

Erich Novak

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6387192/publications.pdf>

Version: 2024-02-01

101
papers

3,049
citations

304368

22
h-index

205818

48
g-index

113
all docs

113
docs citations

113
times ranked

1001
citing authors

#	ARTICLE	IF	CITATIONS
1	High dimensional polynomial interpolation on sparse grids. <i>Advances in Computational Mathematics</i> , 2000, 12, 273-288.	0.8	502
2	High dimensional integration of smooth functions over cubes. <i>Numerische Mathematik</i> , 1996, 75, 79-97.	0.9	298
3	Simple Cubature Formulas with High Polynomial Exactness. <i>Constructive Approximation</i> , 1999, 15, 499-522.	1.8	217
4	The inverse of the star-discrepancy depends linearly on the dimension. <i>Acta Arithmetica</i> , 2001, 96, 279-302.	0.2	94
5	Quantum Complexity of Integration. <i>Journal of Complexity</i> , 2001, 17, 2-16.	0.7	65
6	Intractability Results for Integration and Discrepancy. <i>Journal of Complexity</i> , 2001, 17, 388-441.	0.7	60
7	The Real Number Model in Numerical Analysis. <i>Journal of Complexity</i> , 1995, 11, 57-73.	0.7	56
8	Approximation of infinitely differentiable multivariate functions is intractable. <i>Journal of Complexity</i> , 2009, 25, 398-404.	0.7	51
9	The Curse of Dimension and a Universal Method For Numerical Integration. , 1997, , 177-187.		50
10	On the Power of Adaption. <i>Journal of Complexity</i> , 1996, 12, 199-237.	0.7	47
11	Function Spaces in Lipschitz Domains and Optimal Rates of Convergence for Sampling. <i>Constructive Approximation</i> , 2006, 23, 325-350.	1.8	44
12	Tractability of Approximation for Weighted Korobov Spaces on Classical and Quantum Computers. <i>Foundations of Computational Mathematics</i> , 2004, 4, 121-156.	1.5	42
13	Simple Monte Carlo and the Metropolis algorithm. <i>Journal of Complexity</i> , 2007, 23, 673-696.	0.7	41
14	Optimal approximation of elliptic problems by linear and nonlinear mappings II. <i>Journal of Complexity</i> , 2006, 22, 549-603.	0.7	29
15	The curse of dimensionality for numerical integration of smooth functions II. <i>Journal of Complexity</i> , 2014, 30, 117-143.	0.7	28
16	The curse of dimensionality for numerical integration of smooth functions. <i>Mathematics of Computation</i> , 2014, 83, 2853-2863.	1.1	27
17	On a problem in quantum summation. <i>Journal of Complexity</i> , 2003, 19, 1-18.	0.7	26
18	Stochastic properties of quadrature formulas. <i>Numerische Mathematik</i> , 1988, 53, 609-620.	0.9	24

#	ARTICLE	IF	CITATIONS
37	Smolyak's Construction of Cubature Formulas of Arbitrary Trigonometric Degree. Computing (Vienna/New York), 1999, 62, 147-162.	3.2	13
38	Complexity of oscillatory integration for univariate Sobolev spaces. Journal of Complexity, 2015, 31, 15-41.	0.7	13
39	Random sections of ellipsoids and the power of random information. Transactions of the American Mathematical Society, 2021, 374, 8691-8713.	0.5	13
40	How Many Random Bits Do We Need for Monte Carlo Integration?. , 2004, , 27-49.		13
41	Quadrature and widths. Journal of Approximation Theory, 1986, 47, 195-202.	0.5	12
42	Reproducing kernels of Sobolev spaces on $\hat{\mathbb{A}}_d$ and applications to embedding constants and tractability. Analysis and Applications, 2018, 16, 693-715.	1.2	12
43	Optimal Summation and Integration by Deterministic, Randomized, and Quantum Algorithms. , 2002, , 50-62.		11
44	Cubature formulas for symmetric measures in higher dimensions with few points. Mathematics of Computation, 2007, 76, 1357-1373.	1.1	11
45	The curse of dimensionality for the class of monotone functions and for the class of convex functions. Journal of Approximation Theory, 2011, 163, 955-965.	0.5	11
46	Lower bounds for the complexity of linear functionals in the randomized setting. Journal of Complexity, 2011, 27, 1-22.	0.7	11
47	Average-case results for zero finding. Journal of Complexity, 1989, 5, 489-501.	0.7	10
48	Topological Complexity of Zero-Finding. Journal of Complexity, 1996, 12, 380-400.	0.7	10
49	Intractability Results for Positive Quadrature Formulas and Extremal Problems for Trigonometric Polynomials. Journal of Complexity, 1999, 15, 299-316.	0.7	10
50	Optimal Order of Convergence and (In)Tractability of $\hat{\mathbb{A}}$ Multivariate Approximation of Smooth Functions. Constructive Approximation, 2009, 30, 457-473.	1.8	10
51	Solvable integration problems and optimal sample size selection. Journal of Complexity, 2019, 53, 40-67.	0.7	10
52	Deterministic error bounds. Lecture Notes in Mathematics, 1988, , 9-42.	0.1	9
53	The adaption problem for approximating linear operators. Bulletin of the American Mathematical Society, 1990, 23, 159-165.	0.8	9
54	Product rules are optimal for numerical integration in classical smoothness spaces. Journal of Complexity, 2017, 38, 39-49.	0.7	9

#	ARTICLE	IF	CITATIONS
55	Discontinuous information in the worst case and randomized settings. <i>Mathematische Nachrichten</i> , 2013, 286, 679-690.	0.4	8
56	Lower bounds for the error of quadrature formulas for Hilbert spaces. <i>Journal of Complexity</i> , 2021, 65, 101544.	0.7	8
57	4. On the power of random information. , 2020, , 43-64.		8
58	Eingeschränkte Monte Carlo-Verfahren zur Numerischen Integration. , 1985, , 269-282.		7
59	A decomposition of measures in Euclidean space yielding error bounds for quadrature formulas. <i>Mathematische Zeitschrift</i> , 1987, 196, 407-413.	0.4	6
60	Optimal stochastic quadrature formulas for convex functions. <i>BIT Numerical Mathematics</i> , 1994, 34, 288-294.	1.0	6
61	Optimal approximation of elliptic problems by linear and nonlinear mappings IV: Errors in L^2 and other norms. <i>Journal of Complexity</i> , 2010, 26, 102-124.	0.7	6
62	Optimal Quadrature Formulas for the Sobolev Space H^1 . <i>Journal of Scientific Computing</i> , 2019, 78, 274-289.	1.1	6
63	The average error of quadrature formulas for functions of bounded variation. <i>Rocky Mountain Journal of Mathematics</i> , 1990, 20, 707.	0.2	5
64	Quadrature Formulas for Multivariate Convex Functions. <i>Journal of Complexity</i> , 1996, 12, 5-16.	0.7	5
65	On the cost of uniform and nonuniform algorithms. <i>Theoretical Computer Science</i> , 1999, 219, 301-318.	0.5	5
66	Complexity of Linear Problems with a Fixed Output Basis. <i>Journal of Complexity</i> , 2000, 16, 333-362.	0.7	5
67	High dimensional integration. <i>Advances in Computational Mathematics</i> , 2000, 12, 1-2.	0.8	5
68	Spherical Product Algorithms and the Integration of Smooth Functions with One Singular Point. <i>SIAM Journal on Numerical Analysis</i> , 2001, 39, 1132-1145.	1.1	5
69	Computation of Expectations by Markov Chain Monte Carlo Methods. <i>Lecture Notes in Computational Science and Engineering</i> , 2014, , 397-411.	0.1	5
70	On the adaptive and continuous information problems. <i>Journal of Complexity</i> , 1989, 5, 345-362.	0.7	4
71	Algorithms and complexity for functions on general domains. <i>Journal of Complexity</i> , 2020, 61, 101458.	0.7	4
72	Lower bounds for integration and recovery in L_2 . <i>Journal of Complexity</i> , 2022, , 101662.	0.7	4

#	ARTICLE	IF	CITATIONS
73	On the Convergence of Interpolated Iteration Methods. <i>SIAM Journal on Mathematical Analysis</i> , 1988, 19, 1174-1182.	0.9	3
74	Average errors for zero finding: Lower bounds. <i>Mathematische Zeitschrift</i> , 1992, 211, 671-686.	0.4	3
75	The Adaption Problem for Nonsymmetric Convex Sets. <i>Journal of Approximation Theory</i> , 1995, 82, 123-134.	0.5	3
76	High dimensional numerical problems. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 1997, 30, 1439-1446.	0.6	3
77	On the unsmoothing of functions on the real line. <i>Proceedings of the Koninklijke Nederlandse Akademie Van Wetenschappen Series A, Indagationes Mathematicae</i> , 1986, 89, 201-207.	0.3	2
78	The average a posteriori error of numerical methods. <i>Numerische Mathematik</i> , 1986, 50, 245-252.	0.9	2
79	Optimal approximation of elliptic problems by linear and nonlinear mappings III: Frames. <i>Journal of Complexity</i> , 2007, 23, 614-648.	0.7	2
80	Complexity of oscillatory integrals on the real line. <i>Advances in Computational Mathematics</i> , 2017, 43, 537-553.	0.8	2
81	On average case errors in numerical analysis. <i>Journal of Complexity</i> , 1986, 2, 229-238.	0.7	1
82	Average error bounds. <i>Lecture Notes in Mathematics</i> , 1988, , 66-89.	0.1	1
83	A stochastic analog to Chebyshev centers and optimal average case algorithms. <i>Journal of Complexity</i> , 1989, 5, 60-79.	0.7	1
84	Numerical Integration of Peak Functions. <i>Journal of Complexity</i> , 1996, 12, 358-379.	0.7	1
85	Tractability of approximating multivariate linear functionals. <i>Journal of Fixed Point Theory and Applications</i> , 2010, 7, 313-324.	0.6	1
86	An elementary approach to unsmoothing over cubes. <i>Proceedings of the Koninklijke Nederlandse Akademie Van Wetenschappen Series A, Indagationes Mathematicae</i> , 1986, 89, 209-212.	0.3	0
87	Two remarks on the decreasing rearrangement of a function. <i>Journal of Mathematical Analysis and Applications</i> , 1987, 122, 485-486.	0.5	0
88	Determining zeroes of increasing Lipschitz functions. <i>Aequationes Mathematicae</i> , 1991, 41, 161-167.	0.4	0
89	Information-Based Complexity (By Joseph F. Traub, G. W. Wasilkowski, and H. Woiniakowski). <i>SIAM Review</i> , 1994, 36, 514-515.	4.2	0
90	ANNOUNCEMENT: 2000 Best Paper Award Committee. <i>Journal of Complexity</i> , 2000, 16, 641.	0.7	0

#	ARTICLE	IF	CITATIONS
91	Frank Aurzada, Steffen Dereich, Michael Scheutzow, and Christian Vormoor win the 2009 best paper award. <i>Journal of Complexity</i> , 2010, 26, 335.	0.7	0
92	Editorial Board Changes. <i>Journal of Complexity</i> , 2012, 28, 303.	0.7	0
93	Dmitriy Bilyk, Lutz KÄmmerer, Stefan Kunis, Daniel Potts, Volodya Temlyakov and Rui Yu share the 2012 Best Paper Award. <i>Journal of Complexity</i> , 2013, 29, 141.	0.7	0
94	Pawel Przybylowicz wins the 2012 Information-Based Complexity Young Researcher Award. <i>Journal of Complexity</i> , 2013, 29, 2.	0.7	0
95	In memory of Nikolai Sergeevich Bakhvalov (1934â€“2005). <i>Journal of Complexity</i> , 2015, 31, 495.	0.7	0
96	Thomas MÄ¼ller-Gronbach, Klaus Ritter and Larisa Yaroslavtseva share the 2015 Best Paper Award. <i>Journal of Complexity</i> , 2016, 34, v.	0.7	0
97	Tractability of Multivariate Problems for Standard and Linear Information in the Worst Case Setting: Part II. , 2018, , 963-977.		0
98	Heping Wang and Guiqiao Xu are the winners of the IBC Award 2020. <i>Journal of Complexity</i> , 2020, 59, 101493.	0.7	0
99	Nominations for 2021 Joseph F. Traub Information-Based Complexity Young Researcher Award. <i>Journal of Complexity</i> , 2021, 62, 101536.	0.7	0
100	V. N. Temlyakov, M. Ullrich and T. Ullrich are the winners of the 2021 Joseph F. Traub Prize for Achievement in Information-Based Complexity. <i>Journal of Complexity</i> , 2021, 65, 101581.	0.7	0
101	Henryk WoÅniakowski and the complexity of continuous problems. , 2009, , 1-37.		0