Boris Ryabko

List of Publications by Year
in descending order

80	792	623734 14	610901 24
papers	citations	h-index	g-index

85	85	85	312
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Numerical competence in animals, with an insight from ants. Behaviour, 2011, 148, 405-434.	0.8	72
2	Using Shannon entropy and Kolmogorov complexity to study the communicative system and cognitive capacities in ants. Complexity, 1996, 2, 37-42.	1.6	51
3	Using information theory approach to randomness testing. Journal of Statistical Planning and Inference, 2005, 133, 95-110.	0.6	44
4	Universal codes as a basis for time series testing. Statistical Methodology, 2006, 3, 375-397.	0.5	43
5	The Use of Ideas of Information Theory for Studying â€œLanguageâ€•and Intelligence in Ants. Entropy, 2009, 11, 836-853.	2.2	43
6	A new test for randomness and its application to some cryptographic problems. Journal of Statistical Planning and Inference, 2004, 123, 365-376.	0.6	40
7	The Complexity and Effectiveness of Prediction Algorithms. Journal of Complexity, 1994, 10, 281-295.	1.3	38
8	Compression-Based Methods for Nonparametric Prediction and Estimation of Some Characteristics of Time Series. IEEE Transactions on Information Theory, 2009, 55, 4309-4315.	2.4	31
9	Application of Kolmogorov complexity and universal codes to identity testing and nonparametric testing of serial independence for time series. Theoretical Computer Science, 2006, 359, 440-448.	0.9	29
10	Fast and efficient construction of an unbiased random sequence. IEEE Transactions on Information Theory, 2000, 46, 1090-1093.	2.4	26
11	Comments on "A source matching approach to finding minimax codes" by Davisson, L. D. and Leon-Garcia, A.. IEEE Transactions on Information Theory, 1981, 27, 780-781.	2.4	18
12	Asymptotically optimal perfect steganographic systems. Problems of Information Transmission, 2009, 45, 184-190.	0.5	18
13	Fast adaptive arithmetic code for large alphabet sources with asymmetrical distributions. IEEE Communications Letters, 2003, 7, 33-35.	4.1	17
14	Nonparametric Statistical Inference for Ergodic Processes. IEEE Transactions on Information Theory, 2010, 56, 1430-1435.	2.4	16
15	A fast on-line adaptive code. IEEE Transactions on Information Theory, 1992, 38, 1400-1404.	2.4	15
16	On Asymptotically Optimal Methods of Prediction and Adaptive Coding for Markov Sources. Journal of Complexity, 2002, 18, 224-241.	1.3	14
17	Efficient homophonic coding. IEEE Transactions on Information Theory, 1999, 45, 2083-2091.	2.4	13
18	Studying hunting behaviour in the striped field mouse using data compression. Acta Ethologica, 2017, 20, 165-173.	0.9	12

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19	Fast and efficient coding of information sources. IEEE Transactions on Information Theory, 1994, 40, 96-99.	2.4	11
20	Using Ideas of Kolmogorov Complexity for Studying Biological Texts. Theory of Computing Systems, 2013, 52, 133-147.	1.1	11
21	Constructing perfect steganographic systems. Information and Computation, 2011, 209, 1223-1230.	0.7	10
22	An information-theoretic approach to estimate the capacity of processing units. Performance Evaluation, 2012, 69, 267-273.	1.2	10
23	APPLICATIONS OF UNIVERSAL SOURCE CODING TO STATISTICAL ANALYSIS OF TIME SERIES. Series on Coding Theory and Cryptology, 2010, , 289-338.	0.2	10
24	Experimental investigation of forecasting methods based on data compression algorithms. Problems of Information Transmission, 2005, 41, 65-69.	0.5	8
25	On hypotheses testing for ergodic processes. , 2008, , .		8
26	Application of information-theoretic tests for the analysis of DNA sequences based on Markov chain models. Computational Statistics and Data Analysis, 2009, 53, 1861-1872.	1.2	8
27	An Analytic Method for Estimating the Computation Capacity of Computing Devices. Journal of Circuits, Systems and Computers, 2017, 26, 1750086.	1.5	8
28	Optimal key for taxons ordered in accordance with their frequencies. Discrete Applied Mathematics, 1981, 3, 67-72.	0.9	7
29	Compression-based methods for nonparametric density estimation, on-line prediction, regression and classification for time series. , 2008, , .		7
30	The Vernam cipher is robust to small deviations from randomness. Problems of Information Transmission, 2015, 51, 82-86.	0.5	7
31	Time series prediction based on data compression methods. Problems of Information Transmission, 2016, 52, 92-99.	0.5	7
32	Information-Theoretic method for classification of texts. Problems of Information Transmission, 2017, 53, 294-304.	0.5	7
33	Using the Data-Compression Method for Studying Hunting Behavior in Small Mammals. Entropy, 2019, 21, 368.	2.2	7
34	Title is missing!. Complexity, 1996, 2, 37.	1.6	7
35	Transmission of information regarding the quantitative characteristics of an object in ants. Neuroscience and Behavioral Physiology, 1996, 26, 397-405.	0.4	6
36	Universal codes as a basis for nonparametric testing of serial independence for time series. Journal of Statistical Planning and Inference, 2006, 136, 4119-4128.	0.6	6

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37	Classification by compression: Application of information-theory methods for the identification of themes of scientific texts. Automatic Documentation and Mathematical Linguistics, 2017, 51, 120-126.	0.5	6
38	A New Type of Attacks on Block Ciphers. Problems of Information Transmission, 2005, 41, 385-394.	0.5	5
39	Information-Theoretic Approach to Steganographic Systems. , 2007, , .		5
40	Adaptive Coding and Prediction of Sources With Large and Infinite Alphabets. IEEE Transactions on Information Theory, 2008, 54, 3808-3813.	2.4	5
41	Time-Adaptive Statistical Test for Random Number Generators. Entropy, 2020, 22, 630.	2.2	5
42	Fast and Space-Efficient Adaptive Arithmetic Codingâ‹†. Lecture Notes in Computer Science, 1999, , 270-279.	1.3	5
43	Using Information Theory to Study Efficiency and Capacity of Computers and Similar Devices. Information (Switzerland), 2010, 1, 3-12.	2.9	4
44	Using data-compressors for statistical analysis of problems on homogeneity testing and classification. , 2017, , .		4
45	Applications of information theory to analysis of efficiency and capacity of computers and similar devices. , 2010, , .		3
46	Low-Entropy Stochastic Processes for Generating k-Distributed and Normal Sequences, and the Relationship of These Processes with Random Number Generators â€. Mathematics, 2019, 7, 838.	2.2	3
47	Using Data-Compressors for Classification Hunting Behavioral Sequences in Rodents as â€œEthological Textsâ€: Mathematics, 2020, 8, 579.	2.2	3
48	Fast enumeration algorithm for words with given constraints on run lengths of ones. Problems of Information Transmission, 2010, 46, 390-399.	0.5	2
49	Evaluation of computer capacity for P5 intel processors. , 2012, , .		2
50	On the efficiency and capacity of computers. Applied Mathematics Letters, 2012, 25, 398-400.	2.7	2
51	Theoretical Approach to Performance Evaluation of Supercomputers. Journal of Circuits, Systems and Computers, 2018, 27, 1850062.	1.5	2
52	Time-Universal Data Compression. Algorithms, 2019, 12, 116.	2.1	2
53	Asymptotically most powerful tests for random number generators. Journal of Statistical Planning and Inference, 2022, 217, 1-7.	0.6	2
54	Using Data Compression to Build a Method for Statistically Verified Attribution of Literary Texts. Entropy, 2021, 23, 1302.	2.2	2

#	Article	IF	Citations
55	Fast coding of low-entropy sources. IEEE Transactions on Information Theory, 1999, 45, 2612-2615.	2.4	1
56	DNA-sequence analysis using Markov chain models. , 2008, , .		1
57	Fast enumeration of run-length-limited words. , 2009, , .		1
58	Confidence sets in time-series filtering. , 2011, , .		1
59	Estimating the performance of computer systems through computer capacity. , 2012, , .		1
60	A confidence-set approach to signal denoising. Statistical Methodology, 2013, 15, 115-120.	0.5	1
61	Properties of two Shannonâ€™s ciphers. Designs, Codes, and Cryptography, 2018, 86, 989-995.	1.6	1
62	Investigation of the Processors Evolution Using the Computer Capacity. , 2018, , .		1
63	Time-universal data compression and prediction. , 2019, , .		1
64	Compression-Based Methods of Time Series Forecasting. Mathematics, 2021, 9, 284.	2.2	1
65	Application of the Computer Capacity to the Analysis of Processors Evolution. Journal of Circuits, Systems and Computers, 2020, 29, 2050127.	1.5	1
66	Application of algorithmic information theory to calibrate tests of random number generators. , 2021, , .		1
67	Application of data compression methods to nonparametric estimation of characteristics of discrete-time stochastic processes. Problems of Information Transmission, 2007, 43, 367-379.	0.5	0
68	Distinguishing the language of ciphered texts. , 2008, , .		0
69	Experimental investigation of the genetic text memory using Markov chain models. , 2008, , .		0
70	Using Kolmogorov complexity for understanding some limitations on steganography. , 2009, , .		0
71	An application of universal data compression to statistical analysis of time series. , 2010, , .		0
72	Construction of high rate run-length limited codes using arithmetic decoding. , 2012, , .		0

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73	Experimental investigation of the efficiency of universal measures based forecasting methods. , 2012, , .		0
74	Complexity of Approximating Functions on Real-Life Computers. International Journal of Foundations of Computer Science, 2015, 26, 153-157.	1.1	0
75	Statistical Methods Based on Universal Codes. , 2016, , 1-43.		0
76	Linear Hash Functions as a Means of Distortion--Rate Optimization in Data Embedding. , 2019, , .		0
77	Computer Capacity As a Tool For the Processors Development Analysis. , 2019, , .		0
78	A Pseudo-Random Generator Whose Output is a Normal Sequence. International Journal of Foundations of Computer Science, 2021, 32, 981-989.	1.1	0
79	SCOT-Modeling and Nonparametric Testing of Stationary Strings. , 2016, , 71-144.		0
80	Construction of a pseudo-random number generator whose output is a normal sequence. , 2021, , .		0