

Dongning Guo

List of Publications by Year in descending order

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107
papers

6,073
citations

201674

27
h-index

189892

50
g-index

108
all docs

108
docs citations

108
times ranked

4296
citing authors

#	ARTICLE	IF	CITATIONS
1	In-Band Full-Duplex Wireless: Challenges and Opportunities. IEEE Journal on Selected Areas in Communications, 2014, 32, 1637-1652.	14.0	1,720
2	Mutual Information and Minimum Mean-Square Error in Gaussian Channels. IEEE Transactions on Information Theory, 2005, 51, 1261-1282.	2.4	838
3	Multi-Agent Deep Reinforcement Learning for Dynamic Power Allocation in Wireless Networks. IEEE Journal on Selected Areas in Communications, 2019, 37, 2239-2250.	14.0	357
4	Randomly Spread CDMA: Asymptotics Via Statistical Physics. IEEE Transactions on Information Theory, 2005, 51, 1983-2010.	2.4	297
5	Estimation in Gaussian Noise: Properties of the Minimum Mean-Square Error. IEEE Transactions on Information Theory, 2011, 57, 2371-2385.	2.4	186
6	Spatial Interference Cancellation for Multiantenna Mobile Ad Hoc Networks. IEEE Transactions on Information Theory, 2012, 58, 1660-1676.	2.4	133
7	Scheduling for Cellular Federated Edge Learning With Importance and Channel Awareness. IEEE Transactions on Wireless Communications, 2020, 19, 7690-7703.	9.2	128
8	Multiuser Detection of Sparsely Spread CDMA. IEEE Journal on Selected Areas in Communications, 2008, 26, 421-431.	14.0	127
9	Tracking angles of departure and arrival in a mobile millimeter wave channel. , 2016, , .		124
10	A matrix-algebraic approach to linear parallel interference cancellation in CDMA. IEEE Transactions on Communications, 2000, 48, 152-161.	7.8	113
11	A simple proof of the entropy-power inequality. IEEE Transactions on Information Theory, 2006, 52, 2165-2166.	2.4	97
12	Capacity of Gaussian Many-Access Channels. IEEE Transactions on Information Theory, 2017, 63, 3516-3539.	2.4	97
13	Energy-Efficient Cell Activation, User Association, and Spectrum Allocation in Heterogeneous Networks. IEEE Journal on Selected Areas in Communications, 2016, 34, 823-831.	14.0	95
14	Asymptotic normality of linear multiuser receiver outputs. IEEE Transactions on Information Theory, 2002, 48, 3080-3095.	2.4	90
15	Mutual Information and Conditional Mean Estimation in Poisson Channels. IEEE Transactions on Information Theory, 2008, 54, 1837-1849.	2.4	81
16	Linear parallel interference cancellation in long-code CDMA multiuser detection. IEEE Journal on Selected Areas in Communications, 1999, 17, 2074-2081.	14.0	76
17	Vector Precoding for Wireless MIMO Systems and its Replica Analysis. IEEE Journal on Selected Areas in Communications, 2008, 26, 530-540.	14.0	73
18	Repurposing Blu-ray movie discs as quasi-random nanoimprinting templates for photon management. Nature Communications, 2014, 5, 5517.	12.8	57

#	ARTICLE	IF	CITATIONS
19	Drone-assisted public safety wireless broadband network. , 2015, , .		57
20	The Degrees of Freedom of Isotropic MIMO Interference Channels Without State Information at the Transmitters. IEEE Transactions on Information Theory, 2012, 58, 341-352.	2.4	53
21	Traffic-Driven Spectrum Allocation in Heterogeneous Networks. IEEE Journal on Selected Areas in Communications, 2015, 33, 2027-2038.	14.0	47
22	A message-passing approach for joint channel estimation, interference mitigation, and decoding. IEEE Transactions on Wireless Communications, 2009, 8, 6008-6018.	9.2	45
23	Neighbor discovery for wireless networks via compressed sensing. Performance Evaluation, 2013, 70, 457-471.	1.2	43
24	Asymptotic Mean-Square Optimality of Belief Propagation for Sparse Linear Systems. , 2006, , .		41
25	Statistical Physics of Signal Estimation in Gaussian Noise: Theory and Examples of Phase Transitions. IEEE Transactions on Information Theory, 2010, 56, 1400-1416.	2.4	40
26	Network Localization and Synchronization Using Full-Duplex Radios. IEEE Transactions on Signal Processing, 2018, 66, 714-728.	5.3	40
27	Estimation of non-Gaussian random variables in Gaussian noise: Properties of the MMSE. , 2008, , .		38
28	A single-letter characterization of optimal noisy compressed sensing. , 2009, , .		35
29	Random Sparse Linear Systems Observed Via Arbitrary Channels: A Decoupling Principle. , 2007, , .		33
30	Wireless MIMO Switching: Weighted Sum Mean Square Error and Sum Rate Optimization. IEEE Transactions on Information Theory, 2013, 59, 5297-5312.	2.4	33
31	Virtual Full Duplex Wireless Broadcasting via Compressed Sensing. IEEE/ACM Transactions on Networking, 2014, 22, 1659-1671.	3.8	33
32	Proof of Entropy Power Inequalities Via MMSE. , 2006, , .		32
33	Virtual full-duplex wireless communication via rapid on-off-division duplex. , 2010, , .		31
34	Ergodic Fading Z-Interference Channels Without State Information at Transmitters. IEEE Transactions on Information Theory, 2011, 57, 2627-2647.	2.4	30
35	Mutual information and conditional mean estimation in Poisson channels. , 0, , .		29
36	Licensed and Unlicensed Spectrum Allocation in Heterogeneous Networks. IEEE Transactions on Communications, 2017, 65, 1815-1827.	7.8	28

#	ARTICLE	IF	CITATIONS
37	Neighbor discovery in wireless ad hoc networks based on group testing. , 2008, , .		27
38	A Unified Approach to Power control in Large Energy-Constrained CDMS Systems. IEEE Transactions on Wireless Communications, 2008, 7, 1208-1216.	9.2	27
39	On the delay and throughput of digital and analog network coding for wireless broadcast. , 2008, , .		27
40	Sharing of Unlicensed Spectrum by Strategic Operators. IEEE Journal on Selected Areas in Communications, 2017, 35, 668-679.	14.0	27
41	Performance of multicarrier CDMA in frequency-selective fading via statistical physics. IEEE Transactions on Information Theory, 2006, 52, 1765-1774.	2.4	24
42	Relative entropy and score function: New information-estimation relationships through arbitrary additive perturbation. , 2009, , .		24
43	Additive non-Gaussian noise channels: mutual information and conditional mean estimation. , 2005, , .		23
44	Wireless MIMO Switching with Zero Forcing and Network Coding. IEEE Journal on Selected Areas in Communications, 2012, 30, 1452-1463.	14.0	22
45	Joint Routing and Resource Allocation for Millimeter Wave Picocellular Backhaul. IEEE Transactions on Wireless Communications, 2020, 19, 783-794.	9.2	22
46	Scalable Spectrum Allocation and User Association in Networks With Many Small Cells. IEEE Transactions on Communications, 2017, 65, 2931-2942.	7.8	21
47	Asynchronous Neighbor Discovery Using Coupled Compressive Sensing. , 2019, , .		21
48	Grant-Free NOMA with Device Activity Learning Using Long Short-Term Memory. IEEE Wireless Communications Letters, 2020, , 1-1.	5.0	21
49	Throughput and Stability for Relay-Assisted Wireless Broadcast with Network Coding. IEEE Journal on Selected Areas in Communications, 2013, 31, 1506-1516.	14.0	20
50	Applications and Techniques for Fast Machine Learning in Science. Frontiers in Big Data, 2022, 5, 787421.	2.9	20
51	Neighbor discovery in wireless networks using compressed sensing with Reed-Muller codes. , 2011, , .		18
52	Maximizing Mobile Coverage via Optimal Deployment of Base Stations and Relays. IEEE Transactions on Vehicular Technology, 2016, 65, 5060-5072.	6.3	18
53	On the Entropy Rate of Hidden Markov Processes Observed Through Arbitrary Memoryless Channels. IEEE Transactions on Information Theory, 2009, 55, 1460-1467.	2.4	17
54	The public safety broadband network: A novel architecture with mobile base stations. , 2013, , .		17

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55	Deep Reinforcement Learning for Joint Spectrum and Power Allocation in Cellular Networks. , 2021, , .		17
56	Throughput Optimal Control for Relay-Assisted Wireless Broadcast with Network Coding. , 2008, , .		16
57	Compressed neighbor discovery for wireless ad hoc networks: The Rayleigh fading case. , 2009, , .		15
58	Deep Actor-Critic Learning for Distributed Power Control in Wireless Mobile Networks. , 2020, , .		13
59	Sparse Channel Estimation for Massive MIMO with 1-Bit Feedback Per Dimension. , 2017, , .		12
60	Resource management in 5G: A tale of two timescales. , 2015, , .		11
61	Limited-Rate Channel State Feedback for Multicarrier Block Fading Channels. IEEE Transactions on Information Theory, 2010, 56, 6116-6132.	2.4	9
62	Wireless MIMO switching with zero-forcing relaying. , 2011, , .		9
63	Beam Acquisition and Training in Millimeter Wave Networks With Narrowband Pilots. IEEE Journal on Selected Areas in Communications, 2019, 37, 2759-2771.	14.0	9
64	Information-Estimation Relationships Over Binomial and Negative Binomial Models. IEEE Transactions on Information Theory, 2014, 60, 2630-2646.	2.4	8
65	Distributed Bi-Directional Training of Nonlinear Precoders and Receivers in Cellular Networks. IEEE Transactions on Signal Processing, 2015, 63, 5597-5608.	5.3	8
66	Large-Scale Spectrum Allocation for Cellular Networks via Sparse Optimization. IEEE Transactions on Signal Processing, 2018, 66, 5470-5483.	5.3	8
67	Error Exponent for Gaussian Channels With Partial Sequential Feedback. IEEE Transactions on Information Theory, 2013, 59, 4757-4766.	2.4	7
68	Many-broadcast channels: Definition and capacity in the degraded case. , 2014, , .		7
69	Traffic driven resource allocation in heterogenous wireless networks. , 2014, , .		7
70	Interference-aware routing and spectrum allocation for millimeter wave backhaul in urban picocells. , 2015, , .		7
71	The public safety wireless broadband network with airdropped sensors. , 2015, , .		7
72	1000-Cell Global Spectrum Management. , 2017, , .		7

#	ARTICLE	IF	CITATIONS
73	Wireless peer-to-peer mutual broadcast via sparse recovery. , 2011, , .		6
74	Multiuser two-way ranging. , 2016, , .		6
75	Resource Allocation in Public Safety Broadband Networks With Rapid-Deployment Access Points. IEEE Transactions on Vehicular Technology, 2018, 67, 1660-1671.	6.3	6
76	Performance of Turbo Decision-Feedback Detection for Downlink OFDM. , 2007, , .		5
77	Error Exponent for Gaussian Channels with Partial Sequential Feedback. , 2007, , .		5
78	Joint Channel Probing and Proportional Fair Scheduling in Wireless Networks. IEEE Transactions on Wireless Communications, 2011, 10, 3496-3505.	9.2	5
79	Energy management of dense wireless heterogeneous networks over slow timescales. , 2012, , .		5
80	Downlink Noncoherent Cooperation without Transmitter Phase Alignment. IEEE Transactions on Wireless Communications, 2013, 12, 3920-3931.	9.2	5
81	Robust sublinear complexity Walsh-Hadamard transform with arbitrary sparse support. , 2015, , .		5
82	Public Safety Broadband Network with Rapid-deployment Base Stations. , 2016, , 173-198.		5
83	Allocation of licensed and unlicensed spectrum in heterogeneous networks. , 2016, , .		5
84	Derivative of Mutual Information at Zero SNR: The Gaussian-Noise Case. IEEE Transactions on Information Theory, 2011, 57, 7307-7312.	2.4	4
85	Multicarrier Beamforming With Limited Feedback: A Rate Distortion Approach. IEEE Transactions on Information Theory, 2013, 59, 916-927.	2.4	4
86	Liveness and Consistency of Bitcoin and Prism Blockchains: The Non-lockstep Synchronous Case. , 2020, , .		4
87	On the capacity region of fading Z-interference channels without CSIT. , 2010, , .		3
88	Capacity region of layered erasure one-sided interference channels without CSIT. , 2010, , .		3
89	On information-Estimation relationships over binomial and negative binomial models. , 2013, , .		3
90	A generalized LDPC framework for robust and sublinear compressive sensing. , 2016, , .		3

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91	Error performance of multicarrier CDMA in frequency-selective fading. , 2005, , .		2
92	Limited feedback for multicarrier block fading channels: A rate distortion approach. , 2009, , .		2
93	The maximum stable broadcast throughput for wireless line networks with network coding and topology control. , 2010, , .		2
94	Uplink-downlink bidirectional training of multiuser MIMO filters and precoders. , 2011, , .		2
95	Exploiting peer-to-peer state exchange for distributed medium access control. , 2011, , .		2
96	Entropy functions and determinant inequalities. , 2012, , .		2
97	Bidirectional channel estimation using adaptive pilots. , 2012, , .		2
98	On the capacity-achieving input for additive inverse Gaussian channels. , 2013, , .		2
99	Localization and synchronization in wireless networks using full-duplex radios. , 2017, , .		2
100	Multiuser Simultaneous Two-Way Ranging. IEEE Transactions on Wireless Communications, 2018, 17, 5107-5119.	9.2	2
101	Performance of synchronous multirate CDMA via statistical physics. , 2005, , .		1
102	Channel State and Receiver State feedback for frequency-selective block fading channels. , 2008, , .		1
103	Initial Access and Beamforming in Multi-cell mmWave Networks Using Narrowband Pilots. , 2018, , .		1
104	Importance- and Channel-Aware Scheduling in Cellular Federated Edge Learning. , 2020, , .		1
105	On the entropy and filtering of hidden Markov processes observed through arbitrary memoryless channels. , 2008, , .		0
106	Wireless MIMO switching: Sum rate optimization. , 2013, , .		0
107	Cloud-based resource allocation and cooperative transmission in large cellular networks. , 2017, , .		0