Zai-Chen Zhang

List of Publications by Year
in descending order

119 papers	2,762 citations	279487 23 h-index	197535 49 g-index
119 all docs	119 docs citations	119 times ranked	2034 citing authors

#	Article	IF	Citations
1	Towards 6G wireless communication networks: vision, enabling technologies, and new paradigm shifts. Science China Information Sciences, 2021, 64, 1.	2.7	858
2	Sparse Channel Estimation and Hybrid Precoding Using Deep Learning for Millimeter Wave Massive MIMO. IEEE Transactions on Communications, 2020, 68, 2838-2849.	4.9	134
3	Adaptive Modulation Schemes for Visible Light Communications. Journal of Lightwave Technology, 2015, 33, 117-125.	2.7	123
4	Approximate Message Passing-Based Joint User Activity and Data Detection for NOMA. IEEE Communications Letters, 2017, 21, 640-643.	2.5	104
5	Three-Dimensional Geometry-Based UAV-MIMO Channel Modeling for A2G Communication Environments. IEEE Communications Letters, 2018, 22, 1438-1441.	2.5	85
6	A Novel 3-D Massive MIMO Channel Model for Vehicle-to-Vehicle Communication Environments. IEEE Transactions on Communications, 2018, 66, 79-90.	4.9	84
7	A 3-D Non-Stationary Wideband Geometry-Based Channel Model for MIMO Vehicle-to-Vehicle Communications in Tunnel Environments. IEEE Transactions on Vehicular Technology, 2019, 68, 6257-6271.	3.9	81
8	Three-Dimensional Non-Stationary Wideband Geometry-Based UAV Channel Model for A2G Communication Environments. IEEE Access, 2019, 7, 26116-26122.	2.6	56
9	A Novel 3D UAV Channel Model for A2G Communication Environments Using AoD and AoA Estimation Algorithms. IEEE Transactions on Communications, 2020, 68, 7232-7246.	4.9	50
10	A metasurface-based light-to-microwave transmitter for hybrid wireless communications. Light: Science and Applications, 2022, 11, 126.	7.7	47
11	A Low-Complexity Massive MIMO Detection Based on Approximate Expectation Propagation. IEEE Transactions on Vehicular Technology, 2019, 68, 7260-7272.	3.9	36
12	Efficient Soft-Output Gaussâ€“Seidel Data Detector for Massive MIMO Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 5049-5060.	3.5	35
13	An Advanced Receiver for Universal Filtered Multicarrier. IEEE Transactions on Vehicular Technology, 2018, 67, 7779-7783.	3.9	34
14	A General Wideband Non-Stationary Stochastic Channel Model for Intelligent Reflecting Surface-Assisted MIMO Communications. IEEE Transactions on Wireless Communications, 2021, 20, 5314-5328.	6.1	33
15	Analysis of Geometric Multibounced Virtual Scattering Channel Model for Dense Urban Street Environments. IEEE Transactions on Vehicular Technology, 2017, 66, 1903-1912.	3.9	31
16	A 3D Non-Stationary MIMO Channel Model for Reconfigurable Intelligent Surface Auxiliary UAV-to-Ground mmWave Communications. IEEE Transactions on Wireless Communications, 2022, 21, 5658-5672.	6.1	31
17	Adaptive Modulation and Filter Configuration in Universal Filtered Multi-Carrier Systems. IEEE Transactions on Wireless Communications, 2018, 17, 1869-1881.	6.1	30
18	Performance Analysis of Multi-Branch Reconfigurable Intelligent Surfaces-Assisted Optical Wireless Communication System in Environment With Obstacles. IEEE Transactions on Vehicular Technology, 2021, 70, 9986-10001.	3.9	30

#	Article	IF	Citations
19	Novel Multi-Mobility V2X Channel Model in the Presence of Randomly Moving Clusters. IEEE Transactions on Wireless Communications, 2021, 20, 3180-3195.	6.1	29
20	Acquisition of channel state information for mmWave massive MIMO: traditional and machine learning-based approaches. Science China Information Sciences, 2021, 64, 1.	2.7	29
21	Measurement-Based Characterization and Modeling for Low-Altitude UAV Air-to-Air Channels. IEEE Access, 2019, 7, 98832-98840.	2.6	25
22	On the Low-Complexity, Hardware-Friendly Tridiagonal Matrix Inversion for Correlated Massive MIMO Systems. IEEE Transactions on Vehicular Technology, 2019, 68, 6272-6285.	3.9	25
23	MIMO-OFDM visible light communications system with low complexity. , 2013, , .		24
24	Joint Estimation of Frequency Offset and Doppler Shift in High Mobility Environments Based on Orthogonal Angle Domain Subspace Projection. IEEE Transactions on Vehicular Technology, 2018, 67, 2254-2266.	3.9	23
25	Optical Mobile Communications: Principles, Implementation, and Performance Analysis. IEEE Transactions on Vehicular Technology, 2019, 68, 471-482.	3.9	23
26	A Satellite Handover Strategy Based on MIMO Technology in LEO Satellite Networks. IEEE Communications Letters, 2020, 24, 1505-1509.	2.5	23
27	Channel Estimation for Multicell Multiuser Massive MIMO Uplink Over Rician Fading Channels. IEEE Transactions on Vehicular Technology, 2017, 66, 8872-8882.	3.9	22
28	A Non-Stationary Geometry-Based Scattering Vehicle-to-Vehicle MIMO Channel Model. IEEE Communications Letters, 2018, 22, 1510-1513.	2.5	22
29	Efficient Successive Over Relaxation Detectors for Massive MIMO. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 2128-2139.	3.5	22
30	Expectation Propagation Detection with Neumann-Series Approximation for Massive MIMO. , 2018, , .		18
31	A Novel Estimated Wideband Geometry-Based Vehicle-to-Vehicle Channel Model Using an AoD and AoA Estimation Algorithm. IEEE Access, 2019, 7, 35124-35131.	2.6	18
32	Performance of Decode-and-Forward Relaying in Mixed Beaulieu-Xie and $mathcal{M}$ Dual-Hop Transmission Systems With Digital Coherent Detection. IEEE Access, 2019, 7, 138757-138770.	2.6	18
33	Mathematical Modeling Analysis of Strong Physical Unclonable Functions. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 4426-4438.	1.9	18
34	Approximate Message Passing for Channel Estimation in Reconfigurable Intelligent Surface Aided MIMO Multiuser Systems. IEEE Transactions on Communications, 2022, 70, 5469-5481.	4.9	18
35	A New Framework of Filter Bank Multi-Carrier: Getting Rid of Subband Orthogonality. IEEE Transactions on Communications, 2017, 65, 3922-3932.	4.9	15
36	Enhanced Linear Iterative Detector for Massive Multiuser MIMO Uplink. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 540-552.	3.5	15

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37	Efficient Belief Propagation Polar Decoder With Loop Simplification Based Factor Graphs. IEEE Transactions on Vehicular Technology, 2020, 69, 5657-5660.	3.9	15
38	Efficient Sparse Code Multiple Access Decoder Based on Deterministic Message Passing Algorithm. IEEE Transactions on Vehicular Technology, 2020, 69, 3562-3574.	3.9	15
39	Data-Rate Driven Transmission Strategies for Deep Learning-Based Communication Systems. IEEE Transactions on Communications, 2020, 68, 2129-2142.	4.9	15
40	Novel Statistical Wideband MIMO V2V Channel Modeling Using Unitary Matrix Transformation Algorithm. IEEE Transactions on Wireless Communications, 2021, 20, 4947-4961.	6.1	15
41	Joint TOA and DOA Estimation With CFO Compensation Using Large-Scale Array. IEEE Transactions on Signal Processing, 2021, 69, 4204-4218.	3.2	15
42	A Statistical MIMO Channel Model for Reconfigurable Intelligent Surface Assisted Wireless Communications. IEEE Transactions on Communications, 2022, 70, 1360-1375.	4.9	15
43	Channel Estimation for Optical-OFDM-Based Multiuser MISO Visible Light Communication. IEEE Photonics Technology Letters, 2017, 29, 1727-1730.	1.3	14
44	Novel 3-D Irregular-Shaped Geometry-Based Channel Modeling for Semi-Ellipsoid Vehicle-to-Vehicle Scattering Environments. IEEE Wireless Communications Letters, 2018, 7, 836-839.	3.2	14
45	Low-Complexity Spatial Modulation for IM/DD Optical Wireless Communications. IEEE Photonics Technology Letters, 2019, 31, 475-478.	1.3	14
46	Efficient Expectation Propagation Massive MIMO Detector With Neumann-Series Approximation. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 1924-1928.	2.2	14
47	Novel Channel Quality Indicator Prediction Scheme for Adaptive Modulation and Coding in High Mobility Environments. IEEE Access, 2019, 7, 11543-11553.	2.6	13
48	Light-controllable time-domain digital coding metasurfaces. Advanced Photonics, 2022, 4, .	6.2	13
49	An Improved Software List Sphere Polar Decoder With Synchronous Determination. IEEE Transactions on Vehicular Technology, 2019, 68, 5236-5245.	3.9	12
50	Properties and achievable data rate of a cyclic prefix based imperfect reconstruction filter bank multiple access system. IET Communications, 2016, 10, 2427-2434.	1.5	11
51	Adaptive Preconditioned Iterative Linear Detection and Architecture for Massive MU-MIMO Uplink. Journal of Signal Processing Systems, 2018, 90, 1453-1467.	1.4	11
52	Efficient Successive Cancellation Stack Decoder for Polar Codes. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2019, 27, 2608-2619.	2.1	11
53	Joint User Identification and Channel Estimation Over Rician Fading Channels. IEEE Transactions on Vehicular Technology, 2020, 69, 6803-6807.	3.9	11
54	Low-Latency Segmented List-Pruning Software Polar List Decoder. IEEE Transactions on Vehicular Technology, 2020, 69, 3575-3589.	3.9	11

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55	Beacon LED Coordinates Estimator for Easy Deployment of Visible Light Positioning Systems. IEEE Transactions on Wireless Communications, 2022, 21, 10208-10223.	6.1	11
56	Blind Interference Alignment for Multiuser MISO Indoor Visible Light Communications. IEEE Communications Letters, 2017, 21, 1039-1042.	2.5	10
57	Blind Interference Alignment in Two-Cell Z Interference MIMO Channel. IEEE Access, 2017, 5, 10526-10532.	2.6	10
58	Reconfigurable and Low-Complexity Accelerator for Convolutional and Generative Networks Over Finite Fields. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 4894-4907.	1.9	10
59	Hardware Implementation for Belief Propagation Flip Decoding of Polar Codes. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 1330-1341.	3.5	10
60	A 3D Stochastic Channel Model for 6G Wireless Double-IRS Cooperatively Assisted MIMO Communications. , 2021, , .		10
61	Optical mobile communications: Principles and challenges. , 2017, , .		9
62	Efficient Channel Estimator With Angle-Division Multiple Access. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 708-718.	3.5	8
63	A Flexible and High Parallel Permutation Network for 5G LDPC Decoders. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 3018-3022.	2.2	8
64	Improving the power efficiency of enhanced unipolar OFDM for optical wireless communication. Electronics Letters, 2015, 51, 1681-1683.	0.5	7
65	Efficient Sphere Polar Decoding via Synchronous Determination. IEEE Transactions on Vehicular Technology, 2020, 69, 6777-6781.	3.9	7
66	Quantum Circuit Architecture Optimization for Variational Quantum Eigensolver via Monto Carlo Tree Search. IEEE Transactions on Quantum Engineering, 2021, 2, 1-10.	2.9	7
67	Approaches to Array-Type Optical IRSs: Schemes and Comparative Analysis. Journal of Lightwave Technology, 2022, 40, 3576-3591.	2.7	7
68	Receiver Algorithms for Single-Carrier OSM Based High-Rate Indoor Visible Light Communications. IEEE Transactions on Wireless Communications, 2020, 19, 1113-1126.	6.1	6
69	An Efficient Software Stack Sphere Decoder for Polar Codes. IEEE Transactions on Vehicular Technology, 2020, 69, 1257-1266.	3.9	6
70	Stochastic Belief Propagation Polar Decoding With Efficient Re-Randomization. IEEE Transactions on Vehicular Technology, 2020, 69, 6771-6776.	3.9	6
71	Improving Approximate Expectation Propagation Massive MIMO Detector With Deep Learning. IEEE Wireless Communications Letters, 2021, 10, 2145-2149.	3.2	6
72	Tracking System for Fast Moving Nodes in Optical Mobile Communication and the Design Rules. IEEE Transactions on Wireless Communications, 2021, 20, 2716-2728.	6.1	6

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73	Low-Complexity Construction of Polar Codes Based on Genetic Algorithm. IEEE Communications Letters, 2021, 25, 3175-3179.	2.5	6
74	A geometryâ€based stochastic channel model and its application for intelligent reflecting surface assisted wireless communication. IET Communications, 2021, 15, 421-434.	1.5	6
75	Fast Iterative Soft-Output List Decoding of Polar Codes. IEEE Transactions on Signal Processing, 2022, 70, 1361-1376.	3.2	6
76	Imperfect Reconstructed Filter Bank Multiple Access System Using Wide-Banded Subbands. , 2017, , .		5
77	Joint Detection and Decoding of Polar-Coded OFDM-IDMA Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 4005-4017.	3.5	5
78	Quantum Algorithm for Spectral Regression for Regularized Subspace Learning. IEEE Access, 2019, 7, 4825-4832.	2.6	5
79	Quantum version of MMSE-based massive MIMO uplink detection. Quantum Information Processing, 2020, 19, 1.	1.0	5
80	Efficient Pre-Conditioned Descent Search Detector for Massive MU-MIMO. IEEE Transactions on Vehicular Technology, 2020, 69, 4663-4676.	3.9	5
81	Polar Compiler: Auto-Generator of Hardware Architectures for Polar Encoders. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 2091-2102.	3.5	5
82	Adaptive Damped Jacobi Detector and Architecture for Massive MIMO Uplink. , 2018, , .		4
83	Massive MIMO Detection based on Barzilai-Borwein Algorithm. , 2018, , .		4
84	UFMC-Based Interference Management for Heterogeneous Small-Cell Networks. IEEE Access, 2019, 7, 136559-136567.	2.6	4
85	Wireless Optical Positioning With Multiple Photodiodes and LED Clusters. , 2022, , .		4
86	Frequency-Domain Inter-Group Interference Coordination for V2V Communications. IEEE Signal Processing Letters, 2017, , 1-1.	2.1	3
87	A Multicast Scheme Based on Fidelity Metrics in Quantum Networks. IEEE Access, 2019, 7, 65703-65713.	2.6	3
88	Low complexity and high performance symbol detection scheme for uplink wideâ€banded cyclic prefixed filter bank multiple access system without analysis filtering. Electronics Letters, 2019, 55, 288-290.	0.5	3
89	Autogeneration of Pipelined Belief Propagation Polar Decoders. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2020, 28, 1703-1716.	2.1	3
90	A Linear-Complexity Channel-Independent Code Construction Method for List Sphere Polar Decoder. Journal of Signal Processing Systems, 2020, 92, 763-774.	1.4	3

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91	Transmit Covariance and Waveform Optimization for Non-Orthogonal CP-FBMA System. IEEE Transactions on Communications, 2021, 69, 261-275.	4.9	3
92	Successive-Coded Spatial Shift Keying Modulation for MIMO Wireless Communications. IEEE Transactions on Communications, 2021, 69, 6516-6528.	4.9	3
93	Adaptive modulation with finite rate feedback for QR decompositionâ€successive interference cancellationâ€based multipleâ€in multipleâ€out systems. IET Communications, 2013, 7, 456-462.	1.5	2
94	On the ergodic achievable rate of FBMC system without subband orthogonality. , 2018, , .		2
95	Asymptotic Analysis on Diversity Receptions Over Fading Channels With Correlated Shadowing. IEEE Transactions on Vehicular Technology, 2019, 68, 8275-8278.	3.9	2
96	On the Achievable Rate Performance of Broadcast OMC System with User Mobility. , 2019, , .		2
97	An Efficient Software List Sphere Decoder for Polar Codes. Journal of Signal Processing Systems, 2020, 92, 517-528.	1.4	2
98	Improved quantum algorithm for MMSE-based massive MIMO uplink detection. Quantum Information Processing, 2020, 19, 1.	1.0	2
99	Rate Analysis of Intensity Modulated Broadcast Optical Mobile Communication System With User Mobility. IEEE Photonics Journal, 2020, 12, 1-12.	1.0	2
100	Capacity Results for Range-Limited SISO and MISO Dimmable VLC Channels. IEEE Transactions on Vehicular Technology, 2022, 71, 4465-4470.	3.9	2
101	Design of indoor optical wireless collaborative cellular system. , 2011, , .		1
102	Investigation of a coherent optical wireless system for high speed indoor interconnection. Optics Communications, 2019, 438, 111-117.	1.0	1
103	Optical Adaptive Antenna Array for Multiuser Mobile Optical Communication. IEEE Access, 2019, 7, 65444-65449.	2.6	1
104	Waveform Optimization for Non-orthogonal CP-FBMA System. , 2019, , .		1
105	Overlapped universal filtered multicarrier system for uplink wireless communication. International Journal of Communication Systems, 2020, 33, e4148.	1.6	1
106	An Efficient Stochastic Convolution Architecture Based on Fast FIR Algorithm. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 984-988.	2.2	1
107	An Improved Optical Positioning System With LED Selection. , 2021, , .		1
108	Efficient MMSE-PIC Detection for Polar-Coded System Using Tree-Structured Gray Codes. IEEE Wireless Communications Letters, 2022, 11, 1310-1314.	3.2	1

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109	Outage Analysis and Beamwidth Optimization for Positioning-Assisted Beamforming. IEEE Communications Letters, 2022, 26, 1543-1547.	2.5	1
110	An template averaging based differential receiving method for impulse radio communications. , 2014, , .		0
111	Efficient Hardware for Generalized Turbo Signal Recovery in Compressed Sensing. IEEE Transactions on Vehicular Technology, 2020, 69, 1245-1256.	3.9	0
112	FSO Receiver With Adaptive Alignment Based on Pure Phased Holographic Imaging. Frontiers in Physics, 2021, 9, .	1.0	0
113	Hardware Implementation for Bipartite Belief Propagation Polar Decoding with Bit Flipping. Journal of Signal Processing Systems, 2021, 93, 1149-1157.	1.4	0
114	Performance of Optical Mobile Communications with User Mobility and Multiple Light Sources. Wireless Communications and Mobile Computing, 2021, 2021, 1-14.	0.8	0
115	Low-complexity beam-domain channel estimation and power allocation in hybrid architecture massive MIMO systems. Eurasip Journal on Wireless Communications and Networking, 2019, 2019, .	1.5	0
116	A Novel Method to Estimate the Coordinates of LEDs in Wireless Optical Positioning Systems. , 2021, , .		0
117	Asymptotic Analysis of Diversity Receptions Over Correlated Lognormal-Rician Fading Channels. , 2021, , .		0
118	Blind Interference Alignment Scheme for Dynamic TDD Systems. , 2022, , .		0
119	Multi-User Successive-Coded Spatial Modulation Scheme Based on Beamforming. IEEE Transactions on Vehicular Technology, 2022, 71, 10485-10498.	3.9	0