

# Yury Polyanskiy

## List of Publications by Year in descending order

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67  
papers

5,166  
citations

430442

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all docs

67  
docs citations

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times ranked

2222  
citing authors

#	ARTICLE	IF	CITATIONS
1	Strong Data Processing Constant Is Achieved by Binary Inputs. IEEE Transactions on Information Theory, 2022, 68, 1480-1481.	1.5	2
2	Broadcasting on Two-Dimensional Regular Grids. IEEE Transactions on Information Theory, 2022, , 1-1.	1.5	1
3	Information Storage in the Stochastic Ising Model. IEEE Transactions on Information Theory, 2021, 67, 1373-1399.	1.5	2
4	Reconstruction on 2D Regular Grids. , 2021, , .		1
5	Fundamental Limits of Many-User MAC With Finite Payloads and Fading. IEEE Transactions on Information Theory, 2021, 67, 5853-5884.	1.5	23
6	On Coding Techniques for Unsourced Multiple-Access. , 2021, , .		5
7	Application of the information-percolation method to reconstruction problems on graphs. Mathematical Statistics and Learning, 2020, 2, 1-24.	0.7	5
8	Sampling of the Wiener Process for Remote Estimation Over a Channel With Random Delay. IEEE Transactions on Information Theory, 2020, 66, 1118-1135.	1.5	82
9	Broadcasting on Random Directed Acyclic Graphs. IEEE Transactions on Information Theory, 2020, 66, 780-812.	1.5	6
10	A Note on the Probability of Rectangles for Correlated Binary Strings. IEEE Transactions on Information Theory, 2020, 66, 7878-7886.	1.5	5
11	The Information Bottleneck Problem and its Applications in Machine Learning. IEEE Journal on Selected Areas in Information Theory, 2020, 1, 19-38.	1.9	61
12	Energy Efficient Coded Random Access for the Wireless Uplink. IEEE Transactions on Communications, 2020, 68, 4694-4708.	4.9	50
13	A Lower Bound on the Expected Distortion of Joint Source-Channel Coding. IEEE Transactions on Information Theory, 2020, 66, 4722-4741.	1.5	1
14	Massive Access for Future Wireless Communication Systems. IEEE Wireless Communications, 2020, 27, 148-156.	6.6	114
15	Improved log-Sobolev inequalities, hypercontractivity and uncertainty principle on the hypercube. Journal of Functional Analysis, 2019, 277, 108280.	0.7	7
16	Error Exponents in Distributed Hypothesis Testing of Correlations. , 2019, , .		6
17	Energy efficient random access for the quasi-static fading MAC. , 2019, , .		44
18	Improved bounds on Gaussian MAC and sparse regression via Gaussian inequalities. , 2019, , .		39

#	ARTICLE	IF	CITATIONS
19	List-Decodable Zero-Rate Codes. IEEE Transactions on Information Theory, 2019, 65, 1657-1667.	1.5	13
20	Quasi-static fading MAC with many users and finite payload. , 2019, , .		20
21	Broadcasting on Random Networks. , 2019, , .		4
22	Coherent Multiple-Antenna Block-Fading Channels at Finite Blocklength. IEEE Transactions on Information Theory, 2019, 65, 380-405.	1.5	27
23	Bounds on the Reliability Function of Typewriter Channels. IEEE Transactions on Information Theory, 2018, 64, 6208-6222.	1.5	3
24	Strong Data Processing Inequalities for Input Constrained Additive Noise Channels. IEEE Transactions on Information Theory, 2018, 64, 1879-1892.	1.5	18
25	Betaâ€“Beta Bounds: Finite-Blocklength Analog of the Golden Formula. IEEE Transactions on Information Theory, 2018, 64, 6236-6256.	1.5	10
26	Defect Tolerance: Fundamental Limits and Examples. IEEE Transactions on Information Theory, 2018, 64, 5240-5260.	1.5	2
27	Comparison of Channels: Criteria for Domination by a Symmetric Channel. IEEE Transactions on Information Theory, 2018, 64, 5704-5725.	1.5	18
28	Remote estimation of the Wiener process over a channel with random delay. , 2017, , .		141
29	On metric properties of maps between Hamming spaces and related graph homomorphisms. Journal of Combinatorial Theory - Series A, 2017, 145, 227-251.	0.5	7
30	A perspective on massive random-access. , 2017, , .		273
31	Low complexity schemes for the random access Gaussian channel. , 2017, , .		139
32	Strong Data-Processing Inequalities for Channels and Bayesian Networks. The IMA Volumes in Mathematics and Its Applications, 2017, , 211-249.	0.5	41
33	Dispersion of the coherent MIMO block-fading channel. , 2016, , .		12
34	Minimum Energy to Send $k$ Bits Over Multiple-Antenna Fading Channels. IEEE Transactions on Information Theory, 2016, 62, 6831-6853.	1.5	7
35	Wasserstein Continuity of Entropy and Outer Bounds for Interference Channels. IEEE Transactions on Information Theory, 2016, 62, 3992-4002.	1.5	59
36	Dissipation of Information in Channels With Input Constraints. IEEE Transactions on Information Theory, 2016, 62, 35-55.	1.5	54

#	ARTICLE	IF	CITATIONS
37	Short-Packet Communications Over Multiple-Antenna Rayleigh-Fading Channels. IEEE Transactions on Communications, 2016, 64, 618-629.	4.9	151
38	Upper Bound on List-Decoding Radius of Binary Codes. IEEE Transactions on Information Theory, 2016, 62, 1119-1128.	1.5	11
39	Converse and duality results for combinatorial source-channel coding in binary Hamming spaces. , 2015, , .		4
40	Upper bound on list-decoding radius of binary codes. , 2015, , .		1
41	Optimum Power Control at Finite Blocklength. IEEE Transactions on Information Theory, 2015, 61, 4598-4615.	1.5	38
42	Algebraic methods of classifying directed graphical models. , 2014, , .		5
43	Orthogonal designs optimize achievable dispersion for coherent MISO channels. , 2014, , .		14
44	Peak-to-Average Power Ratio of Good Codes for Gaussian Channel. IEEE Transactions on Information Theory, 2014, 60, 7655-7660.	1.5	11
45	Empirical Distribution of Good Channel Codes With Nonvanishing Error Probability. IEEE Transactions on Information Theory, 2014, 60, 5-21.	1.5	33
46	On the bit error rate of repeated error-correcting codes. , 2014, , .		3
47	Quasi-Static Multiple-Antenna Fading Channels at Finite Blocklength. IEEE Transactions on Information Theory, 2014, 60, 4232-4265.	1.5	408
48	On dispersion of compound DMCs. , 2013, , .		16
49	Saddle Point in the Minimax Converse for Channel Coding. IEEE Transactions on Information Theory, 2013, 59, 2576-2595.	1.5	55
50	Quasi-static SIMO fading channels at finite blocklength. , 2013, , .		63
51	The adversarial joint source-channel problem. , 2012, , .		14
52	Hypothesis testing via a comparator. , 2012, , .		15
53	$\ell_p$ -norms of codewords from capacity- and dispersion-achieving Gaussian codes. , 2012, , .		1
54	Results on combinatorial joint source-channel coding. , 2012, , .		10

#	ARTICLE	IF	CITATIONS
55	Relative entropy at the channel output of a capacity-achieving code. , 2011, , .		5
56	Scalar coherent fading channel: Dispersion analysis. , 2011, , .		56
57	Dispersion of the Gilbert-Elliott Channel. IEEE Transactions on Information Theory, 2011, 57, 1829-1848.	1.5	77
58	Feedback in the Non-Asymptotic Regime. IEEE Transactions on Information Theory, 2011, 57, 4903-4925.	1.5	174
59	Minimum Energy to Send $k$ Bits Through the Gaussian Channel With and Without Feedback. IEEE Transactions on Information Theory, 2011, 57, 4880-4902.	1.5	46
60	Channel Coding Rate in the Finite Blocklength Regime. IEEE Transactions on Information Theory, 2010, 56, 2307-2359.	1.5	2,397
61	Arimoto channel coding converse and $\epsilon$ divergence. , 2010, , .		82
62	Channel dispersion and moderate deviations limits for memoryless channels. , 2010, , .		50
63	Minimum energy to send $k$ bits with and without feedback. , 2010, , .		14
64	Variable-length coding with feedback in the non-asymptotic regime. , 2010, , .		9
65	Dispersion of Gaussian channels. , 2009, , .		74
66	Dispersion of the Gilbert-Elliott channel. , 2009, , .		10
67	New channel coding achievability bounds. , 2008, , .		17