

Erich Novak

List of Publications by Year in descending order

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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	Lower bounds for integration and recovery in L2. Journal of Complexity, 2022, , 101662.	0.7	4
2	Nominations for 2021 Joseph F. Traub Information-Based Complexity Young Researcher Award. Journal of Complexity, 2021, 62, 101536.	0.7	0
3	Random sections of ellipsoids and the power of random information. Transactions of the American Mathematical Society, 2021, 374, 8691-8713.	0.5	13
4	Lower bounds for the error of quadrature formulas for Hilbert spaces. Journal of Complexity, 2021, 65, 101544.	0.7	8
5	V. N. Temlyakov, M. Ullrich and T. Ullrich are the winners of the 2021 Joseph F. Traub Prize for Achievement in Information-Based Complexity. Journal of Complexity, 2021, 65, 101581.	0.7	0
6	Heping Wang and Guiqiao Xu are the winners of the IBC Award 2020. Journal of Complexity, 2020, 59, 101493.	0.7	0
7	Algorithms and complexity for functions on general domains. Journal of Complexity, 2020, 61, 101458.	0.7	4
8	4. On the power of random information. , 2020, , 43-64.		8
9	Optimal Quadrature Formulas for the Sobolev Space H^1 . Journal of Scientific Computing, 2019, 78, 274-289.	1.1	6
10	Solvable integration problems and optimal sample size selection. Journal of Complexity, 2019, 53, 40-67.	0.7	10
11	Reproducing kernels of Sobolev spaces on $\hat{\alpha}, d$ and applications to embedding constants and tractability. Analysis and Applications, 2018, 16, 693-715.	1.2	12
12	Tractability of Multivariate Problems for Standard and Linear Information in the Worst Case Setting: Part II. , 2018, , 963-977.		0
13	A Universal Algorithm for Multivariate Integration. Foundations of Computational Mathematics, 2017, 17, 895-916.	1.5	17
14	Complexity of oscillatory integrals on the real line. Advances in Computational Mathematics, 2017, 43, 537-553.	0.8	2
15	Product rules are optimal for numerical integration in classical smoothness spaces. Journal of Complexity, 2017, 38, 39-49.	0.7	9
16	Tractability of multivariate problems for standard and linear information in the worst case setting: Part I. Journal of Approximation Theory, 2016, 207, 177-192.	0.5	20
17	Thomas Müller-Gronbach, Klaus Ritter and Larisa Yaroslavtseva share the 2015 Best Paper Award. Journal of Complexity, 2016, 34, v.	0.7	0
18	Some Results on the Complexity of Numerical Integration. Springer Proceedings in Mathematics and Statistics, 2016, , 161-183.	0.1	16

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19	Tractability of the Approximation of High-Dimensional Rank One Tensors. Constructive Approximation, 2016, 43, 1-13.	1.8	14
20	In memory of Nikolai Sergeevich Bakhvalov (1934–2005). Journal of Complexity, 2015, 31, 495.	0.7	0
21	Complexity of oscillatory integration for univariate Sobolev spaces. Journal of Complexity, 2015, 31, 15-41.	0.7	13
22	The curse of dimensionality for numerical integration of smooth functions. Mathematics of Computation, 2014, 83, 2853-2863.	1.1	27
23	On weak tractability of the Clenshaw–Curtis Smolyak algorithm. Journal of Approximation Theory, 2014, 183, 31-44.	0.5	14
24	The curse of dimensionality for numerical integration of smooth functions II. Journal of Complexity, 2014, 30, 117-143.	0.7	28
25	Computation of Expectations by Markov Chain Monte Carlo Methods. Lecture Notes in Computational Science and Engineering, 2014, , 397-411.	0.1	5
26	Discontinuous information in the worst case and randomized settings. Mathematische Nachrichten, 2013, 286, 679-690.	0.4	8
27	Dmitriy Bilyk, Lutz K�ammerer, Stefan Kunis, Daniel Potts, Volodya Temlyakov and Rui Yu share the 2012 Best Paper Award. Journal of Complexity, 2013, 29, 141.	0.7	0
28	Pawel Przybylowicz wins the 2012 Information-Based Complexity Young Researcher Award. Journal of Complexity, 2013, 29, 2.	0.7	0
29	Editorial Board Changes. Journal of Complexity, 2012, 28, 303.	0.7	0
30	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
31	Lower bounds for the complexity of linear functionals in the randomized setting. Journal of Complexity, 2011, 27, 1-22.	0.7	11
32	Optimal approximation of elliptic problems by linear and nonlinear mappings IV: Errors in L_1 and other norms. Journal of Complexity, 2010, 26, 102-124.	0.7	6
33	Tractability of approximating multivariate linear functionals. Journal of Fixed Point Theory and Applications, 2010, 7, 313-324.	0.6	1
34	Frank Aurzada, Steffen Dereich, Michael Scheutzow, and Christian Vormoor win the 2009 best paper award. Journal of Complexity, 2010, 26, 335.	0.7	0
35	Optimal Order of Convergence and (In)Tractability of Multivariate Approximation of Smooth Functions. Constructive Approximation, 2009, 30, 457-473.	1.8	10
36	Approximation of infinitely differentiable multivariate functions is intractable. Journal of Complexity, 2009, 25, 398-404.	0.7	51

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55	High dimensional polynomial interpolation on sparse grids. <i>Advances in Computational Mathematics</i> , 2000, 12, 273-288.	0.8	502
56	High dimensional integration. <i>Advances in Computational Mathematics</i> , 2000, 12, 1-2.	0.8	5
57	On an interpolatory method for high dimensional integration. <i>Journal of Computational and Applied Mathematics</i> , 1999, 112, 215-228.	1.1	19
58	On the cost of uniform and nonuniform algorithms. <i>Theoretical Computer Science</i> , 1999, 219, 301-318.	0.5	5
59	Simple Cubature Formulas with High Polynomial Exactness. <i>Constructive Approximation</i> , 1999, 15, 499-522.	1.8	217
60	Smolyak's Construction of Cubature Formulas of Arbitrary Trigonometric Degree. <i>Computing (Vienna/New York)</i> , 1999, 62, 147-162.	3.2	13
61	Intractability Results for Positive Quadrature Formulas and Extremal Problems for Trigonometric Polynomials. <i>Journal of Complexity</i> , 1999, 15, 299-316.	0.7	10
62	High dimensional numerical problems. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 1997, 30, 1439-1446.	0.6	3
63	Tractability of Tensor Product Linear Operators. <i>Journal of Complexity</i> , 1997, 13, 387-418.	0.7	15
64	The Curse of Dimension and a Universal Method For Numerical Integration. , 1997, , 177-187.		50
65	High dimensional integration of smooth functions over cubes. <i>Numerische Mathematik</i> , 1996, 75, 79-97.	0.9	298
66	Quadrature Formulas for Multivariate Convex Functions. <i>Journal of Complexity</i> , 1996, 12, 5-16.	0.7	5
67	On the Power of Adaption. <i>Journal of Complexity</i> , 1996, 12, 199-237.	0.7	47
68	Numerical Integration of Peak Functions. <i>Journal of Complexity</i> , 1996, 12, 358-379.	0.7	1
69	Topological Complexity of Zero-Finding. <i>Journal of Complexity</i> , 1996, 12, 380-400.	0.7	10
70	Global Optimization Using Hyperbolic Cross Points. <i>Nonconvex Optimization and Its Applications</i> , 1996, , 19-33.	0.1	18
71	Optimal Recovery and n-Widths for Convex Classes of Functions. <i>Journal of Approximation Theory</i> , 1995, 80, 390-408.	0.5	15
72	The Adaption Problem for Nonsymmetric Convex Sets. <i>Journal of Approximation Theory</i> , 1995, 82, 123-134.	0.5	3

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73	The Real Number Model in Numerical Analysis. <i>Journal of Complexity</i> , 1995, 11, 57-73.	0.7	56
74	Average-case optimality of a hybrid secant-bisection method. <i>Mathematics of Computation</i> , 1995, 64, 1517-1539.	1.1	15
75	Information-Based Complexity (By Joseph F. Traub, G. W. Wasilkowski, and H. Woiniakowski). <i>SIAM Review</i> , 1994, 36, 514-515.	4.2	0
76	Optimal stochastic quadrature formulas for convex functions. <i>BIT Numerical Mathematics</i> , 1994, 34, 288-294.	1.0	6
77	Some Complexity Results for Zero Finding for Univariate Functions. <i>Journal of Complexity</i> , 1993, 9, 15-40.	0.7	16
78	Optimal linear randomized methods for linear operators in Hilbert spaces. <i>Journal of Complexity</i> , 1992, 8, 22-36.	0.7	23
79	Average errors for zero finding: Lower bounds. <i>Mathematische Zeitschrift</i> , 1992, 211, 671-686.	0.4	3
80	Quadrature formulas for monotone functions. <i>Proceedings of the American Mathematical Society</i> , 1992, 115, 59-68.	0.4	18
81	Determining zeroes of increasing Lipschitz functions. <i>Aequationes Mathematicae</i> , 1991, 41, 161-167.	0.4	0
82	The adaption problem for approximating linear operators. <i>Bulletin of the American Mathematical Society</i> , 1990, 23, 159-165.	0.8	9
83	The average error of quadrature formulas for functions of bounded variation. <i>Rocky Mountain Journal of Mathematics</i> , 1990, 20, 707.	0.2	5
84	Bisection is not optimal on the average. <i>Numerische Mathematik</i> , 1989, 55, 481-491.	0.9	17
85	A stochastic analog to Chebyshev centers and optimal average case algorithms. <i>Journal of Complexity</i> , 1989, 5, 60-79.	0.7	1
86	Average-case results for zero finding. <i>Journal of Complexity</i> , 1989, 5, 489-501.	0.7	10
87	On the adaptive and continuous information problems. <i>Journal of Complexity</i> , 1989, 5, 345-362.	0.7	4
88	Non-linear boundary value problems for the annular membrane: New results on existence of positive solutions. <i>Mathematical Methods in the Applied Sciences</i> , 1988, 10, 37-49.	1.2	14
89	Stochastic properties of quadrature formulas. <i>Numerische Mathematik</i> , 1988, 53, 609-620.	0.9	24
90	On the Convergence of Interpolated Iteration Methods. <i>SIAM Journal on Mathematical Analysis</i> , 1988, 19, 1174-1182.	0.9	3

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91	Deterministic error bounds. Lecture Notes in Mathematics, 1988, , 9-42.	0.1	9
92	Average error bounds. Lecture Notes in Mathematics, 1988, , 66-89.	0.1	1
93	Nonlinear boundary value problems for the annular membrane: A note on uniqueness of positive solutions. Journal of Elasticity, 1987, 17, 279-284.	0.9	16
94	A decomposition of measures in Euclidean space yielding error bounds for quadrature formulas. Mathematische Zeitschrift, 1987, 196, 407-413.	0.4	6
95	Two remarks on the decreasing rearrangement of a function. Journal of Mathematical Analysis and Applications, 1987, 122, 485-486.	0.5	0
96	On average case errors in numerical analysis. Journal of Complexity, 1986, 2, 229-238.	0.7	1
97	On the unsmoothing of functions on the real line. Proceedings of the Koninklijke Nederlandse Akademie Van Wetenschappen Series A, Indagationes Mathematicae, 1986, 89, 201-207.	0.3	2
98	An elementary approach to unsmoothing over cubes. Proceedings of the Koninklijke Nederlandse Akademie Van Wetenschappen Series A, Indagationes Mathematicae, 1986, 89, 209-212.	0.3	0
99	Quadrature and widths. Journal of Approximation Theory, 1986, 47, 195-202.	0.5	12
100	The average a posteriori error of numerical methods. Numerische Mathematik, 1986, 50, 245-252.	0.9	2
101	Eingeschränkte Monte Carlo-Verfahren zur Numerischen Integration. , 1985, , 269-282.		7