

Ralf R MÃ¼ller

List of Publications by Year in descending order

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62
papers

676
citations

840776

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g-index

62
all docs

62
docs citations

62
times ranked

538
citing authors

#	ARTICLE	IF	CITATIONS
1	Vector Precoding for Wireless MIMO Systems and its Replica Analysis. IEEE Journal on Selected Areas in Communications, 2008, 26, 530-540.	14.0	73
2	Massive MIMO With Antenna Selection: Fundamental Limits and Applications. IEEE Transactions on Wireless Communications, 2018, 17, 8502-8516.	9.2	66
3	Load modulated arrays: a low-complexity antenna. , 2016, 54, 46-52.		48
4	Slepian-Based Two-Dimensional Estimation of Time-Frequency Variant MIMO-OFDM Channels. IEEE Signal Processing Letters, 2008, 15, 21-24.	3.6	41
5	Optimal Transmit Antenna Selection for Massive MIMO Wiretap Channels. IEEE Journal on Selected Areas in Communications, 2018, 36, 817-828.	14.0	41
6	Joint Twofold-Iterative Channel Estimation and Multiuser Detection for MIMO-OFDM Systems. IEEE Transactions on Wireless Communications, 2008, 7, 4719-4729.	9.2	40
7	Load modulated massive MIMO. , 2014, , .		28
8	Large-System Analysis of Joint Channel and Data Estimation for MIMO DS-CDMA Systems. IEEE Transactions on Information Theory, 2012, 58, 1385-1412.	2.4	25
9	Vector Precoding for Gaussian MIMO Broadcast Channels: Impact of Replica Symmetry Breaking. IEEE Transactions on Information Theory, 2012, 58, 1413-1440.	2.4	25
10	Secure Transmission in IRS-Assisted MIMO Systems with Active Eavesdroppers. , 2020, , .		18
11	Asymptotics of nonlinear LSE precoders with applications to transmit antenna selection. , 2017, , .		16
12	Scalable and Energy-Efficient Millimeter Massive MIMO Architectures: Reflect-Array and Transmit-Array Antennas. , 2019, , .		16
13	Least Square Error Precoders for Massive MIMO With Signal Constraints: Fundamental Limits. IEEE Transactions on Wireless Communications, 2018, 17, 667-679.	9.2	14
14	Secure Active and Passive Beamforming in IRS-Aided MIMO Systems. IEEE Transactions on Information Forensics and Security, 2022, 17, 1300-1315.	6.9	14
15	Joint Iterative Time-Variant Channel Estimation and Multi-User Detection for MIMO-OFDM Systems. , 2007, , .		13
16	On overloaded vector precoding for single-user MIMO channels. IEEE Transactions on Wireless Communications, 2010, 9, 745-753.	9.2	12
17	RSB decoupling property of MAP estimators. , 2016, , .		11
18	Asymptotic Analysis of Rayleigh Product Channels: A Free Probability Approach. IEEE Transactions on Information Theory, 2017, 63, 1731-1745.	2.4	11

#	ARTICLE	IF	CITATIONS
19	Asymptotics of transmit antenna selection: Impact of multiple receive antennas. , 2017, , .		11
20	On Robustness of Massive MIMO Systems against Passive Eavesdropping under Antenna Selection. , 2018, , .		11
21	Statistical Mechanics of MAP Estimation: General Replica Ansatz. IEEE Transactions on Information Theory, 2019, 65, 7896-7934.	2.4	11
22	GLSE Precoders for Massive MIMO Systems: Analysis and Applications. IEEE Transactions on Wireless Communications, 2019, 18, 4450-4465.	9.2	10
23	Hard deadline constrained multiuser scheduling for random arrivals. , 2011, , .		8
24	On random CDMA with constant envelope. , 2011, , .		8
25	Channel modelling of MU-MIMO systems by quaternionic free probability. , 2012, , .		8
26	A Single-RF Architecture for Multiuser Massive MIMO Via Reflecting Surfaces. , 2020, , .		8
27	PAPR-Limited Precoding in Massive MIMO Systems with Reflect- and Transmit-Array Antennas. , 2019, , .		7
28	Vector precoding for a single-user MIMO channel: Matched filter vs. distributed antenna detection. , 2008, , .		6
29	Replica symmetry breaking in compressive sensing. , 2017, , .		6
30	On Approximation, Bounding & Exact Calculation of Average Block Error Probability for Random Code Ensembles. IEEE Transactions on Communications, 2021, 69, 2987-2996.	7.8	6
31	On channel capacity of communication via antenna arrays with receiver noise matching. , 2012, , .		5
32	Secure Regularized Zero Forcing for Multiuser MIMOME Channels. , 2019, , .		5
33	Individual Packet Deadline Constrained Opportunistic Scheduling for a Multiuser System. , 2011, , .		4
34	A new class of nonlinear precoders for hardware efficient massive MIMO systems. , 2017, , .		4
35	Detection of Spatially Modulated Signals via RLS: Theoretical Bounds and Applications. IEEE Transactions on Wireless Communications, 2022, 21, 2291-2304.	9.2	4
36	Bias-Based Training for Iterative Channel Estimation and Data Decoding in Fast Fading Channels. IEICE Transactions on Communications, 2011, E94-B, 2161-2165.	0.7	4

#	ARTICLE	IF	CITATIONS
37	Power Optimal Scheduling for Guaranteed Throughput in Multi-access Fading Channels. , 2007, , .		3
38	Multiuser Opportunistic Scheduling for Hard Delay Constrained Systems. , 2008, , .		3
39	Provision of Maximum Delay Guarantee at Low Energy in a Multi-User Environment. , 2008, , .		3
40	Slepian-Based Serial Estimation of Time-Frequency Variant Channels for MIMO-OFDM Systems. , 2009, , .		3
41	Securing Massive MIMO Systems: Secrecy for Free With Low-Complexity Architectures. IEEE Transactions on Wireless Communications, 2021, 20, 5831-5845.	9.2	3
42	Channel and Multiuser Diversities in Wireless Systems: Delay-Energy Tradeoff. , 2007, , .		2
43	Vector precoding for singular MIMO channels. , 2008, , .		2
44	Performance analysis of optimal channel estimation and multiuser detection in a randomly-spread CDMA channel. Journal of Systems Science and Complexity, 2010, 23, 22-34.	2.8	2
45	Iterative channel estimation, detection, and decoding in large CDMA systems. , 2010, , .		2
46	Outphasing Elements for Hybrid Analogue Digital Beamforming and Single-RF MIMO. , 2019, , .		2
47	Soft Interference Cancellation for Random Coding in Massive Gaussian Multiple-Access. Entropy, 2021, 23, 539.	2.2	2
48	THE REPLICIA METHOD IN MULTIUSER COMMUNICATIONS. Lecture Notes Series, Institute for Mathematical Sciences, 2009, , 139-165.	0.2	2
49	Real vs. complex BPSK precoding for MIMO broadcast channels. , 2008, , .		1
50	Convex Precoding for Vector Channels in High Dimensions. , 2008, , .		1
51	On the spectral efficiency of MMSE vector precoding. , 2011, , .		1
52	A novel hybrid analog-digital transmitter for multi-antenna base stations. , 2017, , .		1
53	Capacity Scaling in MIMO Systems With General Unitarily Invariant Random Matrices. IEEE Transactions on Information Theory, 2018, 64, 3825-3841.	2.4	1
54	Joint User Selection and Precoding in Multiuser MIMO Systems via Group LASSO. , 2019, , .		1

#	ARTICLE	IF	CITATIONS
55	Massive Gaussian Multiple-Access by Random Coding With Soft Interference Cancellation. , 2021, , .		1
56	Energy-Efficient Digital Beamforming by Means of Linear Computation Coding. , 2021, , .		1
57	Joint Active and Passive Secure Precoding in IRS-Aided MIMO Systems. , 2021, , .		1
58	Outsourcing the Complexity of Detection in MIMO Channels. , 2006, , .		0
59	Link performance of an ESPAR-antenna array in rich scattering and clustered channels. , 2007, , .		0
60	Lattice-reduction aided HNN for vector precoding. , 2010, , .		0
61	Corrections to "Vector Precoding for Gaussian MIMO Broadcast Channels: Impact of Replica Symmetry Breaking" [Mar 12 1413-1440]. IEEE Transactions on Information Theory, 2012, 58, 3308-3308.	2.4	0
62	Oversampled Adaptive Sensing via a Predefined Codebook. , 2021, , .		0