

# Sergey Loyka

## List of Publications by Year in descending order

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91  
papers

852  
citations

840776

11  
h-index

642732

23  
g-index

91  
all docs

91  
docs citations

91  
times ranked

509  
citing authors

#	ARTICLE	IF	CITATIONS
1	Estimating MIMO system performance using the correlation matrix approach. IEEE Communications Letters, 2002, 6, 19-21.	4.1	75
2	The Capacity of Gaussian MIMO Channels Under Total and Per-Antenna Power Constraints. IEEE Transactions on Communications, 2017, 65, 1035-1043.	7.8	60
3	On the Outage Capacity Distribution of Correlated Keyhole MIMO Channels. IEEE Transactions on Information Theory, 2008, 54, 3232-3245.	2.4	57
4	On MIMO channel capacity, correlations, and keyholes: analysis of degenerate channels. IEEE Transactions on Communications, 2002, 50, 1886-1888.	7.8	54
5	Exact capacity distributions for MIMO systems with small numbers of antennas. IEEE Communications Letters, 2003, 7, 481-483.	4.1	48
6	New compound upper bound on MIMO channel capacity. IEEE Communications Letters, 2002, 6, 96-98.	4.1	47
7	An Algorithm for Global Maximization of Secrecy Rates in Gaussian MIMO Wiretap Channels. IEEE Transactions on Communications, 2015, 63, 2288-2299.	7.8	38
8	On physically-based normalization of MIMO channel matrices. IEEE Transactions on Wireless Communications, 2009, 8, 1107-1112.	9.2	37
9	Optimal Signaling for Secure Communications Over Gaussian MIMO Wiretap Channels. IEEE Transactions on Information Theory, 2016, 62, 7207-7215.	2.4	32
10	On optimal signaling over secure MIMO channels. , 2012, , .		31
11	Multi-Keyhole MIMO Channels: Asymptotic Analysis of Outage Capacity. , 2006, , .		24
12	On outage and error rate analysis of the ordered V-BLAST. IEEE Transactions on Wireless Communications, 2008, 7, 3679-3685.	9.2	21
13	Analytical framework for outage and BER analysis of the V-BLAST algorithm. , 0, , .		19
14	The secrecy capacity of a compound MIMO Gaussian channel. , 2013, , .		16
15	V-BLAST outage probability: analytical analysis. , 0, , .		12
16	On Finite-SNR Diversity-Multiplexing Tradeoff. , 2007, , .		12
17	Further results on optimal signaling over secure MIMO channels. , 2013, , .		11
18	The Secrecy Capacity of Gaussian MIMO Wiretap Channels Under Interference Constraints. IEEE Journal on Selected Areas in Communications, 2018, 36, 704-722.	14.0	11

#	ARTICLE	IF	CITATIONS
19	On Capacity-Maximizing Angular Densities of Multipath in MIMO Channels. , 2010, , .		10
20	Rank-Deficient Solutions for Optimal Signaling Over Wiretap MIMO Channels. IEEE Transactions on Communications, 2016, 64, 2400-2411.	7.8	10
21	Algorithms for Globally-Optimal Secure Signaling Over Gaussian MIMO Wiretap Channels Under Interference Constraints. IEEE Transactions on Signal Processing, 2020, 68, 4513-4528.	5.3	10
22	Performance analysis of the V-BLAST algorithm: an analytical approach. , 0, , .		9
23	Comments on "New method of performance analysis for diversity reception with correlated Rayleigh-fading signals". IEEE Transactions on Vehicular Technology, 2003, 52, 725-726.	6.3	9
24	On BER analysis of the BLAST without optimal ordering over Rayleigh fading channel. , 0, , .		8
25	On distribution of aggregate interference in cognitive radio networks. , 2010, , .		8
26	Electromagnetic interference in wireless communications: behavioral-level simulation approach. , 0, , .		7
27	Information theory and electromagnetism: Are they related?. , 2004, , .		7
28	Diversity-Multiplexing Tradeoff via Asymptotic Analysis of Large MIMO Systems. , 2007, , .		7
29	Symbol Error Rates of Maximum-Likelihood Detector: Convex/Concave Behavior and Applications. , 2007, , .		7
30	Comments on "Asymptotic eigenvalue distributions and capacity for MIMO channels under correlated fading. IEEE Transactions on Wireless Communications, 2008, 7, 475-479.	9.2	7
31	Diversity-multiplexing tradeoff in MIMO relay channels for a broad class of fading distributions. IEEE Communications Letters, 2010, 14, 327-329.	4.1	7
32	The Impact of Fading on the Outage Probability in Cognitive Radio Networks. , 2010, , .		7
33	Diversity-multiplexing tradeoff and outage probability in MIMO relay channels. , 2010, , .		7
34	Diversity-Multiplexing Tradeoff in the Low-SNR Regime. IEEE Communications Letters, 2011, 15, 542-544.	4.1	7
35	Analytical BER analysis of the V-BLAST in a rayleigh fading channel. , 2006, , .		6
36	On Accuracy and Efficiency of Monte-Carlo BER Simulations for Fading Channels. , 2007, , .		6

#	ARTICLE	IF	CITATIONS
37	A General Formula for Compound Channel Capacity. IEEE Transactions on Information Theory, 2016, 62, 3971-3991.	2.4	6
38	Optimal Full-Rank Signaling Over MIMO Wiretap Channels Under Interference Constraint. IEEE Wireless Communications Letters, 2018, 7, 534-537.	5.0	6
39	Statistical approach to MIMO capacity analysis in a fading channel. , 0, , .		5
40	Multi-Keyholes and Measure of Correlation in MIMO Channels. , 0, , .		5
41	On Optimization of the V-BLAST Algorithm. , 0, , .		5
42	On node density - outage probability tradeoff in wireless networks. , 2008, , .		5
43	Rank-deficient solutions for optimal signaling over secure MIMO channels. , 2014, , .		5
44	Statistical analysis of a measured MIMO channel. , 0, , .		4
45	On the relationship of information theory and electromagnetism. , 0, , .		4
46	Optimum Power and Rate Allocation for Coded V-BLAST. , 2009, , .		4
47	The operational secrecy capacity of cognitive radio MIMO channel. , 2017, , .		4
48	Control-Coding Capacity of Decision Models Driven by Correlated Noise and Gaussian Application Examples. , 2018, , .		4
49	On the Capacity of Gaussian MIMO Channels Under the Joint Power Constraints. IEEE Wireless Communications Letters, 2019, 8, 332-335.	5.0	4
50	The Capacity and Optimal Signaling for Gaussian MIMO Channels Under Interference Constraints. IEEE Transactions on Communications, 2020, 68, 3386-3400.	7.8	4
51	Comments on "Precoding for secrecy rate maximisation in cognitive MIMO wiretap channels". Electronics Letters, 2020, 56, 902-904.	1.0	4
52	Favorable Propagation for Massive MIMO With Circular and Cylindrical Antenna Arrays. IEEE Wireless Communications Letters, 2022, 11, 458-462.	5.0	4
53	On the capacity of a class of MIMO channels subject to normed uncertainty. , 2008, , .		3
54	The capacity of Gaussian MISO channels under total and per-antenna power constraints. , 2016, , .		3

#	ARTICLE	IF	CITATIONS
55	On optimal signaling over Gaussian MIMO channels under interference constraints. , 2017, , .		3
56	Asymptotic analysis of outage probability in cognitive radio networks. , 2012, , .		2
57	Feedback does not increase the capacity of compound channels with additive noise. , 2016, , .		2
58	Secrecy Rate Maximization in Gaussian MIMO Wiretap Channels. , 0, , 109-139.		2
59	An algorithm for optimal secure signaling over cognitive radio MIMO channels. , 2017, , .		2
60	Asymptotic Reverse-Waterfilling Characterization of Nonanticipative Rate Distortion Function of Vector-Valued Gauss-Markov Processes with MSE Distortion. , 2018, , .		2
61	Simple Closed-Form Approximations for Achievable Information Rates of Coded Modulation Systems. Journal of Lightwave Technology, 2021, 39, 1306-1311.	4.6	2
62	Comments on "Pattern characteristics of harmonic and intermodulation products in broad-band active transmit arrays". IEEE Transactions on Antennas and Propagation, 2003, 51, 1683.	5.1	1
63	Statistical analysis of the $2^{\tilde{A}-n}$ V-BLAST algorithm over Rayleigh fading channel. , 0, , .		1
64	Transmit Power Allocation for the V-Blast Algorithm. , 0, , .		1
65	On multipath clustering in angular domain and its impact on channel capacity and diversity gain. , 2006, , .		1
66	What is the best angular density of multipath in MIMO channels?. , 2009, , .		1
67	The impact of fading and interference cancelation on node density - Outage probability tradeoff in wireless networks. , 2009, , .		1
68	Electromagnetic interference and safety in wireless networks: A statistical approach. , 2011, , .		1
69	Ergodic capacity under channel distribution uncertainty. , 2014, , .		1
70	A general formula for compound channel capacity. , 2015, , .		1
71	Closed-form solutions for optimal secure signaling over cognitive radio MIMO channels. , 2017, , .		1
72	Comments on "On Favorable Propagation in Massive MIMO Systems and Different Antenna Configurations". IEEE Access, 2019, 7, 185369-185372.	4.2	1

#	ARTICLE	IF	CITATIONS
73	From Feedback Capacity to Tight Achievable Rates without Feedback for AGN Channels with Stable and Unstable Autoregressive Noise. , 2020, , .		1
74	To Jam or Not to Jam in Gaussian MIMO Wiretap Channels?: Invited Paper. , 2021, , .		1
75	On the Capacity of Gaussian MIMO Channels With Memory. IEEE Communications Letters, 2022, 26, 1760-1763.	4.1	1
76	Correlated Keyhole MIMO Channels: SNR and Outage Capacity Distributions. , 2006, , .		0
77	Performance Analysis of V-BLAST with Optimum Power Allocation. , 2007, , .		0
78	On Asymptotic Outage Capacity Distribution of Correlated MIMO Channels. , 2007, , .		0
79	Outage probability under channel distribution uncertainty. , 2011, , .		0
80	Performance analysis of coded V-BLAST with optimum power and rate allocation. , 2011, , .		0
81	On optimal detection ordering for coded V-BLAST. , 2013, , .		0
82	Convexity of error rates in digital communications under non-Gaussian noise. , 2013, , .		0
83	Extremum problems with total variation distance. , 2013, , .		0
84	Massive MIMO Channels Under the Joint Power Constraints. , 2019, , .		0
85	On The Capacity of Gaussian MIMO Channels Under Interference Constraints. , 2020, , .		0
86	Comments on "AN-Aided Secrecy Precoding for SWIPT in Cognitive MIMO Broadcast Channels" IEEE Communications Letters, 2020, 24, 1146-1149.	4.1	0
87	Comments on "Precoding and Artificial Noise Design for Cognitive MIMOME Wiretap Channels" IEEE Transactions on Vehicular Technology, 2021, 70, 2917-2921.	6.3	0
88	On Optimal Power Allocation for Modulation-Constrained Gaussian Channels. , 2021, , .		0
89	Multi-Antenna Techniques for Interference Mitigation and Control. , 2021, , .		0
90	Optimal Location of Cellular Base Station via Convex Optimization. , 2020, , .		0

#	ARTICLE	IF	CITATIONS
91	Favorable Propagation for Wideband Massive MIMO with Non-Uniform Linear Arrays. , 2022, , .		0