

Richard P Brent

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6461001/publications.pdf>

Version: 2024-02-01

112
papers

4,309
citations

236912

25
h-index

128286

60
g-index

125
all docs

125
docs citations

125
times ranked

1572
citing authors

#	ARTICLE	IF	CITATIONS
1	The Parallel Evaluation of General Arithmetic Expressions. Journal of the ACM, 1974, 21, 201-206.	2.2	684
2	Algorithms for Minimization Without Derivatives. Mathematics of Computation, 1974, 28, 865.	2.1	483
3	Fast solution of toeplitz systems of equations and computation of Padé approximants. Journal of Algorithms, 1980, 1, 259-295.	0.9	329
4	Fast Multiple-Precision Evaluation of Elementary Functions. Journal of the ACM, 1976, 23, 242-251.	2.2	291
5	The Solution of Singular-Value and Symmetric Eigenvalue Problems on Multiprocessor Arrays. SIAM Journal on Scientific and Statistical Computing, 1985, 6, 69-84.	1.5	257
6	A Fortran Multiple-Precision Arithmetic Package. ACM Transactions on Mathematical Software, 1978, 4, 57-70.	2.9	178
7	Some Efficient Algorithms for Solving Systems of Nonlinear Equations. SIAM Journal on Numerical Analysis, 1973, 10, 327-344.	2.3	159
8	An improved Monte Carlo factorization algorithm. BIT Numerical Mathematics, 1980, 20, 176-184.	2.0	143
9	Table errata: Algorithms for minimization without derivatives (Prentice-Hall, Englewood Cliffs, N. J.), Tj ETQq1 1 0.784314 rgBT / Overl 2.1 107	2.1	107
10	Systolic VLSI Arrays for Polynomial GCD Computation. IEEE Transactions on Computers, 1984, C-33, 731-736.	3.4	83
11	Solving Triangular Systems on a Parallel Computer. SIAM Journal on Numerical Analysis, 1977, 14, 1101-1113.	2.3	80
12	MULTIPLE-PRECISION ZERO-FINDING METHODS AND THE COMPLEXITY OF ELEMENTARY FUNCTION EVALUATION. , 1976, , 151-176.		76
13	On the zeros of the Riemann zeta function in the critical strip. Mathematics of Computation, 1979, 33, 1361-1372.	2.1	75
14	Reducing the retrieval time of scatter storage techniques. Communications of the ACM, 1973, 16, 105-109.	4.5	69
15	Algorithm 488: A Gaussian pseudo-random number generator. Communications of the ACM, 1974, 17, 704-706.	4.5	62
16	Factorization of the eighth Fermat number. Mathematics of Computation, 1981, 36, 627-630.	2.1	60
17	On the Precision Attainable with Various Floating-Point Number Systems. IEEE Transactions on Computers, 1973, C-22, 601-607.	3.4	36
18	On the periods of generalized Fibonacci recurrences. Mathematics of Computation, 1994, 63, 389-401.	2.1	35

#	ARTICLE	IF	CITATIONS
19	Recent Progress and Prospects for Integer Factorisation Algorithms. Lecture Notes in Computer Science, 2000, , 3-22.	1.3	35
20	Optimal iterative processes for root-finding. Numerische Mathematik, 1972, 20, 327-341.	1.9	34
21	Minimum-energy all-to-all multicasting in wireless ad hoc networks. IEEE Transactions on Wireless Communications, 2009, 8, 5490-5499.	9.2	33
22	Irregularities in the distribution of primes and twin primes. Mathematics of Computation, 1975, 29, 43-56.	2.1	32
23	Algorithm 524: MP, A Fortran Multiple-Precision Arithmetic Package [A1]. ACM Transactions on Mathematical Software, 1978, 4, 71-81.	2.9	31
24	Random Krylov Spaces over Finite Fields. SIAM Journal on Discrete Mathematics, 2003, 16, 276-287.	0.8	30
25	Determinants and ranks of random matrices over Z_m . Discrete Mathematics, 1987, 66, 35-49.	0.7	28
26	Factorization of the Eighth Fermat Number. Mathematics of Computation, 1981, 36, 627.	2.1	26
27	Note on Marsaglia's Xorshift Random Number Generators. Journal of Statistical Software, 2004, 11, .	3.7	25
28	The first occurrence of large gaps between successive primes. Mathematics of Computation, 1973, 27, 959-963.	2.1	23
29	On the Zeros of the Riemann Zeta Function in the Critical Strip. Mathematics of Computation, 1979, 33, 1361.	2.1	23
30	On the Periods of Generalized Fibonacci Recurrences. Mathematics of Computation, 1994, 63, 389.	2.1	23
31	Algorithmic Fault Tolerance Using the Lanczos Method. SIAM Journal on Matrix Analysis and Applications, 1992, 13, 312-332.	1.4	22
32	Factorization of the tenth Fermat number. Mathematics of Computation, 1999, 68, 429-452.	2.1	22
33	<title>Computation Of The Generalized Singular Value Decomposition Using Mesh-Connected Processors</title>. Proceedings of SPIE, 1983, 0431, 66.	0.8	21
34	Error bounds on complex floating-point multiplication. Mathematics of Computation, 2007, 76, 1469-1482.	2.1	21
35	Fast local convergence with single and multistep methods for nonlinear equations. Journal of the Australian Mathematical Society Series B Applied Mathematics, 1975, 19, 173-199.	0.2	19
36	Stability analysis of a general toeplitz systems solver. Numerical Algorithms, 1995, 10, 225-244.	1.9	19

#	ARTICLE	IF	CITATIONS
37	The First Occurrence of Large Gaps Between Successive Primes. Mathematics of Computation, 1973, 27, 959.	2.1	19
38	Some New Algorithms for High-Precision Computation of Euler's Constant. Mathematics of Computation, 1980, 34, 305.	2.1	18
39	Analysis of the binary Euclidean algorithm. SIGSAM Bulletin: A Quarterly Publication of the Special Interest Group on Symbolic & Algebraic Manipulation, 1976, 10, 6-7.	0.3	16
40	The first occurrence of certain large prime gaps. Mathematics of Computation, 1980, 35, 1435-1436.	2.1	16
41	The distribution of small gaps between successive primes. Mathematics of Computation, 1974, 28, 315-324.	2.1	14
42	Note on best possible bounds for determinants of matrices close to the identity matrix. Linear Algebra and Its Applications, 2015, 466, 21-26.	0.9	14
43	Parallel Algorithms for Digital Signal Processing. , 1991, , 93-110.		14
44	Irregularities in the Distribution of Primes and Twin Primes. Mathematics of Computation, 1975, 29, 43.	2.1	13
45	Some Area-Time Tradeoffs for VLSI. SIAM Journal on Computing, 1982, 11, 737-747.	1.0	12
46	Parallel Algorithms for Toeplitz Systems. , 1991, , 75-92.		12
47	A new lower bound for odd perfect numbers. Mathematics of Computation, 1989, 53, 431.	2.1	11
48	On computing factors of cyclotomic polynomials. Mathematics of Computation, 1993, 61, 131-149.	2.1	11
49	A fast algorithm for testing reducibility of trinomials mod-2 and some new primitive trinomials of degree 3021377. Mathematics of Computation, 2002, 72, 1443-1453.	2.1	11
50	Accurate estimation of sums over zeros of the Riemann zeta-function. Mathematics of Computation, 2021, 90, 2923-2935.	2.1	11
51	Computation of the regular continued fraction for Euler's constant. Mathematics of Computation, 1977, 31, 771-771.	2.1	9
52	High-Performance Pseudo-Random Number Generation on Graphics Processing Units. Lecture Notes in Computer Science, 2012, , 609-618.	1.3	9
53	The First Occurrence of Certain Large Prime Gaps. Mathematics of Computation, 1980, 35, 1435.	2.1	9
54	Old And New Algorithms For Toeplitz Systems. Proceedings of SPIE, 1988, 0975, 2.	0.8	8

#	ARTICLE	IF	CITATIONS
55	4. Stability of Fast Algorithms for Structured Linear Systems. , 1999, , 103-116.		8
56	A comparative study of algorithms for computing continued fractions of algebraic numbers. Lecture Notes in Computer Science, 1996, , 35-47.	1.3	8
57	Fast Computation of Bernoulli, Tangent and Secant Numbers. Springer Proceedings in Mathematics and Statistics, 2013, , 127-142.	0.2	8
58	Some Parallel Algorithms for Integer Factorisation. Lecture Notes in Computer Science, 1999, , 1-22.	1.3	8
59	The Computational Complexity of Iterative Methods for Systems of Nonlinear Equations. , 1972, , 61-71.		7
60	Correction to: "Irregularities in the distribution of primes and twin primes" (Math. Comp. 29 (1975),) Tj ETQq0,0 0 rgBT /Overlock 1	2.1	7
61	Computation of the Regular Continued Fraction for Euler's Constant. Mathematics of Computation, 1977, 31, 771.	2.1	7
62	Succinct proofs of primality for the factors of some Fermat numbers. Mathematics of Computation, 1982, 38, 253-253.	2.1	7
63	Reproducibility in Computational Science: A Case Study: Randomness of the Digits of Pi. Experimental Mathematics, 2017, 26, 298-305.	0.7	7
64	$O((n \log n)^{3/2})$ ALGORITHMS FOR COMPOSITION AND REVERSION OF POWER SERIES. , 1976, , 217-225.		7
65	Some New Algorithms for High-Precision Computation of Euler's Constant. , 2004, , 448-455.		7
66	Random Number Generators with Period Divisible by a Mersenne Prime. Lecture Notes in Computer Science, 2003, , 1-10.	1.3	6
67	Parallel MCGLS and ICGLS Methods for Least Squares Problems on Distributed Memory Architectures. Journal of Supercomputing, 2004, 29, 145-156.	3.6	6
68	Fast and Reliable Random Number Generators for Scientific Computing. Lecture Notes in Computer Science, 2006, , 1-10.	1.3	6
69	Root optimization of polynomials in the number field sieve. Mathematics of Computation, 2015, 84, 2447-2457.	2.1	6
70	Discrete analogues of Macdonald's Mehta integrals. Journal of Combinatorial Theory - Series A, 2016, 144, 80-138.	0.8	6
71	The Distribution of Small Gaps Between Successive Primes. Mathematics of Computation, 1974, 28, 315.	2.1	6
72	On Computing Factors of Cyclotomic Polynomials. Mathematics of Computation, 1993, 61, 131.	2.1	6

#	ARTICLE	IF	CITATIONS
73	Tables Concerning Irregularities in the Distribution of Primes and Twin Primes to 10^{11} . Mathematics of Computation, 1976, 30, 379.	2.1	5
74	A Theoretical Foundation For The Weighted Checksum Scheme. , 1988, 0975, 10.		5
75	A GENERAL-PURPOSE PARALLEL SORTING ALGORITHM. International Journal of High Speed Computing, 1995, 07, 285-301.	0.2	5
76	Random number generation and simulation on vector and parallel computers. Lecture Notes in Computer Science, 1998, , 1-20.	1.3	5
77	Ten new primitive binary trinomials. Mathematics of Computation, 2008, 78, 1197-1199.	2.1	5
78	Some high-order zero-finding methods using almost orthogonal polynomials. Journal of the Australian Mathematical Society Series B Applied Mathematics, 1975, 19, 1-29.	0.2	4
79	An AUGMENT Interface for Brent's Multiple Precision Arithmetic Package. ACM Transactions on Mathematical Software, 1980, 6, 146-149.	2.9	4
80	The Solution Of Singular Value Problems Using Systolic Arrays. Proceedings of SPIE, 1984, 0495, 7.	0.8	4
81	Choosing Small Weights For Multiple Error Detection. Proceedings of SPIE, 1989, 1058, 130.	0.8	4
82	Extracting Significant Phrases from Text. , 2007, , .		4
83	A bound for the error term in the Brent-McMillan algorithm. Mathematics of Computation, 2015, 84, 2351-2359.	2.1	4
84	Algebraic Independence of Mahler Functions via Radial Asymptotics. International Mathematics Research Notices, 0, , rnv139.	1.0	4
85	ON THE ACCURACY OF ASYMPTOTIC APPROXIMATIONS TO THE LOG-GAMMA AND RIEMANN'S SIEGEL THETA FUNCTIONS. Journal of the Australian Mathematical Society, 2019, 107, 319-337.	0.4	4
86	A CLASS OF OPTIMAL-ORDER ZERO-FINDING METHODS USING DERIVATIVE EVALUATIONS. , 1976, , 59-73.		4
87	High Precision Coefficients Related to the Zeta Function.. Mathematics of Computation, 1977, 31, 803.	2.1	3
88	Adaptive AT2 optimal algorithms on reconfigurable meshes. Parallel Computing, 2000, 26, 1447-1458.	2.1	3
89	A primitive trinomial of degree 6972593. Mathematics of Computation, 2004, 74, 1001-1003.	2.1	3
90	A HARMONIC SUM OVER NONTRIVIAL ZEROS OF THE RIEMANN ZETA-FUNCTION. Bulletin of the Australian Mathematical Society, 2020, , 1-7.	0.5	3

#	ARTICLE	IF	CITATIONS
91	The mean square of the error term in the prime number theorem. Journal of Number Theory, 2022, 238, 740-762.	0.4	3
92	Succinct Proofs of Primality for the Factors of Some Fermat Numbers. Mathematics of Computation, 1982, 38, 253.	2.1	3
93	$\hat{\beta}^3$ and $e^{\hat{\beta}^3}$ to 20700D and Their Regular Continued Fractions to 20000 Partial Quotients.. Mathematics of Computation, 1978, 32, 311.	2.1	2
94	FFT Extension for Algebraic-Group Factorization Algorithms. , 0, , 189-205.		1
95	Tables Concerning Irregularities in the Distribution of Primes and Twin Primes. Mathematics of Computation, 1975, 29, 331.	2.1	1
96	A note on continuation methods for the solution of nonlinear equations. Journal of the Australian Mathematical Society Series B Applied Mathematics, 1977, 20, 157-164.	0.2	1
97	Some new algorithms for high-precision computation of Euler's constant. Mathematics of Computation, 1980, 34, 305-312.	2.1	1
98	Tables of the First 15,000 Zeros of the Riemann Zeta Function to 28 Significant Figures, and Related Quantities.. Mathematics of Computation, 1980, 35, 1442.	2.1	1
99	Constant Time Algorithms for Computing the Contour of Maximal Elements on a Reconfigurable Mesh. Parallel Processing Letters, 1998, 08, 351-361.	0.6	1
100	Computing Aurifeuillian Factors. , 1995, , 201-212.		1
101	Knuth's Constants to 1000 Decimal and 1100 Octal Places. Mathematics of Computation, 1976, 30, 668.	2.1	0
102	Fast local convergence with single and multistep methods for nonlinear equations. Journal of the Australian Mathematical Society Series B Applied Mathematics, 1977, 20, 254-254.	0.2	0
103	Supplement to A New Lower Bound for Odd Perfect Numbers. Mathematics of Computation, 1989, 53, S7.	2.1	0
104	Review of modern computer arithmetic, by Richard Brent and Paul Zimmermann. ACM SIGACT News, 2012, 43, 49-51.	0.1	0
105	BOUNDS ON MINORS OF BINARY MATRICES. Bulletin of the Australian Mathematical Society, 2013, 88, 280-285.	0.5	0
106	On two theorems of Vassilev-Missana. Notes on Number Theory and Discrete Mathematics, 2021, 27, 49-50.	0.2	0
107	Some Instructive Mathematical Errors. Maple Transactions, 2021, 1, .	0.2	0
108	Some New Algorithms for High-Precision Computation of Euler's Constant. , 2000, , 448-455.		0

#	ARTICLE	IF	CITATIONS
109	Fast Multiple-Precision Evaluation of Elementary Functions. , 2004, , 424-433.		0
110	Some New Algorithms for High-Precision Computation of Euler's Constant. , 1980, , 448-455.		0
111	Fast Multiple-Precision Evaluation of Elementary Functions. , 1997, , 424-433.		0
112	The Borwein Brothers, Pi and the AGM. Springer Proceedings in Mathematics and Statistics, 2020, , 323-347.	0.2	0