Jun Zhang

List of Publications by Year
in descending order

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168 papers	15,524 citations	61984 43 h-index	82547 72 g-index
172 all docs	172 docs citations	172 times ranked	9291 citing authors

#	Article	IF	Citations
1	A Survey on Mobile Edge Computing: The Communication Perspective. IEEE Communications Surveys and Tutorials, 2017, 19, 2322-2358.	39.4	3,379
2	Dynamic Computation Offloading for Mobile-Edge Computing With Energy Harvesting Devices. IEEE Journal on Selected Areas in Communications, 2016, 34, 3590-3605.	14.0	1,285
3	The Roadmap to 6G: AI Empowered Wireless Networks. IEEE Communications Magazine, 2019, 57, 84-90.	6.1	1,139
4	Alternating Minimization Algorithms for Hybrid Precoding in Millimeter Wave MIMO Systems. IEEE Journal on Selected Topics in Signal Processing, 2016, 10, 485-500.	10.8	907
5	Delay-optimal computation task scheduling for mobile-edge computing systems. , 2016, , .		540
6	Stochastic Joint Radio and Computational Resource Management for Multi-User Mobile-Edge Computing Systems. IEEE Transactions on Wireless Communications, 2017, 16, 5994-6009.	9.2	530
7	Networked MIMO with clustered linear precoding. IEEE Transactions on Wireless Communications, 2009, 8, 1910-1921.	9.2	445
8	Group Sparse Beamforming for Green Cloud-RAN. IEEE Transactions on Wireless Communications, 2014, 13, 2809-2823.	9.2	381
9	Client-Edge-Cloud Hierarchical Federated Learning. , 2020, , .		347
10	Toward an Intelligent Edge: Wireless Communication Meets Machine Learning. IEEE Communications Magazine, 2020, 58, 19-25.	6.1	336
11	Mobile Edge Intelligence and Computing for the Internet of Vehicles. Proceedings of the IEEE, 2020, 108, 246-261.	21.3	279
12	Power-Delay Tradeoff in Multi-User Mobile-Edge Computing Systems. , 2016, , .		224
13	Adaptive Spatial Intercell Interference Cancellation in Multicell Wireless Networks. IEEE Journal on Selected Areas in Communications, 2010, 28, 1455-1468.	14.0	208
14	Throughput and Energy Efficiency Analysis of Small Cell Networks with Multi-Antenna Base Stations. IEEE Transactions on Wireless Communications, 2014, 13, 2505-2517.	9.2	200
15	Communication-Efficient Edge AI: Algorithms and Systems. IEEE Communications Surveys and Tutorials, 2020, 22, 2167-2191.	39.4	200
16	Distributed Antenna Systems with Randomness. IEEE Transactions on Wireless Communications, 2008, 7, 3636-3646.	9.2	176
17	A Deep Learning Framework for Optimization of MISO Downlink Beamforming. IEEE Transactions on Communications, 2020, 68, 1866-1880.	7.8	171
18	Joint Task Offloading Scheduling and Transmit Power Allocation for Mobile-Edge Computing Systems. , 2017, , .		167

#	Article	IF	Citations
19	Coverage Analysis for Millimeter Wave Networks: The Impact of Directional Antenna Arrays. IEEE Journal on Selected Areas in Communications, 2017, 35, 1498-1512.	14.0	164
20	Mobility-aware caching for content-centric wireless networks: modeling and methodology. , 2016, 54, 77-83.		158
21	Hybrid Beamforming for Millimeter Wave Systems Using the MMSE Criterion. IEEE Transactions on Communications, 2019, 67, 3693-3708.	7.8	148
22	Mobility-Aware Caching in D2D Networks. IEEE Transactions on Wireless Communications, 2017, 16, 5001-5015.	9.2	136
23	Optimal Scheduling and Power Allocation for Two-Hop Energy Harvesting Communication Systems. IEEE Transactions on Wireless Communications, 2013, 12, 4729-4741.	9.2	134
24	Joint Subcarrier and CPU Time Allocation for Mobile Edge Computing. , 2016, , .		133
25	Cache Placement in Fog-RANs: From Centralized to Distributed Algorithms. IEEE Transactions on Wireless Communications, 2017, 16, 7039-7051.	9.2	123
26	On the Accuracy of the Wyner Model in Cellular Networks. IEEE Transactions on Wireless Communications, 2011, 10, 3098-3109.	9.2	120
27	Multi-Mode Transmission for the MIMO Broadcast Channel with Imperfect Channel State Information. IEEE Transactions on Communications, 2011, 59, 803-814.	7.8	112
28	Millimeter-Wave Full-Duplex UAV Relay: Joint Positioning, Beamforming, and Power Control. IEEE Journal on Selected Areas in Communications, 2020, 38, 2057-2073.	14.0	105
29	Graph Neural Networks for Scalable Radio Resource Management: Architecture Design and Theoretical Analysis. IEEE Journal on Selected Areas in Communications, 2021, 39, 101-115.	14.0	105
30	Energy harvesting small cell networks: feasibility, deployment, and operation. , 2015, 53, 94-101.		100
31	Large-Scale Convex Optimization for Dense Wireless Cooperative Networks. IEEE Transactions on Signal Processing, 2015, 63, 4729-4743.	5.3	97
32	A Lyapunov Optimization Approach for Green Cellular Networks With Hybrid Energy Supplies. IEEE Journal on Selected Areas in Communications, 2015, 33, 2463-2477.	14.0	95
33	User-Centric Intercell Interference Nulling for Downlink Small Cell Networks. IEEE Transactions on Communications, 2015, 63, 1419-1431.	7.8	90
34	Large-scale convex optimization for ultra-dense cloud-RAN. IEEE Wireless Communications, 2015, 22, 84-91.	9.0	88
35	A Unified Energy Efficiency and Spectral Efficiency Tradeoff Metric in Wireless Networks. IEEE Communications Letters, 2013, 17, 55-58.	4.1	87
36	Hybrid Beamforming for 5G and Beyond Millimeter-Wave Systems: A Holistic View. IEEE Open Journal of the Communications Society, 2020, 1, 77-91.	6.9	84

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37	Success Probability and Area Spectral Efficiency in Multiuser MIMO HetNets. IEEE Transactions on Communications, 2016, 64, 1544-1556.	7.8	81
38	Mode Switching for the Multi-Antenna Broadcast Channel Based on Delay and Channel Quantization. Eurasip Journal on Advances in Signal Processing, 2009, 2009, .	1.7	78
39	A Hardware-Efficient Analog Network Structure for Hybrid Precoding in Millimeter Wave Systems. IEEE Journal on Selected Topics in Signal Processing, 2018, 12, 282-297.	10.8	78
40	Compressed CSI Acquisition in FDD Massive MIMO: How Much Training is Needed?. IEEE Transactions on Wireless Communications, 2016, 15, 4145-4156.	9.2	77
41	LORM: Learning to Optimize for Resource Management in Wireless Networks With Few Training Samples. IEEE Transactions on Wireless Communications, 2020, 19, 665-679.	9.2	77
42	Downlink User Capacity of Massive MIMO Under Pilot Contamination. IEEE Transactions on Wireless Communications, 2015, 14, 3183-3193.	9.2	75
43	BottleNet++: An End-to-End Approach for Feature Compression in Device-Edge Co-Inference Systems. , 2020, , .		74
44	Smoothed -Minimization for Green Cloud-RAN With User Admission Control. IEEE Journal on Selected Areas in Communications, 2016, 34, 1022-1036.	14.0	62
45	Communication-Computation Trade-off in Resource-Constrained Edge Inference. IEEE Communications Magazine, 2020, 58, 20-26.	6.1	60
46	Robust Group Sparse Beamforming for Multicast Green Cloud-RAN With Imperfect CSI. IEEE Transactions on Signal Processing, 2015, 63, 4647-4659.	5.3	59
47	CSEdge: Enabling Collaborative Edge Storage for Multi-Access Edge Computing Based on Blockchain. IEEE Transactions on Parallel and Distributed Systems, 2022, 33, 1873-1887.	5.6	55
48	Backhaul-Aware Caching Placement for Wireless Networks. , 2015, , .		51
49	Content caching at the wireless network edge: A distributed algorithm via belief propagation. , 2016, , .		51
50	Coordinated 3D Beamforming for Interference Management in Cellular Networks. IEEE Transactions on Wireless Communications, 2014, 13, 5396-5410.	9.2	50
51	Joint data assignment and beamforming for backhaul limited caching networks. , 2014, , .		50
52	Beamforming for small cell deployment in LTE-advanced and beyond. IEEE Wireless Communications, 2014, 21, 50-56.	9.0	46
53	Optimal Stochastic Coordinated Beamforming for Wireless Cooperative Networks With CSI Uncertainty. IEEE Transactions on Signal Processing, 2015, 63, 960-973.	5.3	46
54	A Graph Neural Network Approach for Scalable Wireless Power Control. , 2019, , .		45

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55	Learning Task-Oriented Communication for Edge Inference: An Information Bottleneck Approach. IEEE Journal on Selected Areas in Communications, 2022, 40, 197-211.	14.0	45
56	Joint Activity Detection and Channel Estimation for IoT Networks: Phase Transition and Computation-Estimation Tradeoff. IEEE Internet of Things Journal, 2019, 6, 6212-6225.	8.7	41
57	Joint Fronthaul Multicast Beamforming and User-Centric Clustering in Downlink C-RANs. IEEE Transactions on Wireless Communications, 2017, 16, 5395-5409.	9.2	39
58	Maximizing energy efficiency in wireless networks with a minimum average throughput requirement. , 2012, , .		38
59	Optimal QoS-Aware Channel Assignment in D2D Communications With Partial CSI. IEEE Transactions on Wireless Communications, 2016, 15, 7594-7609.	9.2	38
60	Low-Rank Matrix Completion for Topological Interference Management by Riemannian Pursuit. IEEE Transactions on Wireless Communications, 2016, , 1-1.	9.2	37
61	Generalized Sparse and Low-Rank Optimization for Ultra-Dense Networks. , 2018, 56, 42-48.		36
62	CSI overhead reduction with stochastic beamforming for cloud radio access networks. , 2014, , .		33
63	Exploiting Mobility in Cache-Assisted D2D Networks: Performance Analysis and Optimization. IEEE Transactions on Wireless Communications, 2018, 17, 5592-5605.	9.2	33
64	Data-Importance Aware User Scheduling for Communication-Efficient Edge Machine Learning. IEEE Transactions on Cognitive Communications and Networking, 2021, 7, 265-278.	7.9	33
65	Dependency-Aware Computation Offloading for Mobile Edge Computing With Edge-Cloud Cooperation. IEEE Transactions on Cloud Computing, 2022, 10, 2451-2468.	4.4	32
66	High-Dimensional CSI Acquisition in Massive MIMO: Sparsity-Inspired Approaches. IEEE Systems Journal, 2017, 11, 32-40.	4.6	31
67	LRC: Dependency-aware cache management for data analytics clusters. , 2017, , .		31
68	Energy efficiency analysis of small cell networks. , 2013, , .		30
69	Alternating minimization for hybrid precoding in multiuser OFDM mmWave systems. , 2016, , .		30
70	Layered Group Sparse Beamforming for Cache-Enabled Green Wireless Networks. IEEE Transactions on Communications, 2017, 65, 5589-5603.	7.8	29
71	Cache size allocation in backhaul limited wireless networks. , 2016, , .		26
72	Coordinated Multi-cell MIMO Systems with Cellular Block Diagonalization. Conference Record of the Asilomar Conference on Signals, Systems and Computers, 2007, , .	0.0	24

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73	Grid Energy Consumption and QoS Tradeoff in Hybrid Energy Supply Wireless Networks. IEEE Transactions on Wireless Communications, 2016, 15, 3573-3586.	9.2	24
74	Relay selection for energy harvesting cooperative communication systems. , 2013, , .		23
75	Block Diagonalization in the MIMO Broadcast Channel with Delayed CSIT. , 2009, , .		21
76	A Unified Framework for the Tractable Analysis of Multi-Antenna Wireless Networks. IEEE Transactions on Wireless Communications, 2018, 17, 7965-7980.	9.2	21
77	Wireless Data Acquisition for Edge Learning: Data-Importance Aware Retransmission. IEEE Transactions on Wireless Communications, 2021, 20, 406-420.	9.2	21
78	Partially-Connected Hybrid Beamforming for Spectral Efficiency Maximization via a Weighted MMSE Equivalence. IEEE Transactions on Wireless Communications, 2021, 20, 8218-8232.	9.2	21
79	Interference Management with Relay Cooperation in Two-Hop Interference Channels. IEEE Wireless Communications Letters, 2012, 1, 165-168.	5.0	20
80	Multi-objective resource allocation for mobile edge computing systems. , 2017, , .		20
81	Transfer Learning for Mixed-Integer Resource Allocation Problems in Wireless Networks. , 2019, , .		20
82	Transmit Power Minimization for Wireless Networks With Energy Harvesting Relays. IEEE Transactions on Communications, 2016, 64, 987-1000.	7.8	19
83	Enhanced Group Sparse Beamforming for Green Cloud-RAN: A Random Matrix Approach. IEEE Transactions on Wireless Communications, 2018, 17, 2511-2524.	9.2	18
84	Scalable coordinated beamforming for dense wireless cooperative networks. , 2014, , .		17
85	QoS-aware joint mode selection and channel assignment for D2D communications. , 2016, , .		17
86	Single-user MIMO vs. Multiuser MIMO in the broadcast channel with CSIT constraints. , 2008, , .		16
87	Mobility increases the data offloading ratio in D2D caching networks. , 2017, , .		16
88	Partially-connected hybrid precoding in mm-wave systems with dynamic phase shifter networks. , 2017, , .		16
89	Distributed Green Offloading and Power Optimization in Virtualized Small Cell Networks With Mobile Edge Computing. IEEE Transactions on Green Communications and Networking, 2020, 4, 69-82.	5.5	15
90	Joint link selection and relay power allocation for energy harvesting relaying systems. , 2014, , .		14

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91	Hybrid Precoding Design in Millimeter Wave MIMO Systems: An Alternating Minimization Approach. , 2015, , .		14
92	Wireless Data Acquisition for Edge Learning: Importance-Aware Retransmission. , 2019, , .		14
93	Connectivity-Aware UAV Path Planning with Aerial Coverage Maps. , 2019, , .		14
94	Branchy-GNN: A Device-Edge Co-Inference Framework for Efficient Point Cloud Processing. , 2021, , .		14
95	User-centric intercell interference coordination in small cell networks. , 2014, , .		13
96	Low-rank matrix completion via Riemannian pursuit for topological interference management. , 2015, , .		13
97	Analysis of area spectral efficiency and link reliability in multiuser MIMO HetNets. , 2015, , .		13
98	Hybrid Precoding in Millimeter Wave Systems: How Many Phase Shifters Are Needed?. , 2017, , .		13
99	SP-Cache: Load-Balanced, Redundancy-Free Cluster Caching with Selective Partition. , 2018, , .		13
100	Achievable throughput of multi-mode multiuser MIMO with imperfect CSI constraints. , 2009, , .		12
101	Coordinated single-cell vs multi-cell transmission with limited-capacity backhaul. , 2010, , .		12
102	On the Accuracy of the Wyner Model in Downlink Cellular Networks. , 2011, , .		12
103	QoS-Aware Channel Assignment for Weighted Sum-Rate Maximization in D2D Communications. , 2015, , .		12
104	Incentive mechanism design for cache-assisted D2D communications: A mobility-aware approach. , 2017, , .		11
105	Long-term optimization for MEC-enabled HetNets with deviceâ€“edgeâ€“cloud collaboration. Computer Communications, 2021, 166, 66-80.	5.1	11
106	Performance Analysis of Multiple-Relay Decode-and-Forward Cooperation System. , 2005, , .		10
107	When Does the Wyner Model Accurately Describe an Uplink Cellular Network?. , 2010, , .		10
108	Compressed CSI acquisition in FDD massive MIMO with partial support information. , 2015, , .		10

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109	Selective uplink training for massive MIMO systems. , 2016, , .		10
110	Cellular Communication with Randomly Placed Distributed Antennas. , 2007, , .		9
111	Coverage analysis for dense millimeter wave cellular networks: The impact of array size. , 2016, , .		9
112	Massive CSI Acquisition for Dense Cloud-RANs With Spatial-Temporal Dynamics. IEEE Transactions on Wireless Communications, 2018, 17, 2557-2570.	9.2	9
113	A Tractable Framework for Coverage Analysis of Cellular-Connected UAV Networks. , 2019, , .		9
114	Adaptive Power Allocation for Wireless-Powered FD-NOMA System With Cooperation Versus Non-Cooperation. IEEE Transactions on Vehicular Technology, 2021, 70, 10395-10408.	6.3	9
115	Dynamic Client Association for Energy-Aware Hierarchical Federated Learning. , 2021, , .		9
116	AI Empowered Resource Management for Future Wireless Networks. , 2021, , .		9
117	Location-Based Joint Relay Selection and Channel Allocation for Cognitive Radio Networks. , 2011, , .		8
118	A Low-Complexity Algorithmic Framework for Large-Scale IRS-Assisted Wireless Systems. , 2020, , .		8
119	Faster Activity and Data Detection in Massive Random Access: A Multiarmed Bandit Approach. IEEE Internet of Things Journal, 2022, 9, 13664-13678.	8.7	8
120	Group sparse beamforming for green cloud radio access networks. , 2013, , .		7
121	Performance analysis of SDMA in multicell wireless networks. , 2013, , .		7
122	Achieving energy diversity with multiple energy harvesting relays. , 2014, , .		7
123	Achieving Load-Balanced, Redundancy-Free Cluster Caching with Selective Partition. IEEE Transactions on Parallel and Distributed Systems, 2020, 31, 439-454.	5.6	7
124	Edge Intelligence for Mission Cognitive Wireless Emergency Networks. IEEE Wireless Communications, 2020, 27, 103-109.	9.0	7
125	Low-overhead Communications in IoT Networks. , 2020, , .		7
126	Coordinated relay beamforming for amplify-and-forward two-hop interference networks. , 2012, , .		6

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127	Throughput maximization for two-hop energy harvesting communication systems. , 2013, , .		6
128	User capacity of pilot-contaminated TDD massive MIMO systems. , 2014, , .		6
129	A tractable framework for performance analysis of dense multi-antenna networks. , 2017, , .		6
130	LERC: Coordinated Cache Management for Data-Parallel Systems. , 2017, , .		6
131	Stochastic Geometry Analysis of Multi-Antenna Wireless Networks. , 2019, , .		6
132	Performance comparison of conventional and cooperative multihop transmission. , 2006, , .		5
133	Training optimization for energy harvesting communication systems. , 2012, , .		5
134	Average throughput analysis of downlink cellular networks with multi-antenna base stations. , 2014, , .		5
135	Communication, Computing, and Learning on the Edge. , 2018, , .		5
136	Blind Data Detection in Massive MIMO via â„“â‚*f*-Norm Maximization Over the Stiefel Manifold. IEEE Transactions on Wireless Communications, 2021, 20, 1411-1424.	9.2	5
137	ARQ with adaptive feedback for energy harvesting receivers. , 2016, , .		4
138	OpuS: Fair and Efficient Cache Sharing for In-Memory Data Analytics. , 2018, , .		4
139	Bandit Sampling for Faster Activity and Data Detection in Massive Random Access. , 2020, , .		4
140	Learn to Communicate With Neural Calibration: Scalability and Generalization. IEEE Transactions on Wireless Communications, 2022, 21, 9947-9961.	9.2	4
141	Multiple-Source Multiple-Relay Cooperation System. , 2006, , .		3
142	Massive CSI acquisition in dense cloud-RAN with spatial and temporal prior information. , 2017, , .		3
143	SCALABLE NETWORK ADAPTATION FOR CLOUD-RANS: AN IMITATION LEARNING APPROACH. , 2018, , .		3
144	Coordinated Fronthaul Data Assignment and Multicast Beamforming for Cache-Enabled Wireless Networks. IEEE Wireless Communications Letters, 2019, 8, 1082-1085.	5.0	3

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145	Decentralized Statistical Inference with Unrolled Graph Neural Networks. , 2021, , .		3
146	Multimode Transmission in Network MIMO Downlink with Incomplete CSI. Eurasip Journal on Advances in Signal Processing, 2011, 2011, .	1.7	2
147	Residential demand response with power adjustable and unadjustable appliances in smart grid. , 2013, , .		2
148	Statistical group sparse beamforming for green Cloud-RAN via large system analysis. , 2016, , .		2
149	Latency optimization for D2D-enabled parallel mobile edge computing in cellular networks. Eurasip Journal on Wireless Communications and Networking, 2021, 2021, .	2.4	2
150	Optimizing Training and Feedback for Spatial Intercell Interference Cancellation. , 2011, , .		1
151	Location-aware distributed routing in cognitive radio networks. , 2012, , .		1
152	Location-aware spectrum sharing in cognitive radio networks — A semi-matching approach. , 2014, , .		1
153	Joint Device Caching and Channel Allocation for D2D-Assisted Wireless Content Delivery. , 2018, , .		1
154	Deep Learning-based Prediction of Traffic Accident Risk in Vehicular Networks. , 2020, , .		1
155	Optimal Task Allocation Policy for Energy Efficient D2D-enabled Mobile Edge Computing. , 2021, , .		1
156	Communication-Computation Efficient Device-Edge Co-Inference via AutoML. , 2021, , .		1
157	Joint base station assignment and power control in hybrid energy supply wireless networks. , 2015, , .		0
158	A low-rank approach for interference management in dense wireless networks. , 2016, , .		0
159	Optimal stochastic power control with compressive CSI acquisition for Cloud-RAN. , 2016, , .		0
160	Towards Dependency-Aware Cache Management for Data Analytics Applications. IEEE Transactions on Cloud Computing, 2022, 10, 706-723.	4.4	0
161	An Analytical Framework for Multi-Antenna Wireless Networks. , 2019, , 37-84.		0
162	Analysis of Multi-Antenna Wireless Networks. , 2019, , 85-125.		0

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163	Optimization of Multi-Antenna Wireless Networks. , 2019, , 127-167.		0
164	LACS: Load-Aware Cache Sharing with Isolation Guarantee. , 2019, , .		0
165	Exploiting Diversity Via Importance-Aware User Scheduling for Fast Edge Learning. , 2020, , .		0
166	Network MIMO. , 2018, , 1-4.		0
167	Sparse Linear Model. , 2020, , 13-34.		0
168	Network MIMO. , 2020, , 983-986.		0