

Mahesh K Varanasi

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Capacity Results for Classes of Partially Ordered K -User Broadcast Channels With Two Nested Multicast Messages. IEEE Transactions on Information Theory, 2020, 66, 65-81.	2.4	2
2	Diamond Message Set Groupcasting: From an Achievable Rate Region for the DM Broadcast Channel to the Capacity of the Combination Network. , 2020, , .		1
3	An Upper Bound on the Capacity-Memory Tradeoff of Interleavable Discrete Memoryless Broadcast Channels with Uncoded Prefetching. , 2020, , .		1
4	On the Capacity Region of the Three-Receiver Broadcast Channel With Receiver Message Cognition. , 2020, , .		0
5	Constant-Gap-to-Capacity and Generalized Degrees of Freedom Regions of the MIMO MAC-IC-MAC. IEEE Transactions on Information Theory, 2020, 66, 2198-2218.	2.4	0
6	On the Generalized Degrees of Freedom of the MIMO Interference Channel With Delayed CSIT. IEEE Transactions on Information Theory, 2019, 65, 3261-3277.	2.4	3
7	A Unified Theory of Multiple-Access and Interference Channels via Approximate Capacity Regions for the MAC-IC-MAC. IEEE Transactions on Information Theory, 2019, 65, 1898-1920.	2.4	1
8	The Symmetric Capacity of the K -Receiver Interleaved Broadcast Channel with Symmetric Side Information. , 2019, , .		2
9	The Exact Capacity-Memory Tradeoff for Caching with Uncoded Prefetching in the Two-Receiver Gaussian Broadcast Channel. , 2019, , .		2
10	Capacity Results via Message Merging and Superposition Coding in the K -Receiver Broadcast Channel with General Message Sets. , 2019, , .		0
11	Hierarchical Successive Group Decoding Achieves Capacity in the Multiple Access Channel With General Message Sets. IEEE Transactions on Information Theory, 2018, 64, 4562-4580.	2.4	2
12	An Achievable Rate Region for the K -Receiver Two Nested Groupcast DM Broadcast Channel and a Capacity Result for the Combination Network. , 2018, , .		4
13	The Capacity Region of the Three-Receiver Less Noisy Broadcast Channel with Message Cognition. , 2018, , .		1
14	The Generalized Degrees of Freedom Region of the MIMO Z -Interference Channel With Delayed CSIT. IEEE Transactions on Information Theory, 2018, 64, 531-546.	2.4	6
15	Degrees of Freedom of the MIMO 2×2 Interference Network with General Message Sets. IEEE Transactions on Information Theory, 2017, , 1-1.	2.4	1
16	Degrees of Freedom of the Two-User MIMO Broadcast Channel with Private and Common Messages Under Hybrid CSIT Models. IEEE Transactions on Information Theory, 2017, , 1-1.	2.4	6
17	The K -User Vector Gaussian Multiple-Access Channel With General Messages Sets: Capacity, Polymatroidal Structure, and Efficient Computation. IEEE Transactions on Information Theory, 2017, 63, 3875-3893.	2.4	2
18	A Unifying Order-Theoretic Framework for Superposition Coding: Polymatroidal Structure and Optimality in the Multiple-Access Channel With General Message Sets. IEEE Transactions on Information Theory, 2017, 63, 21-37.	2.4	7

#	ARTICLE	IF	CITATIONS
19	The Degrees of Freedom of the K -User MIMO Cyclic Z -Interference Channel Under Perfect and Delayed CSIT Assumptions. IEEE Transactions on Wireless Communications, 2017, 16, 17-25.	9.2	0
20	On the capacity region of the K -user discrete memoryless broadcast channel with two degraded messages. , 2017, , .		4
21	Rate splitting and superposition coding for concurrent groupcasting over the broadcast channel: A general framework. , 2017, , .		7
22	Feasibility of Single-Beam Interference Alignment in Multi-Carrier Interference Channels. IEEE Transactions on Information Theory, 2017, 63, 7352-7357.	2.4	1
23	Degrees of Freedom Region of the MIMO Z -Interference Channel With Mixed CSIT. IEEE Communications Letters, 2016, 20, 2422-2425.	4.1	5
24	The Degrees of Freedom of Two-Unicast Layered MIMO Interference Networks With Feedback. IEEE Transactions on Information Theory, 2015, 61, 3316-3325.	2.4	1
25	The Generalized Diversity-Multiplexing Tradeoff of the MIMO Z Interference Channel. IEEE Transactions on Information Theory, 2015, 61, 3427-3445.	2.4	5
26	Degrees of freedom region of the MIMO two-transmit, two-receive network with General message sets. , 2015, , .		1
27	Degrees of Freedom of the MIMO Z -Interference Channel With Delayed CSIT. IEEE Communications Letters, 2015, 19, 2282-2285.	4.1	11
28	The degrees of freedom region of the 3-User MIMO cyclic Z -interference channel with perfect and delayed CSIT. , 2015, , .		1
29	The Degrees of Freedom Region of the MIMO Interference Channel With Hybrid CSIT. IEEE Transactions on Wireless Communications, 2015, 14, 1837-1848.	9.2	6
30	The Degrees of Freedom Region of the $\frac{2}{2} \times \frac{2}{2}$ MIMO Interference Network. IEEE Transactions on Information Theory, 2014, 60, 7751-7759.	2.4	5
31	The Degrees of Freedom of MIMO Networks With Full-Duplex Receiver Cooperation but no CSIT. IEEE Transactions on Information Theory, 2014, 60, 5587-5596.	2.4	4
32	Independent Signaling Achieves the Capacity Region of the Gaussian Interference Channel With Common Information to Within One Bit. IEEE Transactions on Information Theory, 2014, 60, 6070-6079.	2.4	0
33	Interference Alignment Under Limited Feedback for MIMO Interference Channels. IEEE Transactions on Signal Processing, 2013, 61, 3908-3917.	5.3	70
34	The Capacity Region of the MIMO Interference Channel and Its Reciprocity to Within a Constant Gap. IEEE Transactions on Information Theory, 2013, 59, 4781-4797.	2.4	45
35	Bounds on the Capacity Region for a Class of Interference Channels With Common Information. IEEE Transactions on Information Theory, 2013, 59, 4811-4818.	2.4	3
36	On the Geometry and Quantization of Manifolds of Positive Semi-Definite Matrices. IEEE Transactions on Signal Processing, 2013, PP, 1-1.	5.3	13

#	ARTICLE	IF	CITATIONS
37	Bounds on the capacity region of a class of multiple access interference channels. , 2013, , .		3
38	The Degrees-of-Freedom Region of the MIMO Interference Channel With Shannon Feedback. IEEE Transactions on Information Theory, 2013, 59, 4798-4810.	2.4	17
39	The generalized multiplexing gain region of the slow fading MIMO interference channel and its achievability with limited feedback. , 2012, , .		7
40	The Diversity-Multiplexing Tradeoff of the MIMO Half-Duplex Relay Channel. IEEE Transactions on Information Theory, 2012, 58, 7168-7187.	2.4	9
41	Beamforming and aligned interference neutralization achieve the degrees of freedom region of the 2×2×2 MIMO interference network. , 2012, , .		13
42	The Generalized Degrees of Freedom Region of the MIMO Interference Channel and Its Achievability. IEEE Transactions on Information Theory, 2012, 58, 7188-7203.	2.4	40
43	Retro-cooperative interference alignment and the DoF region of the $(M,N)<sup>3</sup>$ interference network with limited Shannon feedback. , 2012, , .		1
44	The Degrees of Freedom Region and Interference Alignment for the MIMO Interference Channel With Delayed CSIT. IEEE Transactions on Information Theory, 2012, 58, 4396-4417.	2.4	126
45	The Degree-of-Freedom Regions of MIMO Broadcast, Interference, and Cognitive Radio Channels With No CSIT. IEEE Transactions on Information Theory, 2012, 58, 5354-5374.	2.4	150
46	Can feedback increase the degrees of freedom of a wireless network with delayed CSIT?. , 2011, , .		3
47	The degrees of freedom region of the two-user MIMO broadcast channel with delayed CSIT. , 2011, , .		59
48	The degrees of freedom of the $2\tilde{A}-2\tilde{A}-2$ interference network with delayed CSIT and with limited Shannon feedback. , 2011, , .		13
49	MIMO performance under covariance matrix feedback. , 2011, , .		4
50	The generalized degrees of freedom of the MIMO interference channel. , 2011, , .		7
51	The capacity region of the symmetric Gaussian interference channel with common information to within a constant gap. , 2011, , .		1
52	The degrees of freedom region of the MIMO interference channel with delayed CSIT. , 2011, , .		2
53	Capacity of the MIMO interference channel to within a constant gap. , 2011, , .		8
54	CSI feedback scaling rate vs multiplexing gain tradeoff for DPC-based transmission in the Gaussian MIMO broadcast channel. , 2010, , .		8

#	ARTICLE	IF	CITATIONS
55	The diversity-multiplexing tradeoff of the symmetric MIMO 2-user interference channel. , 2010, , .		8
56	Finite-rate feedback of input covariance matrices in MIMO systems. , 2010, , .		3
57	The diversity-multiplexing tradeoff of the MIMO Z interference channel. , 2010, , .		17
58	Interference alignment under limited feedback for MIMO interference channels. , 2010, , .		102
59	A large-system analysis of the imperfect-CSIT Gaussian broadcast channel with a DPC-based transmission strategy. , 2010, , .		2
60	The degrees of freedom region of the MIMO cognitive interference channel with no CSIT. , 2010, , .		8