

# Elias Yaacoub

## List of Publications by Year in descending order

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169  
papers

2,674  
citations

394421

19  
h-index

276875

41  
g-index

171  
all docs

171  
docs citations

171  
times ranked

2548  
citing authors

#	ARTICLE	IF	CITATIONS
1	Toward Massive Machine Type Cellular Communications. IEEE Wireless Communications, 2017, 24, 120-128.	9.0	346
2	A Key 6G Challenge and Opportunityâ€”Connecting the Base of the Pyramid: A Survey on Rural Connectivity. Proceedings of the IEEE, 2020, 108, 533-582.	21.3	203
3	Securing internet of medical things systems: Limitations, issues and recommendations. Future Generation Computer Systems, 2020, 105, 581-606.	7.5	144
4	A Survey on Uplink Resource Allocation in OFDMA Wireless Networks. IEEE Communications Surveys and Tutorials, 2012, 14, 322-337.	39.4	134
5	Wireless sensor network for real-time air pollution monitoring. , 2013, , .		78
6	Optimized LTE Cell Planning With Varying Spatial and Temporal User Densities. IEEE Transactions on Vehicular Technology, 2016, 65, 1575-1589.	6.3	76
7	Optimized Smart Grid Energy Procurement for LTE Networks Using Evolutionary Algorithms. IEEE Transactions on Vehicular Technology, 2014, 63, 4508-4519.	6.3	69
8	QoE Enhancement of SVC Video Streaming Over Vehicular Networks Using Cooperative LTE/802.11p Communications. IEEE Journal on Selected Topics in Signal Processing, 2015, 9, 37-49.	10.8	69
9	Energy-Aware Cooperative Content Distribution over Wireless Networks: Design Alternatives and Implementation Aspects. IEEE Communications Surveys and Tutorials, 2013, 15, 1736-1760.	39.4	64
10	A Game Theoretical Formulation for Proportional Fairness in LTE Uplink Scheduling. , 2009, , .		58
11	A Survey on Mobile Crowd-Sensing and Its Applications in the IoT Era. IEEE Access, 2019, 7, 3855-3881.	4.2	53
12	Automatic meter reading in the smart grid using contention based random access over the free cellular spectrum. Computer Networks, 2014, 59, 171-183.	5.1	45
13	Energy-efficient Device-to-Device communications in LTE public safety networks. , 2012, , .		43
14	Green Networking in Cellular HetNets: A Unified Radio Resource Management Framework With Base Station ON/OFF Switching. IEEE Transactions on Vehicular Technology, 2017, 66, 5879-5893.	6.3	40
15	Intelligent eye: A mobile application for assisting blind people. , 2018, , .		34
16	Tutorial on LTE/LTE-A Cellular Network Dimensioning Using Iterative Statistical Analysis. IEEE Communications Surveys and Tutorials, 2016, 18, 1355-1383.	39.4	33
17	Transmit Power Minimization and Base Station Planning for High-Speed Trains with Multiple Moving Relays in OFDMA Systems. IEEE Transactions on Vehicular Technology, 2016, , 1-1.	6.3	32
18	A new multitask learning method for multiorganism gene network estimation. , 2008, , .		30

#	ARTICLE	IF	CITATIONS
19	An overview of research topics and challenges for 5G massive MIMO antennas. , 2016, , .		30
20	Secure Transmission of IoT mHealth Patient Monitoring Data from Remote Areas Using DTN. IEEE Network, 2020, 34, 226-231.	6.9	30
21	A utility minimization approach for energy-aware cooperative content distribution with fairness constraints. Transactions on Emerging Telecommunications Technologies, 2012, 23, 378-392.	3.9	26
22	Next-Generation Environment-Aware Cellular Networks: Modern Green Techniques and Implementation Challenges. IEEE Access, 2016, 4, 5010-5029.	4.2	26
23	Low complexity scheduling algorithms for the LTE uplink. , 2009, , .		25
24	Throughput-Aware Cooperative Reinforcement Learning for Adaptive Resource Allocation in Device-to-Device Communication. Future Internet, 2017, 9, 72.	3.8	24
25	LTE radio network planning with HetNets: BS placement optimization using simulated annealing. , 2014, , .		22
26	Game Theory for Anti-Jamming Strategy in Multichannel Slow Fading IoT Networks. IEEE Internet of Things Journal, 2021, 8, 16880-16893.	8.7	22
27	Joint Uplink Scheduling and Interference Mitigation in Multicell LTE Networks. , 2011, , .		21
28	Cooperative wireless sensor networks for green internet of things. , 2012, , .		21
29	Achieving energy efficiency in LTE with joint D2D communications and green networking techniques. , 2013, , .		21
30	Achieving the Nash bargaining solution in OFDMA uplink using distributed scheduling with limited feedback. AEU - International Journal of Electronics and Communications, 2011, 65, 320-330.	2.9	19
31	Delay efficient cooperation in public safety vehicular networks using LTE and IEEE 802.11p. , 2012, , .		19
32	On uplink OFDMA resource allocation with ergodic sum-rate maximization. , 2009, , .		17
33	Performance study of the implementation of green communications in LTE networks. , 2012, , .		17
34	Performance Analysis of Circular Color Shift Keying in VLC Systems With Camera-Based Receivers. IEEE Transactions on Communications, 2019, 67, 4252-4266.	7.8	17
35	Towards development of a tele-mentoring framework for minimally invasive surgeries. International Journal of Medical Robotics and Computer Assisted Surgery, 2021, 17, e2305.	2.3	17
36	Air quality monitoring and analysis in Qatar using a wireless sensor network deployment. , 2013, , .		16

#	ARTICLE	IF	CITATIONS
37	Achieving physical layer security with massive MIMO beamforming. , 2017, , .		16
38	Proportional fair scheduling with probabilistic interference avoidance in the uplink of multicell OFDMA systems. , 2010, , .		15
39	Multihop Routing for Energy Efficiency in Wireless Sensor Networks. , 2012, , .		15
40	Mobile relays for enhanced broadband connectivity in high speed train systems. Physical Communication, 2014, 12, 105-115.	2.1	15
41	On real-time video streaming over LTE networks with mobile-to-mobile cooperation. , 2012, , .		14
42	Green communications in LTE networks with environmentally friendly small cell base stations. , 2012, , .		14
43	SVC video streaming over cooperative LTE/802.11p vehicle-to-infrastructure communications. , 2013, , .		14
44	Exploiting multiple wireless interfaces in smartphones for traffic offloading. , 2013, , .		14
45	On The Use of Quantum Communications for Securing IoT Devices in the 6G Era. , 2021, , .		14
46	Preliminary design and evaluation of a remote tele-mentoring system for minimally invasive surgery. Surgical Endoscopy and Other Interventional Techniques, 2022, 36, 3663-3674.	2.4	14
47	On the use of device-to-device communications for QoS and data rate enhancement in LTE public safety networks. , 2014, , .		13
48	Joint Bandwidth and Power Allocation for MIMO Two-Way Relays-Assisted Overlay Cognitive Radio Systems. IEEE Transactions on Cognitive Communications and Networking, 2015, 1, 383-393.	7.9	13
49	Secure mHealth IoT Data Transfer from the Patient to the Hospital: A Three-Tier Approach. IEEE Wireless Communications, 2019, 26, 70-76.	9.0	13
50	Asynchronous Federated Learning-based ECG Analysis for Arrhythmia Detection. , 2021, , .		13
51	A Wireless Communications Laboratory on Cellular Network Planning. IEEE Transactions on Education, 2010, 53, 653-661.	2.4	12
52	Uplink scheduling in LTE systems using distributed base stations. European Transactions on Telecommunications, 2010, 21, 532-543.	1.2	12
53	Enhancing the performance of OFDMA underlay cognitive radio networks via secondary pattern nulling and primary beam steering. , 2011, , .		12
54	Optimized green operation of LTE networks in the presence of multiple electricity providers. , 2012, , .		12

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55	Optimized LTE Cell Planning for Multiple User Density Subareas Using Meta-Heuristic Algorithms. , 2014, , .		12
56	Efficient Fronthaul and Backhaul Connectivity for IoT Traffic in Rural Areas. IEEE Internet of Things Magazine, 2021, 4, 60-66.	2.6	12
57	Weighted ergodic sum-rate maximisation in uplink orthogonal frequency division multiple access and its achievable rate region. IET Communications, 2010, 4, 2217.	2.2	11
58	Delay-sensitive content distribution via peer-to-peer collaboration in public safety vehicular ad-hoc networks. Ad Hoc Networks, 2014, 16, 182-196.	5.5	11
59	Cooperative reinforcement learning for adaptive power allocation in device-to-device communication. , 2018, , .		11
60	Machine Learning Techniques for Detecting Attackers During Quantum Key Distribution in IoT Networks With Application to Railway Scenarios. IEEE Access, 2021, 9, 136994-137004.	4.2	11
61	Enhanced connectivity in vehicular ad-hoc networks via V2V communications. , 2013, , .		10
62	Joint energy-distortion aware algorithms for cooperative video streaming over LTE networks. Signal Processing: Image Communication, 2013, 28, 1114-1131.	3.2	10
63	Fair Optimization of Video Streaming Quality of Experience in LTE Networks Using Distributed Antenna Systems and Radio Resource Management. Journal of Applied Mathematics, 2014, 2014, 1-12.	0.9	10
64	On the impact of D2D traffic offloading on energy efficiency in green LTE HetNets. Wireless Communications and Mobile Computing, 2015, 15, 1089-1105.	1.2	10
65	Green Virtualization for Multiple Collaborative Cellular Operators. IEEE Transactions on Cognitive Communications and Networking, 2017, 3, 420-434.	7.9	10
66	Centralized and distributed LTE uplink scheduling in a distributed base station scenario. , 2009, , .		9
67	Bandwidth and power allocation for two-way relaying in overlay cognitive radio systems. , 2014, , .		9
68	A game theoretical approach for cooperative environmentally friendly cellular networks powered by the smart grid. , 2014, , .		9
69	On using relays with carrier aggregation for planning 5G networks supporting M2M traffic. , 2014, , .		9
70	Energy-efficient two-hop LTE resource allocation in high speed trains with moving relays. , 2014, , .		9
71	LTE radio resource management for real-time smart meter reading in the smart grid. , 2015, , .		9
72	Classification for Imperfect EEG Epileptic Seizure in IoT applications: A Comparative Study. , 2018, , .		9

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73	A Nash bargaining solution for energy-efficient content distribution over wireless networks with mobile-to-mobile cooperation. , 2011, , .		8
74	Uplink OFDMA resource allocation with discrete rates: optimal solution and suboptimal implementation. Transactions on Emerging Telecommunications Technologies, 2012, 23, 148-162.	3.9	8
75	A practical approach for base station on/off switching in green LTE-A HetNets. , 2014, , .		8
76	Evaluation of user-interfaces for controlling movements of virtual minimally invasive surgical instruments. International Journal of Medical Robotics and Computer Assisted Surgery, 2022, 18, e2414.	2.3	8
77	Cylindrical Antenna Arrays for WCDMA Downlink Capacity Enhancement. , 2006, , .		7
78	Heterogeneous LTE/802.11a mobile relays for data rate enhancement and energy-efficiency in high speed trains. , 2012, , .		7
79	Multi-Operator Collaboration for Green Cellular Networks under Roaming Price Consideration. , 2014, , .		7
80	On the Dual-Decomposition-Based Resource and Power Allocation with Sleeping Strategy for Heterogeneous Networks. , 2015, , .		7
81	Green 5G Femtocells for Supporting Indoor Generated IoT Traffic. Modeling and Optimization in Science and Technologies, 2016, , 129-152.	0.7	7
82	I-SEE: Intelligent, Secure, and Energy-Efficient Techniques for Medical Data Transmission Using Deep Reinforcement Learning. IEEE Internet of Things Journal, 2021, 8, 6454-6468.	8.7	7
83	A comparison of uplink scheduling in OFDMA and SCFDMA. , 2010, , .		6
84	On the performance of distributed base stations in LTE public safety networks. , 2012, , .		6
85	A modified joint uplink-downlink opportunistic scheduling for Quality of Service guarantees. , 2013, , .		6
86	A generic simulation-based dimensioning approach for planning heterogeneous LTE cellular networks. , 2014, , .		6
87	RESCUE: Renewable Energy Small Cells for Utility Enhancement in Green LTE HetNets. IEEE Systems Journal, 2017, 11, 2356-2365.	4.6	6
88	Cooperative energy efficient D2D clustering in LTE-A with enhanced QoS. Telecommunication Systems, 2018, 67, 401-414.	2.5	6
89	Joint Security and Energy Efficiency in IoT Networks Through Clustering and Bit Flipping. , 2019, , .		6
90	3D Beamforming With Massive Cylindrical Arrays for Physical Layer Secure Data Transmission. IEEE Communications Letters, 2019, 23, 830-833.	4.1	6

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91	Travel Hopping Enabled Resource Allocation (THEResA) and delay tolerant networking through the use of UAVs in railroad networks. Ad Hoc Networks, 2021, 122, 102628.	5.5	6
92	Detecting Attackers during Quantum Key Distribution in IoT Networks using Neural Networks. , 2021, , .		6
93	A transparent pricing scheme for interference mitigation in uplink OFDMA with collaborative distributed scheduling. , 2010, , .		5
94	Distributed Load Balancing through Self Organisation of cell size in cellular systems. , 2012, , .		5
95	Performance of Green LTE Networks Powered by the Smart Grid with Time Varying User Density. , 2013, , .		5
96	A game theoretic framework for energy efficient deployment and operation of heterogeneous LTE networks. , 2013, , .		5
97	QoS-aware joint uplink-downlink scheduling in FDD LTE-Advanced with carrier aggregation. , 2014, , .		5
98	On real-time smart meter reading using OFDMA-based random access. , 2014, , .		5
99	Safe driving: A mobile application for detecting traffic accidents. , 2018, , .		5
100	Q-Learning Based Joint Energy-Spectral Efficiency Optimization in Multi-Hop Device-to-Device Communication. Sensors, 2020, 20, 6692.	3.8	5
101	Radio Resource Management in Integrated Wired/Wireless LTE Femtocell Networks. Lecture Notes in Computer Science, 2014, , 96-108.	1.3	5
102	Energy-Aware Distributed Edge ML for mHealth Applications with Strict Latency Requirements. IEEE Wireless Communications Letters, 2021, , 1-1.	5.0	5
103	A Secure Energy Efficient Scheme for Cooperative IoT Networks. IEEE Transactions on Communications, 2022, 70, 3962-3976.	7.8	5
104	Distributed uplink scheduling and rate control in cdma2000 using adaptive antenna arrays. AEU - International Journal of Electronics and Communications, 2009, 63, 841-852.	2.9	4
105	Interference mitigation and avoidance in uplink OFDMA with collaborative distributed intracell scheduling. AEU - International Journal of Electronics and Communications, 2011, 65, 937-941.	2.9	4
106	An OFDMA communication protocol for wireless sensor networks used for leakage detection in underground water infrastructures. , 2011, , .		4
107	An energy-efficient M2M communication method for leakage detection in underground water pipes. , 2012, , .		4
108	Interference mitigation in femtocell networks with joint channel sensing and resource allocation. , 2015, , .		4

#	ARTICLE	IF	CITATIONS
109	On the use of massive cylindrical antenna arrays for physical layer security. , 2016, , .		4
110	Rectangular and circular arrays with independently controlled beamwidth and sidelobe level. , 2017, , .		4
111	A Simple Approach for Securing IoT Data Transmitted over Multi-RATs. , 2018, , .		4
112	A Novel Pandemic Tracking Map: From Theory to Implementation. IEEE Access, 2021, 9, 51106-51120.	4.2	4
113	Intercell Interference Reduction by the Use of Chebyshev Circular Antenna Arrays with Beam Steering. , 2007, , .		3
114	Reverse Link Rate Control in 1xEV-DO with Adaptive Antenna Arrays. , 2008, , .		3
115	Distributed Probabilistic Scheduling in OFDMA Uplink using Subcarrier Sensing. , 2009, , .		3
116	Ergodic sum-rate maximization in OFDMA uplink with discrete rates. , 2010, , .		3
117	Beam and RB allocation in LTE uplink with opportunistic beamforming. , 2011, , .		3
118	Empirical evaluation of acoustical signals for leakage detection in underground plastic pipes. , 2014, , .		3
119	Network QoE metrics for assessing system-level performance of radio resource management algorithms in LTE networks. , 2014, , .		3
120	Novel time-frequency reservation Aloha scheme for OFDMA systems. , 2011, , .		2
121	A novel distributed scheduling scheme for OFDMA uplink using channel information and probabilistic transmission. Computer Communications, 2011, 34, 2104-2113.	5.1	2
122	Enhancing the QoS of real-time video streaming over LTE MBMS using D2D communications. , 2012, , .		2
123	Enhanced connectivity in railroad networks using LTE relays with directive antennas. , 2013, , .		2
124	Energy optimization in unsynchronized TDD systems for joint uplink downlink scheduling. , 2013, , .		2
125	Enhancing the quality of experience of video streaming in LTE networks using distributed antenna systems. , 2013, , .		2
126	On the extension of traditional resource allocation algorithms in LTE-A to joint UL-DL scheduling with FDD carrier aggregation. , 2014, , .		2



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127	A game theoretical approach for cooperative green mobile operators under roaming price consideration. , 2015, , .		2
128	Confluence of pattern recognition and signal processing: application of Alâ€Alaoui pattern recognition algorithm to digital filters design. IET Signal Processing, 2015, 9, 498-505.	1.5	2
129	On secret key generation with massive MIMO antennas using time-frequency-space dimensions. , 2016, , .		2
130	Multi-operator Collaboration for Green Cellular Networks. Studies in Systems, Decision and Control, 2016, , 97-122.	1.0	2
131	Femtocells in centralized systems: green operation and radio resource management techniques. Annales Des Telecommunications/Annals of Telecommunications, 2017, 72, 679-691.	2.5	2
132	A secure client-side framework for protecting the privacy of health data stored on the cloud. , 2018, , .		2
133	A Real-Time ECG Feature Extraction Algorithm for Detecting Meditation Levels within a General Measurement Setup. , 2019, 2019, 99-103.		2
134	A Practical TDMA Modification of IEEE 802.11 for Ultra-Dense IoT-Health with Fairness Considerations. , 2020, , .		2
135	Seven Challenges for Communication in Modern Railway Systems. Frontiers in Communications and Networks, 2021, 1, .	3.0	2
136	6G Connectivity in Dense Indoor Environments using Beamforming and Frequency Allocation over IEEE 802.11ad. , 2021, , .		2
137	A Genetic Algorithm Solution for the Operation of Green LTE Networks with Energy and Environment Considerations. Lecture Notes in Computer Science, 2012, , 512-519.	1.3	2
138	On Physical Layer Security of Double Shadowed Rician Fading Channels. Wireless Personal Communications, 2022, 124, 2299-2312.	2.7	2
139	Directivity and Interference Tradeoffs with Cylindrical Antenna Arrays. , 2008, , .		1
140	Distributed on-off uplink scheduling in CDMA systems with adaptive antenna arrays. , 2008, , .		1
141	Uplink scheduling in OFDMA systems using opportunistic beamforming. , 2009, , .		1
142	Opportunistic beamforming for uplink OFDMA scheduling in severe interference conditions. , 2010, , .		1
143	A multiorganism based method for Bayesian gene network estimation. BioSystems, 2011, 103, 425-434.	2.0	1
144	Cooperative relay-based multicasting for energy and delay minimization. , 2012, , .		1

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145	Green operation techniques for large scale deployments of small cell LTE networks. , 2013, , .		1
146	On the capacity and spatial fairness trade-off in planning sectorization and frequency reuse. , 2013, , .		1
147	A mathematical modeling approach and a novel solution for sector azimuth angle planning. , 2014, , .		1
148	Cluster based V2V communications for enhanced QoS of SVC video streaming over vehicular networks. , 2014, , .		1
149	Massive Planar Antenna Arrays for Physical Layer Security. , 2019, , .		1
150	Secure DoF for the MIMO MAC: The Case of Knowing Eavesdropper's Channel Statistics Only. , 2019, , .		1
151	On the Delay of Finite Buffered Multi-Hop Relay Wireless Internet of Things. , 2019, , .		1
152	Optimizing Energy-Distortion Trade-off for Vital Signs Delivery in Mobile Health Applications. , 2020, , .		1
153	On Accommodating VR Traffic for mHealth Applications in Rural Areas with Limited Impact on IoT Traffic. , 2020, , .		1
154	A Game Theoretic Framework for Green HetNets Using D2D Traffic Offload and Renewable Energy Powered Base Stations. Advances in Wireless Technologies and Telecommunication Book Series, 0, , 333-367.	0.4	1
155	Physical Layer Security in Military Communications. International Journal of Mobile Computing and Multimedia Communications, 2019, 10, 26-40.	0.5	1
156	A Lightweight Central Learning Approach for Arrhythmia Detection from ECG Signals. , 2021, , .		1
157	Accelerated IoT Anti-Jamming: A Game Theoretic Power Allocation Strategy. IEEE Transactions on Wireless Communications, 2022, 21, 10607-10620.	9.2	1
158	Scheduling in OFDMA Uplink With Imperfect CSI. International Journal of Wireless Information Networks, 2011, 18, 73-79.	2.7	0
159	Cooperative ad hoc networks for energy and delay-efficient content distribution with fast channel-variations. Wireless Communications and Mobile Computing, 2012, 12, 1635-1651.	1.2	0
160	A new MAC design in LTE for MIMO multiuser schemes. , 2013, , .		0
161	Opportunistic bi-directional scheduling under quality of experience demands. , 2013, , .		0
162	Achieving green LTE-A HetNets with D2D traffic offload and renewable energy powered small cell BSs. , 2014, , .		0

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163	Green operation of LTE-A femtocell networks benefiting from centralized control. , 2015, , .		0
164	Novel Extended Circular Color Shift Keying Constellation in VLC Systems with Camera-based Receivers. , 2019, , .		0
165	Physical Layer Security in Military Communications. , 2021, , 384-398.		0
166	Towards Information Theoretic Interpretation of Practical Ciphers. , 2021, , .		0
167	A Game Theoretic Framework for Green HetNets Using D2D Traffic Offload and Renewable Energy Powered Base Stations. , 2017, , 679-711.		0
168	An Efficient Channel-Aware Aloha-Like OFDMA-Based Wireless Communication Protocol for IoT Communications in Wireless Sensor Networks. Advances in Systems Analysis, Software Engineering, and High Performance Computing Book Series, 2018, , 85-110.	0.5	0
169	Distributed Antenna Systems for Enhanced Video Transmission in LTE Public Safety Networks. Advances in Wireless Technologies and Telecommunication Book Series, 0, , 40-64.	0.4	0