Kaibin Huang

List of Publications by Year
in descending order

119 **papers**	11,950 **citations**

81900
| 39 **h-index** |

60623
| 81 **g-index** |

| 120 **all docs** | 120 **docs citations** | 120 **times ranked** | 7912 **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	Energy-Efficient Resource Allocation for Mobile-Edge Computation Offloading. IEEE Transactions on Wireless Communications, 2017, 16, 1397-1411.	9.2	1,169
3	Energy Harvesting Wireless Communications: A Review of Recent Advances. IEEE Journal on Selected Areas in Communications, 2015, 33, 360-381.	14.0	777
4	Enabling Wireless Power Transfer in Cellular Networks: Architecture, Modeling and Deployment. IEEE Transactions on Wireless Communications, 2014, 13, 902-912.	9.2	615
5	Opportunistic Wireless Energy Harvesting in Cognitive Radio Networks. IEEE Transactions on Wireless Communications, 2013, 12, 4788-4799.	9.2	541
6	Simultaneous Information and Power Transfer for Broadband Wireless Systems. IEEE Transactions on Signal Processing, 2013, 61, 5972-5986.	5.3	427
7	Broadband Analog Aggregation for Low-Latency Federated Edge Learning. IEEE Transactions on Wireless Communications, 2020, 19, 491-506.	9.2	405
8	Energy Efficient Mobile Cloud Computing Powered by Wireless Energy Transfer. IEEE Journal on Selected Areas in Communications, 2016, 34, 1757-1771.	14.0	390
9	Toward an Intelligent Edge: Wireless Communication Meets Machine Learning. IEEE Communications Magazine, 2020, 58, 19-25.	6.1	336
10	Cutting the last wires for mobile communications by microwave power transfer. , 2015, 53, 86-93.		267
11	Distributed Learning in Wireless Networks: Recent Progress and Future Challenges. IEEE Journal on Selected Areas in Communications, 2021, 39, 3579-3605.	14.0	201
12	Wirelessly Powered Backscatter Communication Networks: Modeling, Coverage, and Capacity. IEEE Transactions on Wireless Communications, 2017, 16, 2548-2561.	9.2	157
13	One-Bit Over-the-Air Aggregation for Communication-Efficient Federated Edge Learning: Design and Convergence Analysis. IEEE Transactions on Wireless Communications, 2021, 20, 2120-2135.	9.2	155
14	Green and Mobility-Aware Caching in 5G Networks. IEEE Transactions on Wireless Communications, 2017, 16, 8347-8361.	9.2	147
15	MIMO Over-the-Air Computation for High-Mobility Multimodal Sensing. IEEE Internet of Things Journal, 2019, 6, 6089-6103.	8.7	141
16	Energy-Efficient Radio Resource Allocation for Federated Edge Learning. , 2020, , .		129
17	Scheduling for Cellular Federated Edge Learning With Importance and Channel Awareness. IEEE Transactions on Wireless Communications, 2020, 19, 7690-7703.	9.2	128
18	Wirelessly Powered Two-Way Communication With Nonlinear Energy Harvesting Model: Rate Regions Under Fixed and Mobile Relay. IEEE Transactions on Wireless Communications, 2017, 16, 8190-8204.	9.2	126

#	Article	IF	Citations
19	Wireless Networks for Mobile Edge Computing: Spatial Modeling and Latency Analysis. IEEE Transactions on Wireless Communications, 2018, 17, 5225-5240.	9.2	122
20	Beam Management in Millimeter-Wave Communications for 5G and Beyond. IEEE Access, 2020, 8, 13282-13293.	4.2	105
21	Optimized Power Control for Over-the-Air Computation in Fading Channels. IEEE Transactions on Wireless Communications, 2020, 19, 7498-7513.	9.2	101
22	Cache-Enabled Heterogeneous Cellular Networks: Optimal Tier-Level Content Placement. IEEE Transactions on Wireless Communications, 2017, 16, 5939-5952.	9.2	100
23	Asynchronous Mobile-Edge Computation Offloading: Energy-Efficient Resource Management. IEEE Transactions on Wireless Communications, 2018, 17, 7590-7605.	9.2	91
24	Next generation backscatter communication: systems, techniques, and applications. Eurasip Journal on Wireless Communications and Networking, 2019, 2019, .	2.4	85
25	Exploiting Non-Causal CPU-State Information for Energy-Efficient Mobile Cooperative Computing. IEEE Transactions on Wireless Communications, 2018, 17, 4104-4117.	9.2	79
26	Multiuser Resource Allocation for Mobile-Edge Computation Offloading. , 2016, , .		78
27	Multiuser Computation Offloading and Downloading for Edge Computing With Virtualization. IEEE Transactions on Wireless Communications, 2019, 18, 4298-4311.	9.2	78
28	Over-the-Air Computing for Wireless Data Aggregation in Massive IoT. IEEE Wireless Communications, 2021, 28, 57-65.	9.0	78
29	Wirelessly Powered Data Aggregation for IoT via Over-the-Air Function Computation: Beamforming and Power Control. IEEE Transactions on Wireless Communications, 2019, 18, 3437-3452.	9.2	73
30	Multi-Cell Mobile Edge Computing: Joint Service Migration and Resource Allocation. IEEE Transactions on Wireless Communications, 2021, 20, 5898-5912.	9.2	70
31	Some new research trends in wirelessly powered communications. IEEE Wireless Communications, 2016, 23, 19-27.	9.0	66
32	Hybrid Beamforming via the Kronecker Decomposition for the Millimeter-Wave Massive MIMO Systems. IEEE Journal on Selected Areas in Communications, 2017, 35, 2097-2114.	14.0	64
33	Energy-Efficient Resource Management for Federated Edge Learning With CPU-GPU Heterogeneous Computing. IEEE Transactions on Wireless Communications, 2021, 20, 7947-7962.	9.2	64
34	High-Dimensional Stochastic Gradient Quantization for Communication-Efficient Edge Learning. IEEE Transactions on Signal Processing, 2020, 68, 2128-2142.	5.3	58
35	Live Prefetching for Mobile Computation Offloading. IEEE Transactions on Wireless Communications, 2017, 16, 3057-3071.	9.2	57
36	Wireless Power Transfer for Future Networks: Signal Processing, Machine Learning, Computing, and Sensing. IEEE Journal on Selected Topics in Signal Processing, 2021, 15, 1060-1094.	10.8	55

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37	Full-Duplex Backscatter Interference Networks Based on Time-Hopping Spread Spectrum. IEEE Transactions on Wireless Communications, 2017, 16, 4361-4377.	9.2	53
38	Reduced-Dimension Design of MIMO Over-the-Air Computing for Data Aggregation in Clustered IoT Networks. IEEE Transactions on Wireless Communications, 2019, 18, 5255-5268.	9.2	53
39	Wirelessly Powered Crowd Sensing: Joint Power Transfer, Sensing, Compression, and Transmission. IEEE Journal on Selected Areas in Communications, 2019, 37, 391-406.	14.0	49
40	Feedback-Topology Designs for Interference Alignment in MIMO Interference Channels. IEEE Transactions on Signal Processing, 2012, 60, 6561-6575.	5.3	47
41	Power Saving Techniques for 5G and Beyond. IEEE Access, 2020, 8, 108675-108690.	4.2	44
42	Reconfigurable Intelligent Surface Assisted Mobile Edge Computing With Heterogeneous Learning Tasks. IEEE Transactions on Cognitive Communications and Networking, 2021, 7, 369-382.	7.9	44
43	Wirelessly Powered Backscatter Communications: Waveform Design and SNR-Energy Tradeoff. IEEE Communications Letters, 2017, 21, 2234-2237.	4.1	37
44	Interference Cancelation at Receivers in Cache-Enabled Wireless Networks. IEEE Transactions on Vehicular Technology, 2018, 67, 842-846.	6.3	37
45	V2X-Based Vehicular Positioning: Opportunities, Challenges, and Future Directions. IEEE Wireless Communications, 2021, 28, 144-151.	9.0	35
46	Inference From Randomized Transmissions by Many Backscatter Sensors. IEEE Transactions on Wireless Communications, 2018, 17, 3111-3127.	9.2	34
47	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
48	Joint Parameter-and-Bandwidth Allocation for Improving the Efficiency of Partitioned Edge Learning. IEEE Transactions on Wireless Communications, 2020, 19, 8272-8286.	9.2	32
49	Stochastic Control of Computation Offloading to a Helper With a Dynamically Loaded CPU. IEEE Transactions on Wireless Communications, 2019, 18, 1247-1262.	9.2	29
50	Cooperative Interference Management for Over-the-Air Computation Networks. IEEE Transactions on Wireless Communications, 2021, 20, 2634-2651.	9.2	29
51	A New Metric for Measuring the Security of an Environment: The Secrecy Pressure. IEEE Transactions on Wireless Communications, 2017, 16, 3416-3430.	9.2	28
52	Wirelessly Powered Urban Crowd Sensing over Wearables: Trading Energy for Data. IEEE Wireless Communications, 2018, 25, 140-149.	9.0	26
53	Renewable Powered Cellular Networks: Energy Field Modeling and Network Coverage. IEEE Transactions on Wireless Communications, 2015, 14, 4234-4247.	9.2	21
54	Wireless Data Acquisition for Edge Learning: Data-Importance Aware Retransmission. IEEE Transactions on Wireless Communications, 2021, 20, 406-420.	9.2	21

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55	An Energy-Efficient Aerial Backhaul System With Reconfigurable Intelligent Surface. IEEE Transactions on Wireless Communications, 2022, 21, 6478-6494.	9.2	21
56	Ambient Backscatter Communication Systems With MFSK Modulation. IEEE Transactions on Wireless Communications, 2019, 18, 2553-2564.	9.2	20
57	Federated Dropout—A Simple Approach for Enabling Federated Learning on Resource Constrained Devices. IEEE Wireless Communications Letters, 2022, 11, 923-927.	5.0	20
58	Analog Spatial Cancellation for Tackling the Near-Far Problem in Wirelessly Powered Communications. IEEE Journal on Selected Areas in Communications, 2016, 34, 3566-3576.	14.0	17
59	Wirelessly Powered Federated Edge Learning: Optimal Tradeoffs Between Convergence and Power Transfer. IEEE Transactions on Wireless Communications, 2022, 21, 680-695.	9.2	17
60	Stability and Delay of Zero-Forcing SDMA With Limited Feedback. IEEE Transactions on Information Theory, 2012, 58, 6499-6514.	2.4	16
61	The Connectivity of Millimeter Wave Networks in Urban Environments Modeled Using Random Lattices. IEEE Transactions on Wireless Communications, 2018, 17, 3357-3372.	9.2	16
62	Hidden Vehicle Sensing via Asynchronous V2V Transmission: A Multi-Path-Geometry Approach. IEEE Access, 2019, 7, 169399-169416.	4.2	16
63	Scheduling for Mobile Edge Computing With Random User Arrivals—An Approximate MDP and Reinforcement Learning Approach. IEEE Transactions on Vehicular Technology, 2020, 69, 7735-7750.	6.3	16
64	Wireless Data Acquisition for Edge Learning: Importance-Aware Retransmission. , 2019, , .		14
65	Connectivity and Blockage Effects in Millimeter-Wave Air-To-Everything Networks. IEEE Wireless Communications Letters, 2019, 8, 388-391.	5.0	13
66	Rate Adaptation for Downlink Massive MIMO Networks and Underlaid D2D Links: A Learning Approach. IEEE Transactions on Wireless Communications, 2019, 18, 1819-1833.	9.2	13
67	Deploying Federated Learning in Large-Scale Cellular Networks: Spatial Convergence Analysis. IEEE Transactions on Wireless Communications, 2022, 21, 1542-1556.	9.2	12
68	Fast Analog Transmission for High-Mobility Wireless Data Acquisition in Edge Learning. IEEE Wireless Communications Letters, 2019, 8, 468-471.	5.0	11
69	Optimal Power Control for Over-the-Air Computation. , 2019, , .		11
70	Content-Based Wake-Up for Top-k Query in Wireless Sensor Networks. IEEE Transactions on Green Communications and Networking, 2021, 5, 362-377.	5.5	10
71	Adaptive Video Streaming for Massive MIMO Networks via Approximate MDP and Reinforcement Learning. IEEE Transactions on Wireless Communications, 2020, 19, 5716-5731.	9.2	9
72	A Two-Timescale Approach to Mobility Management for Multicell Mobile Edge Computing. IEEE Transactions on Wireless Communications, 2022, 21, 10981-10995.	9.2	9

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73	Simultaneous Signal-and-Interference Alignment for Two-Cell Over-the-Air Computation. IEEE Wireless Communications Letters, 2020, 9, 1342-1345.	5.0	8
74	Modeling Network Interference in the Angular Domain: Interference Azimuth Spectrum. IEEE Transactions on Communications, 2014, 62, 2107-2120.	7.8	7
75	Stochastic Control of Computation Offloading to a Dynamic Helper. , 2018, , .		7
76	Analysis of Interference Correlation in Non-Poisson Networks. , 2016, , .		6
77	Automatic Recognition of Space-Time Constellations by Learning on the Grassmann Manifold. IEEE Transactions on Signal Processing, 2018, 66, 6031-6046.	5.3	6
78	Effects of Base-Station Spatial Interdependence on Interference Correlation and Network Performance. IEEE Transactions on Communications, 2018, 66, 3092-3107.	7.8	5
79	Communication, Computing, and Learning on the Edge. , 2018, , .		5
80	Energy-Efficient Peer-to-Peer Computation Offloading Based on Non-Causal CPU-State Information. , 2018, , .		5
81	Communication Using a Large-Scale Array of Ubiquitous Antennas: A Geometry Approach. IEEE Transactions on Signal Processing, 2016, 64, 3635-3650.	5.3	4
82	Mitigating Interference in Content Delivery Networks by Spatial Signal Alignment: The Approach of Shot-Noise Ratio. IEEE Transactions on Wireless Communications, 2018, 17, 2305-2318.	9.2	4
83	Wirelessly Powered Over-the-Air Computation for High-Mobility Sensing. , 2018, , .		4
84	V2X Downlink Coverage Analysis with a Realistic Urban Vehicular Model. , 2018, , .		4
85	Reduced-Dimension Design of MIMO AirComp for Data Aggregation in Clustered IoT Networks. , 2019, , .		4
86	Joint Annotator-and-Spectrum Allocation in Wireless Networks for Crowd Labeling. IEEE Transactions on Wireless Communications, 2020, 19, 6116-6129.	9.2	4
87	Adaptive Subcarrier, Parameter, and Power Allocation for Partitioned Edge Learning Over Broadband Channels. IEEE Transactions on Wireless Communications, 2021, 20, 8348-8361.	9.2	4
88	Turning Channel Noise into an Accelerator for Over-the-Air Principal Component Analysis. , 2021, , .		4
89	Wirelessly Powered Mobile Computation Offloading: Energy Savings Maximization. , 2015, , .		3
90	Time-Hopping Multiple-Access for Backscatter Interference Networks. , 2017, , .		3

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91	Automatic Recognition of Space-Time Constellations by Learning on the Grassmann Manifold. , 2018, , .		3
92	Resource Management for Asynchronous Mobile-Edge Computation Offloading. , 2018, , .		3
93	Millimeter-Wave Multi-Point Vehicular Positioning for Autonomous Driving. , 2019, , .		3
94	Joint Topology and Computation Resource Optimization for Federated Edge Learning. , 2021, , .		3
95	On the complementary roles of massive MIMO and coded caching for content delivery. , 2016, , .		2
96	A New Physical-Layer Security Measure - Secrecy Pressure. , 2017, , .		2
97	IEEE Transactions on Green Communications and Computing: New Research Scope. IEEE Transactions on Green Communications and Networking, 2020, 4, 939-943.	5.5	2
98	Cooperative Multi-Point Vehicular Positioning Using Millimeter-Wave Surface Reflection. IEEE Transactions on Wireless Communications, 2021, 20, 2221-2236.	9.2	2
99	Accelerating Federated Edge Learning via Topology Optimization. IEEE Internet of Things Journal, 2023, 10, 2056-2070.	8.7	2
100	Simultaneous information and power transfer over broadband channels: Fixed coding rates. , 2013, , .		1
101	Analog spatial decoupling for tackling the near-far problem in wirelessly powered communications. , 2016, , .		1
102	Multi-Point Vehicular Positioning via Millimeter-Wave Transmissions. , 2019, , .		1
103	Learning-Based Rate Adaptation for Uplink Massive MIMO with a Cooperative Data-Assisted Detector. , 2019, , .		1
104	Adaptive Video Streaming for Massive MIMO Networks via Novel Approximate MDP. , 2020, , .		1
105	Guest Editorial Signal Processing Advances in Wireless Transmission of Information and Power. IEEE Journal on Selected Topics in Signal Processing, 2021, 15, 1056-1059.	10.8	1
106	Spatial Convergence of Federated Learning in Large-Scale Cellular Networks. , 2021, , .		1
107	Importance- and Channel-Aware Scheduling in Cellular Federated Edge Learning. , 2020, , .		1
108	Guest Editorial Special Issue on Distributed Learning Over Wireless Edge Networks—Part I. IEEE Journal on Selected Areas in Communications, 2021, 39, 3575-3578.	14.0	1

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109	Analog MIMO Communication for One-Shot Distributed Principal Component Analysis. IEEE Transactions on Signal Processing, 2022, 70, 3328-3342.	5.3	1
110	Progressive optimization for time-varying channel with one-way multiple Mechanical Relays. , 2013, , .		0
111	Wirelessly Powered Mobile Computation Offloading: Energy Savings Maximization. , 2014, , .		0
112	Harnessing Interference in Content Delivery by Spatial Signal Alignment. , 2017, , .		0
113	Ambient Backscatter Communications Systems Using MFSK Modulation. , 2018, , .		0
114	Exploiting Diversity Via Importance-Aware User Scheduling for Fast Edge Learning. , 2020, , .		0
115	Spectrum Allocation in Wireless Networks for Crowd Labelling. , 2020, , .		0
116	Capacity of Remote Classification Over Wireless Channels. IEEE Transactions on Communications, 2021, 69, 4489-4503.	7.8	0
117	Wirelessly Powered Federated Edge Learning. , 2021, , .		0
118	Guest Editorial Special Issue on Distributed Learning Over Wireless Edge Networksâ€"Part II. IEEE Journal on Selected Areas in Communications, 2022, 40, 445-448.	14.0	0
119	Joint Annotator Clustering and Power Control for Energy-Efficient Wireless Crowd Labelling. , 2021, , .		0