Paul M B VitÃ¡nyi

List of Publications by Year
in descending order

142 papers	8,038 citations	201674 27 h-index	82547 72 g-index
152 all docs	152 docs citations	152 times ranked	3488 citing authors

#	Article	IF	Citations
1	Fast Phylogeny of SARS-CoV-2 by Compression. Entropy, 2022, 24, 439.	2.2	1
2	How Incomputable Is Kolmogorov Complexity?. Entropy, 2020, 22, 408.	2.2	14
3	Web Similarity in Sets of Search Terms Using Database Queries. SN Computer Science, 2020, 1, 1.	3.6	1
4	Logical depth for reversible Turing machines with an application to the rate of decrease in logical depth for general Turing machines. Theoretical Computer Science, 2019, 778, 78-80.	0.9	0
5	An Introduction to Kolmogorov Complexity and Its Applications. Texts in Computer Science, 2019, , .	0.7	795
6	On the averageâ€case complexity of Shellsort. Random Structures and Algorithms, 2018, 52, 354-363.	1.1	0
7	Identification of probabilities. Journal of Mathematical Psychology, 2017, 76, 13-24.	1.8	9
8	Exact Expression For Information Distance. IEEE Transactions on Information Theory, 2017, 63, 4725-4728.	2.4	3
9	Registers. , 2016, , 1808-1812.		0
10	Normalized Compression Distance of Multisets with Applications. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2015, 37, 1602-1614.	13.9	28
11	Language Learning From Positive Evidence, Reconsidered: A Simplicityâ€Based Approach. Topics in Cognitive Science, 2013, 5, 35-55.	1.9	18
12	Tolstoyâ€™s Mathematics in War and Peace. Mathematical Intelligencer, 2013, 35, 71-75.	0.2	3
13	Conditional Kolmogorov complexity and universal probability. Theoretical Computer Science, 2013, 501, 93-100.	0.9	9
14	Similarity and denoising. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120091.	3.4	13
15	Approximating Rate-Distortion Graphs of Individual Data: Experiments in Lossy Compression and Denoising. IEEE Transactions on Computers, 2012, 61, 395-407.	3.4	10
16	Information Distance in Multiples. IEEE Transactions on Information Theory, 2011, 57, 2451-2456.	2.4	28
17	The probabilistic analysis of language acquisition: Theoretical, computational, and experimental analysis. Cognition, 2011, 120, 380-390.	2.2	59
18	A Fast Quartet tree heuristic for hierarchical clustering. Pattern Recognition, 2011, 44, 662-677.	8.1	28

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19	Nonapproximability of the normalized information distance. Journal of Computer and System Sciences, 2011, 77, 738-742.	1.2	25
20	Rate Distortion and Denoising of Individual Data Using Kolmogorov Complexity. IEEE Transactions on Information Theory, 2010, 56, 3438-3454.	2.4	24
21	Depth as Randomness Deficiency. Theory of Computing Systems, 2009, 45, 724-739.	1.1	10
22	Time-bounded incompressibility of compressible strings and sequences. Information Processing Letters, 2009, 109, 1055-1059.	0.6	1
23	Normalized Information Distance. , 2009, , 45-82.		42
24	Turing machine. Scholarpedia Journal, 2009, 4, 6240.	0.3	1
25	An Introduction to Kolmogorov Complexity and Its Applications. Texts in Computer Science, 2008, , .	0.7	682
26	ALGORITHMIC INFORMATION THEORY. , 2008, , 281-317.		24
27	Registers. , 2008, , 761-764.		1
28	The Power and Perils of MDL. , 2007, , .		7
29	The Google Similarity Distance. IEEE Transactions on Knowledge and Data Engineering, 2007, 19, 370-383.	5.7	1,373
30	â€˜Ideal learningâ€™ of natural language: Positive results about learning from positive evidence. Journal of Mathematical Psychology, 2007, 51, 135-163.	1.8	165
31	Individual communication complexity. Journal of Computer and System Sciences, 2007, 73, 973-985.	1.2	6
32	Analysis of Sorting Algorithms by Kolmogorov Complexity (A Survey). , 2007, , 209-232.		6
33	Algorithmic probability. Scholarpedia Journal, 2007, 2, 2572.	0.3	7
34	Applications of algorithmic information theory. Scholarpedia Journal, 2007, 2, 2658.	0.3	1
35	Andrey Nikolaevich Kolmogorov. Scholarpedia Journal, 2007, 2, 2798.	0.3	1
36	On Algorithmic Rate-Distortion Function. , 2006, , .		4

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37	Automatic Extraction of Meaning from the Web. , 2006, , .		20
38	On the importance of having an identity or, is consensus really universal?. Distributed Computing, 2006, 18, 167-176.	0.8	33
39	Similarity of Objects and the Meaning of Words. Lecture Notes in Computer Science, 2006, , 21-45.	1.3	16
40	About the Lifespan of Peer to Peer Networks. Lecture Notes in Computer Science, 2006, , 290-304.	1.3	3
41	Algorithmic Clustering of Music Based on String Compression. Computer Music Journal, 2004, 28, 49-67.	0.1	196
42	The Similarity Metric. IEEE Transactions on Information Theory, 2004, 50, 3250-3264.	2.4	766
43	Kolmogorov's Structure Functions and Model Selection. IEEE Transactions on Information Theory, 2004, 50, 3265-3290.	2.4	91
44	Individual Communication Complexity. Lecture Notes in Computer Science, 2004, , 19-30.	1.3	1
45	Title is missing!. Journal of Logic, Language and Information, 2003, 12, 497-529.	0.6	53
46	Sharpening Occam's razor. Information Processing Letters, 2003, 85, 267-274.	0.6	15
47	The generalized universal law of generalization. Journal of Mathematical Psychology, 2003, 47, 346-369.	1.8	56
48	Simplicity: a unifying principle in cognitive science?. Trends in Cognitive Sciences, 2003, 7, 19-22.	7.8	274
49	Bounded concurrent timestamp systems using vector clocks. Journal of the ACM, 2002, 49, 101-126.	2.2	28
50	Randomized two-process wait-free test-and-set. Distributed Computing, 2002, 15, 127-135.	0.8	12
51	The average-case area of Heilbronn-type triangles*. Random Structures and Algorithms, 2002, 20, 206-219.	1.1	19
52	Simple Wait-Free Multireader Registers. Lecture Notes in Computer Science, 2002, , 118-132.	1.3	3
53	Meaningful Information. Lecture Notes in Computer Science, 2002, , 588-599.	1.3	6
54	Sharpening Occamâ€™s Razor. Lecture Notes in Computer Science, 2002, , 411-419.	1.3	1

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55	Universal generalization and universal inter-item confusability. Behavioral and Brain Sciences, 2001, 24, 659-660.	0.7	2
56	Algorithmic statistics. IEEE Transactions on Information Theory, 2001, 47, 2443-2463.	2.4	84
57	Time and space bounds for reversible simulation. Journal of Physics A, 2001, 34, 6821-6830.	1.6	16
58	On a Generalized Ruin Problem. Lecture Notes in Computer Science, 2001, , 181-191.	1.3	2
59	The Quantum Computing Challenge. Lecture Notes in Computer Science, 2001, , 219-233.	1.3	0
60	Applying MDL to learn best model granularity. Artificial Intelligence, 2000, 121, 1-29.	5.8	46
61	New applications of the incompressibility method: Part II. Theoretical Computer Science, 2000, 235, 59-70.	0.9	15
62	A discipline of evolutionary programming. Theoretical Computer Science, 2000, 241, 3-23.	0.9	13
63	Minimum description length induction, Bayesianism, and Kolmogorov complexity. IEEE Transactions on Information Theory, 2000, 46, 446-464.	2.4	170
64	Average-case analysis of algorithms using Kolmogorov complexity. Journal of Computer Science and Technology, 2000, 15, 402-408.	1.5	9
65	A lower bound on the average-case complexity of shellsort. Journal of the ACM, 2000, 47, 905-911.	2.2	15
66	Towards an Algorithmic Statistics. Lecture Notes in Computer Science, 2000, , 41-55.	1.3	0
67	The Incompressibility Method. Lecture Notes in Computer Science, 2000, , 36-53.	1.3	0
68	Mutual search. Journal of the ACM, 1999, 46, 517-536.	2.2	8
69	New Applications of the Incompressibility Method. Computer Journal, 1999, 42, 287-293.	2.4	4
70	The erdÅ‘s graph and the beast. Mathematical Intelligencer, 1999, 21, 54-63.	0.2	0
71	Space-efficient Routing Tables for Almost All Networks and the Incompressibility Method. SIAM Journal on Computing, 1999, 28, 1414-1432.	1.0	15
72	Kolmogorov Random Graphs and the Incompressibility Method. SIAM Journal on Computing, 1999, 29, 590-599.	1.0	28

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73	Average-Case Complexity of Shellsort (Preliminary Version). Lecture Notes in Computer Science, 1999, , 453-462.	1.3	7
74	Randomized naming using wait-free shared variables. Distributed Computing, 1998, 11, 113-124.	0.8	29
75	Reversible simulation of irreversible computation. Physica D: Nonlinear Phenomena, 1998, 120, 168-176.	2.8	25
76	Two heads are better than two tapes. Journal of the ACM, 1997, 44, 237-256.	2.2	6
77	An Introduction to Kolmogorov Complexity and Its Applications. , 1997, , .		1,072
78	Average-case analysis via incompressibility. Lecture Notes in Computer Science, 1997, , 38-50.	1.3	0
79	The miraculous universal distribution. Mathematical Intelligencer, 1997, 19, 7-15.	0.2	58
80	On prediction by data compression. Lecture Notes in Computer Science, 1997, , 14-30.	1.3	3
81	Average-Case Analysis Using Kolmogorov Complexity. , 1997, , 157-169.		2
82	Resource-Bounded Complexity. , 1997, , 459-520.		0
83	Algorithmic Probability. , 1997, , 239-314.		0
84	The Incompressibility Method. , 1997, , 379-457.		0
85	Inductive Reasoning. , 1997, , 315-377.		0
86	How to share concurrent wait-free variables. Journal of the ACM, 1996, 43, 723-746.	2.2	47
87	Optimal routing tables. , 1996, , .		9
88	Genetic fitness optimization using rapidly mixing Markov chains. Lecture Notes in Computer Science, 1996, , 67-82.	1.3	0
89	A New Approach to Formal Language Theory by Kolmogorov Complexity. SIAM Journal on Computing, 1995, 24, 398-410.	1.0	23
90	Physics and the new computation. Lecture Notes in Computer Science, 1995, , 106-128.	1.3	2

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91	Algorithmic arguments in physics of computation. Lecture Notes in Computer Science, 1995, , 315-333.	1.3	0
92	Two heads are better than two tapes. , 1994, , .		2
93	Kolmogorov complexity arguments in combinatorics. Journal of Combinatorial Theory - Series A, 1994, 66, 226-236.	0.8	8
94	Randomized wait-free naming. Lecture Notes in Computer Science, 1994, , 83-91.	1.3	1
95	Thermodynamics of computation and information distance. , 1993, , .		17
96	An Introduction to Kolmogorov Complexity and Its Applications. , 1993, , .		439
97	The Power of the Queue. SIAM Journal on Computing, 1992, 21, 697-712.	1.0	18
98	Inductive reasoning and kolmogorov complexity. Journal of Computer and System Sciences, 1992, 44, 343-384.	1.2	48
99	A note on weighted distributed match-making. Mathematical Systems Theory, 1992, 25, 123-140.	0.5	3
100	Optimality of wait-free atomic multiwriter variables. Information Processing Letters, 1992, 43, 107-112.	0.6	11
101	Average case complexity under the universal distribution equals worst-case complexity. Information Processing Letters, 1992, 42, 145-149.	0.6	46
102	Philosophical issues in Kolmogorov complexity. Lecture Notes in Computer Science, 1992, , 1-15.	1.3	7
103	Wait-free test-and-set. Lecture Notes in Computer Science, 1992, , 85-94.	1.3	26
104	Learning Simple Concepts under Simple Distributions. SIAM Journal on Computing, 1991, 20, 911-935.	1.0	58
105	Kolmogorov Complexity and its Applications. , 1990, , 187-254.		53
106	Applications of Kolmogorov Complexity in the Theory of Computation. , 1990, , 147-203.		17
107	A new approach to formal language theory by kolmogorov complexity. Lecture Notes in Computer Science, 1989, , 506-520.	1.3	4
108	How to share concurrent asynchronous wait-free variables. Lecture Notes in Computer Science, 1989, , 488-505.	1.3	15

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109	Distributed match-making. Algorithmica, 1988, 3, 367-391.	1.3	92
110	Tape versus queue and stacks: The lower bounds. Information and Computation, 1988, 78, 56-85.	0.7	39
111	Locality, Communication, and Interconnect Length in Multicomputers. SIAM Journal on Computing, 1988, 17, 659-672.	1.0	72
112	Counting is easy. Journal of the ACM, 1988, 35, 985-1000.	2.2	4
113	Weighted distributed match-making. Lecture Notes in Computer Science, 1988, , 361-368.	1.3	3
114	Atomic multireader register. Lecture Notes in Computer Science, 1988, , 278-296.	1.3	19
115	A proof technique for register atomicity. Lecture Notes in Computer Science, 1988, , 286-303.	1.3	9
116	Atomic shared register access by asynchronous hardware. , 1986, , .		107
117	The power of the queue. Lecture Notes in Computer Science, 1986, , 219-233.	1.3	11
118	Development, Growth and Time. , 1986, , 431-444.		3
119	An n1.618 lower bound on the time to simulate one queue or two pushdown stores by one tape. Information Processing Letters, 1985, 21, 147-152.	0.6	11
120	Square time is optimal for simulation of one pushdown store or one queue by an oblivious one-head tape unit. Information Processing Letters, 1985, 21, 87-91.	0.6	11
121	Distributed match-making for processes in computer networks (preliminary version). , 1985, , .		14
122	Area penalty for sublinear signal propagation delay on chip. , 1985, , .		5
123	An Optimal Simulation of Counter Machines. SIAM Journal on Computing, 1985, 14, 1-33.	1.0	11
124	An Optimal Simulation of Counter Machines: The ACM Case. SIAM Journal on Computing, 1985, 14, 34-40.	1.0	4
125	On two-tape real-time computation and queues. Journal of Computer and System Sciences, 1984, 29, 303-311.	1.2	8
126	On the power of real-time two-way multihead finite automata with jumps. Information Processing Letters, 1984, 19, 31-35.	0.6	2

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127	On the simulation of many storage heads by one. Theoretical Computer Science, 1984, 34, 157-168.	0.9	6
128	The simple roots of real-time computation hierarchies. Lecture Notes in Computer Science, 1984, , 486-489.	1.3	1
129	How well can a graph be n-colored?. Discrete Mathematics, 1981, 34, 69-80.	0.7	24
130	Algorithmique et structures de donnÃ©es. European Journal of Operational Research, 1980, 5, 148-149.	5.7	0
131	Achievable high scores of Îµ-moves and running times in DPDA computations. Information Processing Letters, 1980, 10, 83-86.	0.6	0
132	Relativized obliviousness. , 1980, , 665-672.		0
133	On inverse deterministic pushdown transductions. Journal of Computer and System Sciences, 1978, 16, 423-444.	1.2	4
134	A note on the recursive enumerability of some classes of recursively enumerable languages. Information Sciences, 1978, 14, 89-91.	6.9	1
135	Stable string languages of lindenmayer systems. Information and Control, 1978, 37, 134-149.	1.1	6
136	Context sensitive table linden mayer languages and a relation to the LBA problem. Information and Control, 1977, 33, 217-226.	1.1	3
137	Growth Functions Associated with Biological Development. American Mathematical Monthly, 1976, 83, 1-15.	0.3	5
138	On a problem in the collective behavior of automata. Discrete Mathematics, 1976, 14, 99-101.	0.7	3
139	Deterministic Lindenmayer languages, nonterminals and homomorphisms. Theoretical Computer Science, 1976, 2, 49-71.	0.9	6
140	Growth Functions Associated with Biological Development. American Mathematical Monthly, 1976, 83, 1.	0.3	7
141	Structure of growth in Lindenmayer systems. Proceedings of the Koninklijke Nederlandse Akademie Van Wetenschappen Series A, Indagationes Mathematicae, 1973, 76, 247-253.	0.3	20
142	Sexually reproducing cellular automata. Mathematical Biosciences, 1973, 18, 23-54.	1.9	34