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	A Statistical MIMO Channel Model for Reconfigurable Intelligent Surface Assisted Wireless Communications. IEEE Transactions on Communications, 2022, 70, 1360-1375.	4.9	15
2	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
3	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
4	Capacity Results for Range-Limited SISO and MISO Dimmable VLC Channels. IEEE Transactions on Vehicular Technology, 2022, 71, 4465-4470.	3.9	2
5	Fast Iterative Soft-Output List Decoding of Polar Codes. IEEE Transactions on Signal Processing, 2022, 70, 1361-1376.	3.2	6
6	Efficient MMSE-PIC Detection for Polar-Coded System Using Tree-Structured Gray Codes. IEEE Wireless Communications Letters, 2022, 11, 1310-1314.	3.2	1
7	Light-controllable time-domain digital coding metasurfaces. Advanced Photonics, 2022, 4, .	6.2	13
8	Approaches to Array-Type Optical IRSs: Schemes and Comparative Analysis. Journal of Lightwave Technology, 2022, 40, 3576-3591.	2.7	7
9	Outage Analysis and Beamwidth Optimization for Positioning-Assisted Beamforming. IEEE Communications Letters, 2022, 26, 1543-1547.	2.5	1
10	A metasurface-based light-to-microwave transmitter for hybrid wireless communications. Light: Science and Applications, 2022, 11, 126.	7.7	47
11	Wireless Optical Positioning With Multiple Photodiodes and LED Clusters. , 2022, , .		4
12	Blind Interference Alignment Scheme for Dynamic TDD Systems. , 2022, , .		0
13	Beacon LED Coordinates Estimator for Easy Deployment of Visible Light Positioning Systems. IEEE Transactions on Wireless Communications, 2022, 21, 10208-10223.	6.1	11
14	Multi-User Successive-Coded Spatial Modulation Scheme Based on Beamforming. IEEE Transactions on Vehicular Technology, 2022, 71, 10485-10498.	3.9	0
15	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
16	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
17	Towards 6G wireless communication networks: vision, enabling technologies, and new paradigm shifts. Science China Information Sciences, 2021, 64, 1.	2.7	858
18	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

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19	Transmit Covariance and Waveform Optimization for Non-Orthogonal CP-FBMA System. IEEE Transactions on Communications, 2021, 69, 261-275.	4.9	3
20	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
21	Improving Approximate Expectation Propagation Massive MIMO Detector With Deep Learning. IEEE Wireless Communications Letters, 2021, 10, 2145-2149.	3.2	6
22	FSO Receiver With Adaptive Alignment Based on Pure Phased Holographic Imaging. Frontiers in Physics, 2021, 9, .	1.0	0
23	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
24	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
25	Hardware Implementation for Bipartite Belief Propagation Polar Decoding with Bit Flipping. Journal of Signal Processing Systems, 2021, 93, 1149-1157.	1.4	0
26	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
27	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
28	Novel Statistical Wideband MIMO V2V Channel Modeling Using Unitary Matrix Transformation Algorithm. IEEE Transactions on Wireless Communications, 2021, 20, 4947-4961.	6.1	15
29	Performance of Optical Mobile Communications with User Mobility and Multiple Light Sources. Wireless Communications and Mobile Computing, 2021, 2021, 1-14.	0.8	0
30	Joint TOA and DOA Estimation With CFO Compensation Using Large-Scale Array. IEEE Transactions on Signal Processing, 2021, 69, 4204-4218.	3.2	15
31	Successive-Coded Spatial Shift Keying Modulation for MIMO Wireless Communications. IEEE Transactions on Communications, 2021, 69, 6516-6528.	4.9	3
32	Low-Complexity Construction of Polar Codes Based on Genetic Algorithm. IEEE Communications Letters, 2021, 25, 3175-3179.	2.5	6
33	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
34	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
35	A 3D Stochastic Channel Model for 6G Wireless Double-IRS Cooperatively Assisted MIMO Communications. , 2021, , .		10
36	A Novel Method to Estimate the Coordinates of LEDs in Wireless Optical Positioning Systems. , 2021, , .		0

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37	An Improved Optical Positioning System With LED Selection. , 2021, , .		1
38	Asymptotic Analysis of Diversity Receptions Over Correlated Lognormal-Rician Fading Channels. , 2021, , .		0
39	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
40	Quantum version of MMSE-based massive MIMO uplink detection. Quantum Information Processing, 2020, 19, 1.	1.0	5
41	An Efficient Software List Sphere Decoder for Polar Codes. Journal of Signal Processing Systems, 2020, 92, 517-528.	1.4	2
42	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
43	Overlapped universal filtered multicarrier system for uplink wireless communication. International Journal of Communication Systems, 2020, 33, e4148.	1.6	1
44	An Efficient Software Stack Sphere Decoder for Polar Codes. IEEE Transactions on Vehicular Technology, 2020, 69, 1257-1266.	3.9	6
45	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
46	Efficient Hardware for Generalized Turbo Signal Recovery in Compressed Sensing. IEEE Transactions on Vehicular Technology, 2020, 69, 1245-1256.	3.9	0
47	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
48	Joint User Identification and Channel Estimation Over Rician Fading Channels. IEEE Transactions on Vehicular Technology, 2020, 69, 6803-6807.	3.9	11
49	Improved quantum algorithm for MMSE-based massive MIMO uplink detection. Quantum Information Processing, 2020, 19, 1.	1.0	2
50	Rate Analysis of Intensity Modulated Broadcast Optical Mobile Communication System With User Mobility. IEEE Photonics Journal, 2020, 12, 1-12.	1.0	2
51	Autogeneration of Pipelined Belief Propagation Polar Decoders. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2020, 28, 1703-1716.	2.1	3
52	Efficient Sphere Polar Decoding via Synchronous Determination. IEEE Transactions on Vehicular Technology, 2020, 69, 6777-6781.	3.9	7
53	Efficient Belief Propagation Polar Decoder With Loop Simplification Based Factor Graphs. IEEE Transactions on Vehicular Technology, 2020, 69, 5657-5660.	3.9	15
54	A Satellite Handover Strategy Based on MIMO Technology in LEO Satellite Networks. IEEE Communications Letters, 2020, 24, 1505-1509.	2.5	23

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55	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
56	Stochastic Belief Propagation Polar Decoding With Efficient Re-Randomization. IEEE Transactions on Vehicular Technology, 2020, 69, 6771-6776.	3.9	6
57	Efficient Pre-Conditioned Descent Search Detector for Massive MU-MIMO. IEEE Transactions on Vehicular Technology, 2020, 69, 4663-4676.	3.9	5
58	Low-Latency Segmented List-Pruning Software Polar List Decoder. IEEE Transactions on Vehicular Technology, 2020, 69, 3575-3589.	3.9	11
59	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
60	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
61	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
62	Efficient Sparse Code Multiple Access Decoder Based on Deterministic Message Passing Algorithm. IEEE Transactions on Vehicular Technology, 2020, 69, 3562-3574.	3.9	15
63	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
64	Data-Rate Driven Transmission Strategies for Deep Learning-Based Communication Systems. IEEE Transactions on Communications, 2020, 68, 2129-2142.	4.9	15
65	Efficient Successive Over Relaxation Detectors for Massive MIMO. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 2128-2139.	3.5	22
66	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
67	Measurement-Based Characterization and Modeling for Low-Altitude UAV Air-to-Air Channels. IEEE Access, 2019, 7, 98832-98840.	2.6	25
68	Asymptotic Analysis on Diversity Receptions Over Fading Channels With Correlated Shadowing. IEEE Transactions on Vehicular Technology, 2019, 68, 8275-8278.	3.9	2
69	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
70	Efficient Successive Cancellation Stack Decoder for Polar Codes. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2019, 27, 2608-2619.	2.1	11
71	A Low-Complexity Massive MIMO Detection Based on Approximate Expectation Propagation. IEEE Transactions on Vehicular Technology, 2019, 68, 7260-7272.	3.9	36
72	UFMC-Based Interference Management for Heterogeneous Small-Cell Networks. IEEE Access, 2019, 7, 136559-136567.	2.6	4

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73	A Multicast Scheme Based on Fidelity Metrics in Quantum Networks. IEEE Access, 2019, 7, 65703-65713.	2.6	3
74	Investigation of a coherent optical wireless system for high speed indoor interconnection. Optics Communications, 2019, 438, 111-117.	1.0	1
75	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
76	Quantum Algorithm for Spectral Regression for Regularized Subspace Learning. IEEE Access, 2019, 7, 4825-4832.	2.6	5
77	Optical Adaptive Antenna Array for Multiuser Mobile Optical Communication. IEEE Access, 2019, 7, 65444-65449.	2.6	1
78	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
79	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
80	Novel Channel Quality Indicator Prediction Scheme for Adaptive Modulation and Coding in High Mobility Environments. IEEE Access, 2019, 7, 11543-11553.	2.6	13
81	An Improved Software List Sphere Polar Decoder With Synchronous Determination. IEEE Transactions on Vehicular Technology, 2019, 68, 5236-5245.	3.9	12
82	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
83	Low-Complexity Spatial Modulation for IM/DD Optical Wireless Communications. IEEE Photonics Technology Letters, 2019, 31, 475-478.	1.3	14
84	Three-Dimensional Non-Stationary Wideband Geometry-Based UAV Channel Model for A2G Communication Environments. IEEE Access, 2019, 7, 26116-26122.	2.6	56
85	Waveform Optimization for Non-orthogonal CP-FBMA System. , 2019, , .		1
86	On the Achievable Rate Performance of Broadcast OMC System with User Mobility. , 2019, , .		2
87	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
88	Optical Mobile Communications: Principles, Implementation, and Performance Analysis. IEEE Transactions on Vehicular Technology, 2019, 68, 471-482.	3.9	23
89	Efficient Channel Estimator With Angle-Division Multiple Access. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 708-718.	3.5	8
90	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

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91	Adaptive Modulation and Filter Configuration in Universal Filtered Multi-Carrier Systems. IEEE Transactions on Wireless Communications, 2018, 17, 1869-1881.	6.1	30
92	Adaptive Preconditioned Iterative Linear Detection and Architecture for Massive MU-MIMO Uplink. Journal of Signal Processing Systems, 2018, 90, 1453-1467.	1.4	11
93	Three-Dimensional Geometry-Based UAV-MIMO Channel Modeling for A2G Communication Environments. IEEE Communications Letters, 2018, 22, 1438-1441.	2.5	85
94	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
95	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
96	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
97	Expectation Propagation Detection with Neumann-Series Approximation for Massive MIMO. , 2018, , .		18
98	Adaptive Damped Jacobi Detector and Architecture for Massive MIMO Uplink. , 2018, , .		4
99	Massive MIMO Detection based on Barzilai-Borwein Algorithm. , 2018, , .		4
100	An Advanced Receiver for Universal Filtered Multicarrier. IEEE Transactions on Vehicular Technology, 2018, 67, 7779-7783.	3.9	34
101	A Non-Stationary Geometry-Based Scattering Vehicle-to-Vehicle MIMO Channel Model. IEEE Communications Letters, 2018, 22, 1510-1513.	2.5	22
102	On the ergodic achievable rate of FBMC system without subband orthogonality. , 2018, , .		2
103	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
104	Blind Interference Alignment for Multiuser MISO Indoor Visible Light Communications. IEEE Communications Letters, 2017, 21, 1039-1042.	2.5	10
105	Channel Estimation for Multicell Multiuser Massive MIMO Uplink Over Rician Fading Channels. IEEE Transactions on Vehicular Technology, 2017, 66, 8872-8882.	3.9	22
106	Optical mobile communications: Principles and challenges. , 2017, , .		9
107	A New Framework of Filter Bank Multi-Carrier: Getting Rid of Subband Orthogonality. IEEE Transactions on Communications, 2017, 65, 3922-3932.	4.9	15
108	Blind Interference Alignment in Two-Cell Z Interference MIMO Channel. IEEE Access, 2017, 5, 10526-10532.	2.6	10

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109	Approximate Message Passing-Based Joint User Activity and Data Detection for NOMA. IEEE Communications Letters, 2017, 21, 640-643.	2.5	104
110	Channel Estimation for Optical-OFDM-Based Multiuser MISO Visible Light Communication. IEEE Photonics Technology Letters, 2017, 29, 1727-1730.	1.3	14
111	Frequency-Domain Inter-Group Interference Coordination for V2V Communications. IEEE Signal Processing Letters, 2017, , 1-1.	2.1	3
112	Imperfect Reconstructed Filter Bank Multiple Access System Using Wide-Banded Subbands. , 2017, , .		5
113	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
114	Improving the power efficiency of enhanced unipolar OFDM for optical wireless communication. Electronics Letters, 2015, 51, 1681-1683.	0.5	7
115	Adaptive Modulation Schemes for Visible Light Communications. Journal of Lightwave Technology, 2015, 33, 117-125.	2.7	123
116	An template averaging based differential receiving method for impulse radio communications. , 2014, , .		0
117	MIMO-OFDM visible light communications system with low complexity. , 2013, , .		24
118	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
119	Design of indoor optical wireless collaborative cellular system. , 2011, , .		1