

Honggang Zhang

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.

174
papers

3,462
citations

29
h-index

55
g-index

219
ext. papers

4,482
ext. citations

5.4
avg, IF

5.78
L-index

#	Paper	IF	Citations
174	Intelligent 5G: When Cellular Networks Meet Artificial Intelligence. <i>IEEE Wireless Communications</i> , 2017 , 24, 175-183	13.4	293
173	Optimized Computation Offloading Performance in Virtual Edge Computing Systems Via Deep Reinforcement Learning. <i>IEEE Internet of Things Journal</i> , 2019 , 6, 4005-4018	10.7	262
172	Energy-Efficiency Oriented Traffic Offloading in Wireless Networks: A Brief Survey and a Learning Approach for Heterogeneous Cellular Networks. <i>IEEE Journal on Selected Areas in Communications</i> , 2015 , 33, 627-640	14.2	170
171	Network slicing as a service: enabling enterprisesTown software-defined cellular networks 2016 , 54, 146-153		164
170	Network energy saving technologies for green wireless access networks. <i>IEEE Wireless Communications</i> , 2011 , 18, 30-38	13.4	150
169	CogMesh: A Cluster-Based Cognitive Radio Network 2007 ,		149
168	Deep Learning with Long Short-Term Memory for Time Series Prediction. <i>IEEE Communications Magazine</i> , 2019 , 57, 114-119	9.1	139
167	Spatial modeling of the traffic density in cellular networks. <i>IEEE Wireless Communications</i> , 2014 , 21, 80-88	13.4	121
166	Deep Reinforcement Learning for Resource Management in Network Slicing. <i>IEEE Access</i> , 2018 , 6, 74429374441110	3.4	110
165	On the limits of predictability in real-world radio spectrum state dynamics: from entropy theory to 5G spectrum sharing 2015 , 53, 178-183		79
164	AI-Based Two-Stage Intrusion Detection for Software Defined IoT Networks. <i>IEEE Internet of Things Journal</i> , 2019 , 6, 2093-2102	10.7	76
163	TACT: A Transfer Actor-Critic Learning Framework for Energy Saving in Cellular Radio Access Networks. <i>IEEE Transactions on Wireless Communications</i> , 2014 , 13, 2000-2011	9.6	75
162	Multi-Tenant Cross-Slice Resource Orchestration: A Deep Reinforcement Learning Approach. <i>IEEE Journal on Selected Areas in Communications</i> , 2019 , 37, 2377-2392	14.2	66
161	Performance Optimization in Mobile-Edge Computing via Deep Reinforcement Learning 2018 ,		64
160	The prediction analysis of cellular radio access network traffic: From entropy theory to networking practice 2014 , 52, 234-240		59
159	The Learning and Prediction of Application-Level Traffic Data in Cellular Networks. <i>IEEE Transactions on Wireless Communications</i> , 2017 , 16, 3899-3912	9.6	58
158	Age of Information Aware Radio Resource Management in Vehicular Networks: A Proactive Deep Reinforcement Learning Perspective. <i>IEEE Transactions on Wireless Communications</i> , 2020 , 19, 2268-2281	9.6	58

157	GAN-Powered Deep Distributional Reinforcement Learning for Resource Management in Network Slicing. <i>IEEE Journal on Selected Areas in Communications</i> , 2020 , 38, 334-349	14.2	58
156	Optimal Base Station Sleeping in Green Cellular Networks: A Distributed Cooperative Framework Based on Game Theory. <i>IEEE Transactions on Wireless Communications</i> , 2015 , 14, 4391-4406	9.6	57
155	Stochastic Power Adaptation with Multiagent Reinforcement Learning for Cognitive Wireless Mesh Networks. <i>IEEE Transactions on Mobile Computing</i> , 2013 , 12, 2155-2166	4.6	50
154	Energy efficiency in communications 2010 , 48, 48-49		45
153	Multiple signal waveforms adaptation in cognitive ultra-wideband radio evolution. <i>IEEE Journal on Selected Areas in Communications</i> , 2006 , 24, 878-884	14.2	44
152	SoftMobile: control evolution for future heterogeneous mobile networks. <i>IEEE Wireless Communications</i> , 2014 , 21, 70-78	13.4	41
151	On the Spatial Distribution of Base Stations and Its Relation to the Traffic Density in Cellular Networks. <i>IEEE Access</i> , 2015 , 3, 998-1010	3.5	38
150	. <i>IEEE Access</i> , 2019 , 7, 101441-101452	3.5	34
149	Deep Reinforcement Learning With Discrete Normalized Advantage Functions for Resource Management in Network Slicing. <i>IEEE Communications Letters</i> , 2019 , 23, 1337-1341	3.8	33
148	Wireless Resource Scheduling in Virtualized Radio Access Networks Using Stochastic Learning. <i>IEEE Transactions on Mobile Computing</i> , 2018 , 17, 961-974	4.6	30
147	Large-Scale Spatial Distribution Identification of Base Stations in Cellular Networks. <i>IEEE Access</i> , 2015 , 3, 2987-2999	3.5	29
146	Swarm Intelligence Based Dynamic Control Channel Assignment in Cogmesh 2008 ,		29
145	The LSTM-Based Advantage Actor-Critic Learning for Resource Management in Network Slicing With User Mobility. <i>IEEE Communications Letters</i> , 2020 , 24, 2005-2009	3.8	28
144	Energy savings scheme in radio access networks via compressive sensing-based traffic load prediction. <i>Transactions on Emerging Telecommunications Technologies</i> , 2014 , 25, 468-478	1.9	26
143	Human Mobility Patterns in Cellular Networks. <i>IEEE Communications Letters</i> , 2013 , 17, 1877-1880	3.8	26
142	The predictability of cellular networks traffic 2012 ,		24
141	Predicting Spectrum Occupancies Using a Non-Stationary Hidden Markov Model. <i>IEEE Wireless Communications Letters</i> , 2014 , 3, 333-336	5.9	22
140	On the α -Stable Distribution of Base Stations in Cellular Networks. <i>IEEE Communications Letters</i> , 2015 , 19, 1750-1753	3.8	22

139	Energy-Efficient Event Detection by Participatory Sensing Under Budget Constraints. <i>IEEE Systems Journal</i> , 2017 , 11, 2490-2501	4.3	21
138	What is the Best Spatial Distribution to Model Base Station Density? A Deep Dive into Two European Mobile Networks. <i>IEEE Access</i> , 2016 , 4, 1434-1443	3.5	21
137	Towards green wireless access networks 2010 ,		21
136	Understanding the Nature of Social Mobile Instant Messaging in Cellular Networks. <i>IEEE Communications Letters</i> , 2014 , 18, 389-392	3.8	20
135	Improving energy efficiency in Green femtocell networks: A hierarchical reinforcement learning framework 2013 ,		20
134	Cooperation-Based Probabilistic Caching Strategy in Clustered Cellular Networks. <i>IEEE Communications Letters</i> , 2017 , 21, 2029-2032	3.8	19
133	An efficient policy for D2D communications and energy harvesting in cognitive radios: Go Bayesian! 2015 ,		18
132	Characterizing spatial patterns of base stations in cellular networks 2014 ,		18
131	Toward 5G: when explosive bursts meet soft cloud. <i>IEEE Network</i> , 2014 , 28, 12-17	11.4	18
130	Joint computation offloading and data caching with delay optimization in mobile-edge computing systems 2017 ,		17
129	Adaptive multi-task compressive sensing for localisation in wireless local area networks. <i>IET Communications</i> , 2014 , 8, 1736-1744	1.3	16
128	Compressed sensing for efficient random routing in multi-hop wireless sensor networks. <i>International Journal of Communication Networks and Distributed Systems</i> , 2011 , 7, 275	0.4	15
127	Deep Learning-Based Intelligent Dual Connectivity for Mobility Management in Dense Network 2018 ,		15
126	Game-Theoretic Multi-Channel Multi-Access in Energy Harvesting Wireless Sensor Networks. <i>IEEE Sensors Journal</i> , 2016 , 16, 4587-4594	4	14
125	CogMesh: Cognitive Wireless Mesh Networks 2008 ,		14
124	Low complexity and efficient dynamic spectrum learning and tunable bandwidth access for heterogeneous decentralized cognitive radio networks 2015 , 37, 13-23		13
123	Traffic Prediction Based on Random Connectivity in Deep Learning with Long Short-Term Memory 2018 ,		13
122	CogMesh: A Cluster Based Cognitive Radio Mesh Network 2007 , 657-678		13

121	Two-tier spatial modeling of base stations in cellular networks 2014 ,		12
120	Achievements and the Road Ahead: The First Decade of Cognitive Radio. <i>IEEE Transactions on Vehicular Technology</i> , 2010 , 59, 1574-1577	6.8	12
119	The Stochastic Geometry Analyses of Cellular Networks With α -Stable Self-Similarity. <i>IEEE Transactions on Communications</i> , 2019 , 67, 2487-2503	6.9	12
118	Reconfigurable Filter Bank With Complete Control Over Subband Bandwidths for Multistandard Wireless Communication Receivers. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2015 , 23, 1772-1782	2.6	11
117	Understanding the Traffic Nature of Mobile Instantaneous Messaging in Cellular Networks: A Revisiting to α -Stable Models. <i>IEEE Access</i> , 2015 , 3, 1416-1422	3.5	11
116	Resource Awareness In Unmanned Aerial Vehicle-Assisted Mobile-Edge Computing Systems 2020 ,		10
115	GM-PAB: A grid-based energy saving scheme with predicted traffic load guidance for cellular networks 2012 ,		10
114	Green communications and computing networks [Series Editorial] 2016 , 54, 106-107		10
113	Energy Efficiency Analysis of Heterogeneous Cellular Networks with Downlink and Uplink Decoupling 2015 ,		9
112	Energy saving through a learning framework in greener cellular radio access networks 2012 ,		9
111	Information Freshness-Aware Task Offloading in Air-Ground Integrated Edge Computing Systems. <i>IEEE Journal on Selected Areas in Communications</i> , 2022 , 40, 243-258	14.2	9
110	Latency analysis of cooperative caching with multicast for 5G wireless networks 2016 ,		9
109	A learning approach for traffic offloading in stochastic heterogeneous cellular networks 2015 ,		8
108	Decision Fusion of Cooperative Spectrum Sensing for Cognitive Radio under Bandwidth Constraints 2008 ,		8
107	Adapting Downlink Power in Fronthaul-Constrained Hierarchical Software-Defined RANs 2017 ,		7
106	The Emergence of Scaling Law, Fractal Patterns and Small-World in Wireless Networks. <i>IEEE Access</i> , 2017 , 5, 3121-3130	3.5	7
105	The Collective Advantage for Advancing Communications and Intelligence. <i>IEEE Wireless Communications</i> , 2020 , 27, 96-102	13.4	7
104	Cooperate Caching with Multicast for Mobile Edge Computing in 5G Networks 2017 ,		7

103	An adaptive scheme for data forwarding in software defined network 2014 ,		7
102	Cognitive Femtocell Networks 2012 , 359-394		7
101	Compressed sensing for efficient random routing in multi-hop wireless sensor networks 2010 ,		7
100	Research advances in cognitive ultra wide band radio and their application to sensor networks. <i>Mobile Networks and Applications</i> , 2006 , 11, 487-499	2.9	7
99	Nomadic sensor networks		7
98	Optimizing routing and server selection in intelligent SDN-based CDN 2016 ,		7
97	GAN-Based Deep Distributional Reinforcement Learning for Resource Management in Network Slicing 2019 ,		7
96	Decision making policy for RF energy harvesting enabled cognitive radios in decentralized wireless networks 2017 , 60, 33-45		6
95	Downlink interference minimization in cognitive LTE-femtocell networks 2013 ,		6
94	Wireless big data in cellular networks: the cornerstone of smart cities. <i>IET Communications</i> , 2018 , 12, 1517-1523	1.3	5
93	Foresighted resource scheduling in software-defined radio access networks 2015 ,		5
92	Green communications and computing networks [Series Editorial] 2015 , 53, 148-149		5
91	A game-theoretic approach for optimal base station sleeping in green cellular networks 2014 ,		5
90	Energy efficiency in communications: part II [Guest Editorial] 2011 , 49, 28-29		5
89	Dynamic energy savings in heterogeneous cellular networks based on traffic prediction using compressive sensing 2011 ,		5
88	Intercluster Connection in Cognitive Wireless Mesh Networks Based on Intelligent Network Coding. <i>Eurasip Journal on Advances in Signal Processing</i> , 2009 , 2009,	1.9	5
87	Semantic Communication with Adaptive Universal Transformer. <i>IEEE Wireless Communications Letters</i> , 2021 , 1-1	5.9	5
86	On the application of compressed sensing in communication networks 2010 ,		5

85	Stigmergic Independent Reinforcement Learning for Multiagent Collaboration. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2021 , PP,	10.3	5
84	Brain-Inspired Stigmergy Learning. <i>IEEE Access</i> , 2019 , 7, 54410-54424	3.5	4
83	An approximate algorithm of controller configuration in multi-domain SDN architecture 2014 ,		4
82	Energy efficiency in communications: Part III 2011 , 49, 52-54		4
81	Reinforcement Learning Enhanced Iterative Power Allocation in Stochastic Cognitive Wireless Mesh Networks. <i>Wireless Personal Communications</i> , 2011 , 57, 89-104	1.9	4
80	Compressed sensing based random routing for multi-hop wireless sensor networks 2010 ,		4
79	Transmit Power Allocation among PSWF-based Pulse Wavelets in Cognitive UWB Radio 2006 ,		4
78	Characterizing and Modeling Social Mobile Data Traffic in Cellular Networks 2016 ,		4
77	ISD-WiFi: An intelligent SDN based solution for enterprise WLANs 2016 ,		4
76	Fundamentals on Base Stations in Urban Cellular Networks: From the Perspective of Algebraic Topology. <i>IEEE Wireless Communications Letters</i> , 2019 , 8, 612-615	5.9	4
75	Graph Attention Network-Based Multi-Agent Reinforcement Learning for Slicing Resource Management in Dense Cellular Network. <i>IEEE Transactions on Vehicular Technology</i> , 2021 , 1-1	6.8	4
74	Evaluation Mechanism of Collective Intelligence for Heterogeneous Agents Group. <i>IEEE Access</i> , 2020 , 8, 28385-28394	3.5	3
73	On the dependence between base stations deployment and traffic spatial distribution in cellular networks 2016 ,		3
72	Downlink interference minimization in cooperative cognitive LTE-femtocell networks. <i>Eurasip Journal on Wireless Communications and Networking</i> , 2013 , 2013,	3.2	3
71	Blind wireless standard identification for green radio communications 2013 ,		3
70	Green Communications and Computing Networks 2017 , 55, 12-13		3
69	Spatial-temporal compressed sensing based traffic prediction in cellular networks 2012 ,		3
68	Social Behaviour in Cognitive Radio 2012 , 257-281		3

67	Adaptive Bayesian Compressed Sensing based localization in wireless networks 2012 ,		3
66	Applying multi-agent Q-learning scheme in cognitive wireless mesh networks for green communications 2010 ,		3
65	Distributed anomaly event detection in wireless networks using compressed sensing 2011 ,		3
64	Spectrum Self-Coexistence in Cognitive Wireless Access Networks 2009 ,		3
63	Graph Convolutional Multi-Agent Reinforcement Learning for UAV Coverage Control 2020 ,		3
62	A transfer learning framework for energy efficient Wi-Fi networks and performance analysis using real data 2016 ,		3
61	Reciprocally opportunistic spectrum access. <i>Transactions on Emerging Telecommunications Technologies</i> , 2015 , 26, 1073-1085	1.9	2
60	A reality check of Base Station Spatial Distribution in mobile networks 2016 ,		2
59	Decentralized Deep Reinforcement Learning for Delay-Power Tradeoff in Vehicular Communications 2019 ,		2
58	A revisiting to queueing theory for mobile instant messaging with keep-alive mechanism in cellular networks 2017 ,		2
57	An intelligent honeynet architecture based on software defined security 2017 ,		2
56	Green communications and computing networks [Series Editorial] 2015 , 53, 214-215		2
55	Green communications and computing networks [Series Editorial] 2014 , 52, 102-103		2
54	Distributed Clustering of Cognitive Radio Networks: A Message-Passing Approach 2012 , 119-142		2
53	Exploration vs exploitation for distributed channel access in cognitive radio networks: A multi-user case study 2011 ,		2
52	2009 ,		2
51	A Novel Control Channel Management in CogMesh Networks 2011 ,		2
50	2006 ,		2

49	Novel filter banks based wireless microphone detection in IEEE 802.22 WRAN 2010 ,	2
48	Energy-Efficient User Association and Downlink Power Allocation in Software Defined HetNet 2016 ,	2
47	On the Emerging of Scaling Law, Fractality and Small-World in Cellular Networks 2017 ,	1
46	Green Communications and Computing Networks 2018 , 56, 138-139	1
45	On the cooperation between cognitive radio users and femtocell networks for cooperative spectrum sensing and self-organization 2013 ,	1
44	Efficient spectrum sensing for green cognitive radio using low complexity reconfigurable fast filter bank 2013 ,	1
43	Combined learning for energy efficiency in heterogeneous cellular networks 2013 ,	1
42	Efficient decentralized dynamic spectrum learning and access policy for multi-standard multi-user cognitive radio networks 2014 ,	1
41	Cognitive Radio and Networks for Heterogeneous Networking 2012 , 17-52	1
40	Learning Techniques for Context Diagnosis and Prediction in Cognitive Communications 2012 , 231-256	1
39	Machine Learning Applied to Cognitive Communications 2012 , 143-162	1
38	A pilot-aided channel estimation method for FBMC/OQAM communications system 2012 ,	1
37	LT coding over the network 2010 ,	1
36	Power entangling and matching in cognitive wireless mesh networks by applying conjecture based multi-agent QQ-learning approach 2010 ,	1
35	Adaptive threshold enhanced filter banks for wireless microphone detection in IEEE 802.22 WRAN 2010 ,	1
34	Reliable data transmission using IBRC and LT codes over AWGN channels 2010 ,	1
33	Energy efficient data gathering based on distributed iLT coding 2011 ,	1
32	Collaborative spectrum sharing based on information pooling for cognitive radio networks with channel heterogeneity 2011 ,	1

31	Improving spectrum sensing by counting rules for cognitive radio 2008 ,		1
30	Transmit Power Allocation among Orthogonal Pulse Wavelets for BER Performance Improvement in Cognitive UWB Radio 2007 ,		1
29	Evolving Deep Convolutional Neural Network for Intrusion Detection Based on NEAT 2020 ,		1
28	RAN Information-assisted TCP Congestion Control via DRL with Reward Redistribution 2021 ,		1
27	. <i>IEEE Transactions on Mobile Computing</i> , 2021 , 20, 2254-2268	4.6	1
26	Evaluation of LTP-Based DTN for Deep Space Communication 2018 ,		1
25	Neurophysiological Assessment of Image Quality from EEG Using Persistent Homology of Brain Network 2021 ,		1
24	Multicast scheduling for delay-energy trade-off under bursty request arrivals in cellular networks. <i>IET Communications</i> , 2019 , 13, 1696-1701	1.3	0
23	Energy-saving techniques in cellular wireless base stations 190-208		0
22	The Implementation of Asynchronous Advantage Actor-Critic with Stigmergy in Network-assisted Multi-agent System		0
21	Trustable Policy Collaboration Scheme for Multi-Agent Stigmergic Reinforcement Learning. <i>IEEE Communications Letters</i> , 2022 , 1-1	3.8	0
20	RAN Information-assisted TCP Congestion Control Using Deep Reinforcement Learning with Reward Redistribution. <i>IEEE Transactions on Communications</i> , 2021 , 1-1	6.9	0
19	Persistent Homology-Based Topological Analysis on the Gestalt Patterns during Human Brain Cognition Process. <i>Journal of Healthcare Engineering</i> , 2021 , 2021, 2334332	3.7	0
18	Control Channel Management in Dynamic Spectrum Access-Based Ad Hoc Networks 2011 , 181-205		0
17	Deep Learning Based Traffic and Mobility Prediction 2020 , 119-136		0
16	Neural evidence for image quality perception based on algebraic topology.. <i>PLoS ONE</i> , 2021 , 16, e0261233	3.7	0
15	Architecture and Application of SDN/NFV-enabled Space-Terrestrial Integrated Network. <i>Communications in Computer and Information Science</i> , 2017 , 244-255	0.3	
14	Green Communications and Computing Networks 2017 , 55, 160-161		

- 13 Cognitive Acoustics: A Way to Extend the Lifetime of Underwater Acoustic Sensor Networks **2012**, 395-416
- 12 Introduction to Cognitive Communications **2012**, 1-16
- 11 Filter Bank Techniques for Multi-Carrier Cognitive Radio Systems **2012**, 93-118
- 10 Reinforcement Learning for Distributed Power Control and Channel Access in Cognitive Wireless Mesh Networks **2012**, 163-193
- 9 Channel Assignment and Power Allocation Algorithms in Multi-Carrier-Based Cognitive Radio Environments **2012**, 53-92
- 8 Cognitive Radio Networks in TV White Spaces **2012**, 319-357
- 7 Reinforcement Learning-Based Cognitive Radio for Open Spectrum Access **2012**, 195-230
- 6 Regulatory Policy and Economics of Cognitive Radio for Secondary Spectrum Access **2012**, 283-317
- 5 CMOS RF Transceiver Considerations for DSA **2012**, 417-464
- 4 Equalization of rotationally variant signals. *Optoelectronics, Instrumentation and Data Processing*, **2011**, 47, 253-263 0.6
- 3 Ultra-Wideband Cognitive Radio for Dynamic Spectrum Accessing Networks **2008**, 353-382
- 2 Study on Base Station Topology in National Cellular Networks: Take Advantage of Alpha Shapes, Betti Numbers, and Euler Characteristics. *IEEE Systems Journal*, **2020**, 14, 2202-2213 4.3
- 1 Characterizing and Learning the Mobile Data Traffic in Cellular Network **2018**, 453-498