

Angel Lozano

List of Publications by Year in descending order

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135
papers

16,404
citations

109321

35
h-index

114465

63
g-index

147
all docs

147
docs citations

147
times ranked

10835
citing authors

#	ARTICLE	IF	CITATIONS
1	What Will 5G Be?. IEEE Journal on Selected Areas in Communications, 2014, 32, 1065-1082.	14.0	6,564
2	Five disruptive technology directions for 5G. IEEE Communications Magazine, 2014, 52, 74-80.	6.1	3,763
3	Optimum power allocation for parallel Gaussian channels with arbitrary input distributions. IEEE Transactions on Information Theory, 2006, 52, 3033-3051.	2.4	397
4	Impact of Antenna Correlation on the Capacity of Multiantenna Channels. IEEE Transactions on Information Theory, 2005, 51, 2491-2509.	2.4	330
5	Multiple-antenna capacity in the low-power regime. IEEE Transactions on Information Theory, 2003, 49, 2527-2544.	2.4	286
6	Fundamental Limits of Cooperation. IEEE Transactions on Information Theory, 2013, 59, 5213-5226.	2.4	259
7	Effect of antenna separation on the capacity of BLAST in correlated channels. IEEE Communications Letters, 2000, 4, 337-339.	4.1	237
8	Link-optimal space-time processing with multiple transmit and receive antennas. IEEE Communications Letters, 2001, 5, 85-87.	4.1	236
9	High-SNR Power Offset in Multiantenna Communication. IEEE Transactions on Information Theory, 2005, 51, 4134-4151.	2.4	234
10	Antenna Subset Modulation for Secure Millimeter-Wave Wireless Communication. IEEE Transactions on Communications, 2013, 61, 3231-3245.	7.8	222
11	Layered space-time receivers for frequency-selective wireless channels. IEEE Transactions on Communications, 2002, 50, 65-73.	7.8	174
12	Is the PHY layer dead?. , 2011, 49, 159-165.		171
13	Capacity of multiple-transmit multiple-receive antenna architectures. IEEE Transactions on Information Theory, 2002, 48, 3117-3128.	2.4	168
14	Network MIMO: Overcoming Intercell Interference in Indoor Wireless Systems. Conference Record of the Asilomar Conference on Signals, Systems and Computers, 2007, , .	0.0	165
15	Transmit diversity vs. spatial multiplexing in modern MIMO systems. IEEE Transactions on Wireless Communications, 2010, 9, 186-197.	9.2	160
16	Estimation of continuous flat fading MIMO channels. IEEE Transactions on Wireless Communications, 2002, 1, 549-553.	9.2	114
17	On the Overhead of Interference Alignment: Training, Feedback, and Cooperation. IEEE Transactions on Wireless Communications, 2012, 11, 4192-4203.	9.2	109
18	Spectral Efficiency of Dynamic Coordinated Beamforming: A Stochastic Geometry Approach. IEEE Transactions on Wireless Communications, 2015, 14, 230-241.	9.2	109

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19	A Unified Treatment of Optimum Pilot Overhead in Multipath Fading Channels. IEEE Transactions on Communications, 2010, 58, 2939-2948.	7.8	105
20	Approaching eigenmode BLAST channel capacity using V-BLAST with rate and power feedback. , 0, , .		103
21	Random vs Structured Pilot Assignment in Cell-Free Massive MIMO Wireless Networks. , 2018, , .		93
22	Lifting the limits on high speed wireless data access using antenna arrays. , 2001, 39, 156-162.		89
23	An Analytical Framework for Device-to-Device Communication in Cellular Networks. IEEE Transactions on Wireless Communications, 2015, 14, 6297-6310.	9.2	87
24	Long-Term Transmit Beamforming for Wireless Multicasting. , 2007, , .		70
25	Comprehensive Evaluation of the IEEE 802.15.4 MAC Layer Performance With Retransmissions. IEEE Transactions on Vehicular Technology, 2010, 59, 3917-3932.	6.3	69
26	Ergodic Spectral Efficiency in MIMO Cellular Networks. IEEE Transactions on Wireless Communications, 2017, 16, 2835-2849.	9.2	68
27	Modified Conjugate Beamforming for Cell-Free Massive MIMO. IEEE Wireless Communications Letters, 2019, 8, 616-619.	5.0	66
28	Spectral efficiency of FDMA/TDMA wireless systems with transmit and receive antenna arrays. IEEE Transactions on Wireless Communications, 2002, 1, 591-599.	9.2	62
29	Are yesterday-s information-theoretic fading models and performance metrics adequate for the analysis of today's wireless systems?. , 2012, 50, 210-217.		61
30	Optimum Power Allocation for Multiuser OFDM with Arbitrary Signal Constellations. IEEE Transactions on Communications, 2008, 56, 828-837.	7.8	59
31	Capacity of antenna arrays with space, polarization and pattern diversity. , 0, , .		57
32	A WiMAX-Based Implementation of Network MIMO for Indoor Wireless Systems. Eurasip Journal on Advances in Signal Processing, 2009, 2009, .	1.7	54
33	Capacity-approaching rate function for layered multiantenna architectures. IEEE Transactions on Wireless Communications, 2003, 24, 616-620.	9.2	49
34	Multiple ARQ Processes for MIMO Systems. Eurasip Journal on Advances in Signal Processing, 2004, 2004, 1.	1.7	48
35	Terahertz Line-of-Sight MIMO Communication: Theory and Practical Challenges. IEEE Communications Magazine, 2021, 59, 104-109.	6.1	48
36	Mutual Information of IID Complex Gaussian Signals on Block Rayleigh-Faded Channels. IEEE Transactions on Information Theory, 2012, 58, 331-340.	2.4	47

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37	Low-Complexity MIMO Precoding for Finite-Alphabet Signals. IEEE Transactions on Wireless Communications, 2017, 16, 4571-4584.	9.2	46
38	Mercury/waterfilling: optimum power allocation with arbitrary input constellations. , 2005, , .		45
39	Integrated dynamic channel assignment and power control in TDMA mobile wireless communication systems. IEEE Journal on Selected Areas in Communications, 1999, 17, 2031-2040.	14.0	44
40	Uplink Fractional Power Control and Downlink Power Allocation for Cell-Free Networks. IEEE Wireless Communications Letters, 2020, 9, 774-777.	5.0	44
41	Non-Peaky Signals in Wideband Fading Channels: Achievable Bit Rates and Optimal Bandwidth. IEEE Transactions on Wireless Communications, 2012, 11, 246-257.	9.2	43
42	System-Level Performance of Interference Alignment. IEEE Transactions on Wireless Communications, 2015, 14, 1060-1070.	9.2	42
43	Reconfigurable ULAs for Line-of-Sight MIMO Transmission. IEEE Transactions on Wireless Communications, 2021, 20, 2933-2947.	9.2	38
44	Eigenvalue Statistics of Finite-Dimensional Random Matrices for MIMO Wireless Communications. , 2006, , .		37
45	Multiple ARQ processes for MIMO systems. , 0, , .		36
46	On the limitations of cooperation in wireless networks. , 2012, , .		36
47	Approaching the MIMO Capacity with a Low-Rate Feedback Channel in V-BLAST. Eurasip Journal on Advances in Signal Processing, 2004, 2004, 1.	1.7	35
48	Full-Duplex MIMO in Cellular Networks: System-Level Performance. IEEE Transactions on Wireless Communications, 2017, 16, 3124-3137.	9.2	35
49	Low-complexity MIMO precoding with discrete signals and statistical CSI. , 2016, , .		34
50	Duplexing, resource allocation and inter-cell coordination: design recommendations for next generation wireless systems. Wireless Communications and Mobile Computing, 2005, 5, 77-93.	1.2	33
51	Distribution of the Number of Users per Base Station in Cellular Networks. IEEE Wireless Communications Letters, 2019, 8, 520-523.	5.0	33
52	MIMO Capacity in Correlated Interference-Limited Channels. , 2007, , .		32
53	Outage Probability Analysis for MRC in $\hat{1}$ - $\hat{1}$ / 4 Fading Channels with Co-Channel Interference. IEEE Communications Letters, 2012, 16, 674-677.	4.1	32
54	Subset MMSE Receivers for Cell-Free Networks. IEEE Transactions on Wireless Communications, 2020, 19, 4183-4194.	9.2	32

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55	3GPP LTE and LTE-Advanced. Eurasip Journal on Wireless Communications and Networking, 2009, 2009, .	2.4	31
56	Spectral efficiency limits in pilot-assisted cooperative communications. , 2012, , .		30
57	Massive MIMO Forward Link Analysis for Cellular Networks. IEEE Transactions on Wireless Communications, 2019, 18, 2964-2976.	9.2	29
58	Per-antenna rate and power control for MIMO layered architectures in the low- and high-power regimes. IEEE Transactions on Communications, 2010, 58, 652-659.	7.8	28
59	Interplay of spectral efficiency, power and doppler spectrum for reference-signal-assisted wireless communication. IEEE Transactions on Wireless Communications, 2008, 7, 5020-5029.	9.2	27
60	Multiuser Mercury/waterfilling for Downlink OFDM with Arbitrary Signal Constellations. , 2006, , .		26
61	Overhead and Spectral Efficiency of Pilot-Assisted Interference Alignment in Time-Selective Fading Channels. IEEE Transactions on Wireless Communications, 2014, 13, 4884-4895.	9.2	25
62	Dual-Kernel Online Reconstruction of Power Maps. , 2018, , .		23
63	Connections Between the Generalized Marcum Q -Function and a Class of Hypergeometric Functions. IEEE Transactions on Information Theory, 2014, 60, 1077-1082.	2.4	22
64	Ergodic sum-rate of proportional fair scheduling with multiple antennas. , 2013, , .		21
65	Uplink Fractional Power Control for Cell-Free Wireless Networks. , 2019, , .		20
66	Low complexity algorithm for rate and power quantization in extended V-BLAST. , 0, , .		18
67	What is the value of joint processing of pilots and data in block-fading channels?. , 2009, , .		17
68	Millimeter Wave Channel Modeling via Generative Neural Networks. , 2020, , .		17
69	Design and Analysis of Deterministic Distributed Beamforming Algorithms in the Presence of Noise. IEEE Transactions on Communications, 2013, 61, 1595-1607.	7.8	15
70	Distributed dynamic channel assignment in TDMA mobile communication systems. IEEE Transactions on Vehicular Technology, 2002, 51, 1397-1406.	6.3	14
71	System-level performance of distributed cooperation. , 2012, , .		14
72	Base station cooperation with dynamic clustering in super-dense cloud-RAN. , 2013, , .		13

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73	Unsupervised-Learning Power Control for Cell-Free Wireless Systems. , 2019, , .		13
74	Capacity of Line-of-Sight MIMO Channels. , 2020, , .		13
75	Enclosed mmWave Wearable Networks: Feasibility and Performance. IEEE Transactions on Wireless Communications, 2017, 16, 2300-2313.	9.2	12
76	Mutual information of IID complex Gaussian signals on block Rayleigh-faded channels. , 2010, , .		11
77	On the spatial spectral efficiency of ITLinQ. , 2014, , .		11
78	Multiantenna capacity: myths and realities. , 2001, , 87-107.		10
79	Optimum pilot overhead in wireless communication: A unified treatment of continuous and block-fading channels. , 2010, , .		10
80	Antenna Subset Modulation for secure millimeter-wave wireless communication. , 2013, , .		8
81	Interference surge in full-duplex wireless systems. , 2015, , .		8
82	Analytical Characterization of ITLinQ: Channel Allocation for Device-to-Device Communication Networks. IEEE Transactions on Wireless Communications, 2016, 15, 3603-3615.	9.2	8
83	Unsupervised Learning for C-RAN Power Control and Power Allocation. IEEE Communications Letters, 2021, 25, 687-691.	4.1	8
84	Unsupervised Learning for Parametric Optimization. IEEE Communications Letters, 2021, 25, 678-681.	4.1	8
85	Spectral iterative algorithm for RCS computation in electrically large or intermediate perfectly conducting cavities. IEEE Transactions on Antennas and Propagation, 1994, 42, 790-797.	5.1	7
86	Impact of reflections in enclosed mmWave wearable networks. , 2015, , .		7
87	Millimeter-Wave UAV Coverage in Urban Environments. , 2021, , .		7
88	Bit Loading for MIMO with Statistical Channel Information at the Transmitter and ZF Receivers. , 2009, , .		6
89	Optimizing training and feedback for MIMO interference alignment. , 2011, , .		6
90	Overlaid device-to-device communication in cellular networks. , 2014, , .		6

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91	Performance evaluation of ITLinQ and FlashLinQ for overlaid device-to-device communication. , 2015, , .		6
92	Computation-Bandwidth Trading for Mobile Edge Computing. , 2019, , .		6
93	Linear Interference Cancellation for the Cell-Free C-RAN Uplink. IEEE Transactions on Wireless Communications, 2021, 20, 1544-1556.	9.2	6
94	Antenna separation and capacity of BLAST in correlated channels. , 0, , .		5
95	Random Matrix Transforms and Applications via Non-Asymptotic Eigenanalysis. , 0, , .		5
96	Unsupervised-Learning Power Allocation for the Cell-Free Downlink. , 2020, , .		5
97	Unsupervised Learning for Cellular Power Control. IEEE Communications Letters, 2021, 25, 682-686.	4.1	5
98	Uplink-downlink imbalance in TDMA personal communication systems. , 0, , .		4
99	Capacity of multi-antenna channels in the low-power regime. , 0, , .		4
100	Doppler sensitivity of link reciprocity in TDD MIMO systems. , 2005, , .		4
101	Fading models and metrics for contemporary wireless systems. , 2010, , .		4
102	Analytical handle for ZF reception in distributed massive MIMO. , 2016, , .		4
103	Subset Regularized Zero-Forcing Precoders for Cell-Free C-RANs. , 2021, , .		4
104	Guest editorial - Advances in smart antennas. IEEE Wireless Communications, 2006, 13, 6-7.	9.0	3
105	Capacity to within one bit of a class of Gaussian multicast channels with interference. , 2008, , .		3
106	Pilot-assisted interference alignment in time-selective fading channels. , 2013, , .		3
107	Coordinated beamforming with dynamic clustering: A stochastic geometry approach. , 2014, , .		3
108	Optimum exclusion regions for interference protection in device-to-device wireless networks. , 2015, , .		3

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109	A Smartphone-Based Healthcare Monitoring System—PHY Challenges and Behavioral Aspects. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2012, , 127-134.	0.3	3
110	On the Deployment Problem in Cell-Free UAV Networks. , 2021, , .		3
111	CTH01-2: Optimum Ergodic Power Allocation for Multiuser OFDM with Arbitrary Signal Constellations. IEEE Global Telecommunications Conference (GLOBECOM), 2006, , .	0.0	2
112	De-Hyoping Transmit Diversity in Modern MIMO Cellular Systems. , 2009, , .		2
113	Interference priority: A new scheme for prioritized resource allocation in wireless. Journal of Communications and Networks, 2012, 14, 487-494.	2.6	2
114	Pseudo-Inverse vs Generalized Inverse for C-RAN Downlink Precoding. , 2020, , .		2
115	Design and Experimental Validation of MIMO Multiuser Detection for Downlink Packet Data. Eurasip Journal on Advances in Signal Processing, 2005, 2005, 1.	1.7	1
116	Prioritized resource allocation in wireless spectrum pooling. Journal of Communications and Networks, 2012, 14, 495-500.	2.6	1
117	System-level performance of interference alignment. , 2014, , .		1
118	A novel approach for spectral efficiency analysis in MIMO cellular networks. , 2017, , .		1
119	A signal processing perspective. , 2018, , 57-130.		1
120	Capacity-achieving input covariance for single-user multi-antenna channels. IEEE Transactions on Wireless Communications, 2006, 5, 662-671.	9.2	1
121	Spectral Efficiency in Reference-Signal-Assisted Low-Power Wireless Communication. , 2008, , .		0
122	Performance of a Radio Transmission System with Spectrum Pooling and Unequal User Priorities. IEEE Communications Letters, 2012, 16, 975-977.	4.1	0
123	Bit loading for MIMO with statistical channel information at the transmitter and MMSE receivers. , 2012, , .		0
124	Coding for a radio transmission system with spectrum pooling and unequal resource sharing. , 2012, , .		0
125	Successive deterministic distributed beamforming. , 2013, , .		0
126	A primer on information theory and MMSE estimation. , 2018, , 3-56.		0

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127	Channel modeling. , 2018, , 131-208.		0
128	Single-user SISO. , 2018, , 209-294.		0
129	SU-MIMO with optimum receivers. , 2018, , 297-385.		0
130	SU-MIMO with linear receivers. , 2018, , 386-412.		0
131	Multiuser communication prelude. , 2018, , 415-435.		0
132	MU-MIMO with optimum transceivers. , 2018, , 436-496.		0
133	MU-MIMO with linear transceivers. , 2018, , 497-577.		0
134	Massive MIMO. , 2018, , 578-642.		0
135	Parallel Interference Cancellation for Cell-Free C-RANs. , 2020, , .		0