent Anomalous Behavior Identification in Support of Autonomic Networks. , 2010, , .		3
113	Only the short die old. , 2010, , .		3
114	Artificial Immune System Inspired Algorithm for Flow-Based Internet Traffic Classification. , 2014, , .		3
115	Global User-Level Perception of COVID-19 Contact Tracing Applications: Data-Driven Approach Using Natural Language Processing. JMIR Formative Research, 2022, 6, e36238.	1.4	3
116	Social Media as an Instant Source of Feedback on Water Quality. IEEE Transactions on Technology and Society, 2024, , 1-1.	3.2	3
117	Performance of WDM Mesh Networks with Limited Traffic Grooming Resources. , 2007, , .		2
118	Intelligent Service Monitoring and Support. , 2009, , .		2
119	Reconstruction of malicious internet flows. , 2010, , .		2
120	Towards a Streaming Approach to the Mitigation of Covert Timing Channels. , 2018, , .		2
121	From Blindness to Foraging to Sensing to Sociality: an Evolutionary Perspective on Cognitive Radio Networks. Mobile Networks and Applications, 2020, 25, 1902-1914.	3.3	2
122	Opportunistic Selection of Vehicular Data Brokers as Relay Nodes to the Cloud. , 2020, , .		2
123	The robustness of popular multiclass machine learning models against poisoning attacks: Lessons and insights. International Journal of Distributed Sensor Networks, 2022, 18, 155013292211051.	2.2	2
124	A new fuzzy-based cooperative movement model in support of qos in wireless ad-hoc network. , 2007, , .		1
125	Using connection expansion to reduce control traffic in MANETs. , 2010, , .		1
126	Failure Prediction based on multi-parameter analysis in support of autonomic networks. , 2011, , .		1



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127	A client-based QoS approach using generalized extreme value theorem in multi-hop network environments. , 2012, , .		1
128	Client-based QoS data selection and modeling using generalized extreme value theorem and linear opinion pool. , 2012, , .		1
129	Context severity based opportunistic service reprioritization for IEEE 802.11p VANETs. , 2013, , .		1
130	A Biologically-Inspired Approach to Network Traffic Classification for Resource-Constrained Systems. , 2014, , .		1
131	Evolution of bio-socially inspired strategies in support of dynamic spectrum access. , 2017, , .		1
132	When brands fight over bands: Sociality in the cognitive radio ecosystem. , 2017, , .		1
133	Exploiting the Spatio-Temporal Patterns in IoT Data to Establish a Dynamic Ensemble of Distributed Learners. IEEE Access, 2018, 6, 63316-63328.	4.2	1
134	Opportunistic Data Ferrying in Areas with Limited Information and Communications Infrastructure. , 2019, , .		1
135	Using the Lens of Systems Thinking To Model Education During and Beyond COVID-19. , 2021, , .		1
136	Editorial: Advances in multi-source information fusion for epidemic diseases. Information Fusion, 2021, 76, 175-176.	19.1	1
137	PSO and Genetic modeling of Deep Features for Road Passibility Analysis during Floods. IS&T International Symposium on Electronic Imaging, 2020, 32, 270-1-270-6.	0.4	1
138	Design and Simulation of a New Queuing Architecture for Large-Scale ATM Switches. Simulation, 2002, 78, 431-446.	1.8	0
139	WSN07-2: Harnessing the Parity of Multiple Errors in End-to-End MAC Schemes. IEEE Global Telecommunications Conference (GLOBECOM), 2006, , .	0.0	0
140	Multigrid techniques for movement planning in manets with cooperative mobility. , 2007, , .		0
141	Using MILP for Optimal Movement Planning in MANETs with Cooperative Mobility. , 2007, , .		0
142	Lagrangean relaxation for service location in large-scale networks with QoS constraints. Wireless Communications and Mobile Computing, 2009, 9, 1668-1682.	1.2	0
143	Opportunistic service promotion for end-to-end delay minimization in IEEE 802.11p vehicular networks. , 2012, , .		0
144	Optimizing agent placement for flow reconstruction of DDoS attacks. , 2013, , .		0

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145	Cloud-based autonomic service monitoring for Future Internet. , 2014, , .		0
146	A new approach to optimized negative selection. , 2016, , .		0
147	Emergence of pecking order in social Cognitive Radio societies. , 2018, , .		0
148	Surrendering Autonomy: Can Cooperative Mobility Help?. Lecture Notes in Computer Science, 2007, , 901-910.	1.3	0
149	Guest Editorial: Introduction to the Special Section on Advanced Networking Technologies in the Battle Against the Outbreak of Epidemic Diseases. IEEE Transactions on Network Science and Engineering, 2022, 9, 245-246.	6.4	0