

# Richard P Brent

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

100  
papers

2,666  
citations

23  
h-index

50  
g-index

116  
ext. papers

2,995  
ext. citations

1.5  
avg, IF

4.96  
L-index

#	Paper	IF	Citations
100	The Borwein Brothers, Pi and the AGM. <i>Springer Proceedings in Mathematics and Statistics</i> , <b>2020</b> , 323-347	0.2	0
99	A HARMONIC SUM OVER NONTRIVIAL ZEROS OF THE RIEMANN ZETA-FUNCTION. <i>Bulletin of the Australian Mathematical Society</i> , <b>2020</b> , 1-7	0.4	1
98	ON THE ACCURACY OF ASYMPTOTIC APPROXIMATIONS TO THE LOG-GAMMA AND RIEMANN-BIEGEL THETA FUNCTIONS. <i>Journal of the Australian Mathematical Society</i> , <b>2019</b> , 107, 319-337	0.5	0
97	Reproducibility in Computational Science: A Case Study: Randomness of the Digits of Pi. <i>Experimental Mathematics</i> , <b>2017</b> , 26, 298-305	0.5	7
96	Fast multiple-precision evaluation of elementary functions (1976) <b>2016</b> , 9-20		
95	Discrete analogues of Macdonald-Mehta integrals. <i>Journal of Combinatorial Theory - Series A</i> , <b>2016</b> , 144, 80-138	1	4
94	Note on best possible bounds for determinants of matrices close to the identity matrix. <i>Linear Algebra and Its Applications</i> , <b>2015</b> , 466, 21-26	0.9	10
93	Root optimization of polynomials in the number field sieve. <i>Mathematics of Computation</i> , <b>2015</b> , 84, 2447-2457	1.2	6
92	A bound for the error term in the Brent-McMillan algorithm. <i>Mathematics of Computation</i> , <b>2015</b> , 84, 2351-2359	1.2	2
91	Algebraic Independence of Mahler Functions via Radial Asymptotics. <i>International Mathematics Research Notices</i> , <b>2015</b> , rnv139	0.8	4
90	BOUNDS ON MINORS OF BINARY MATRICES. <i>Bulletin of the Australian Mathematical Society</i> , <b>2013</b> , 88, 280-285	0.4	
89	Fast Computation of Bernoulli, Tangent and Secant Numbers. <i>Springer Proceedings in Mathematics and Statistics</i> , <b>2013</b> , 127-142	0.2	5
88	Review of modern computer arithmetic, by Richard Brent and Paul Zimmermann. <i>ACM SIGACT News</i> , <b>2012</b> , 43, 49-51	0.3	
87	High-Performance Pseudo-Random Number Generation on Graphics Processing Units. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 609-618	0.9	7
86	Modern Computer Arithmetic <b>2010</b> ,		105
85	Minimum-energy all-to-all multicasting in wireless ad hoc networks. <i>IEEE Transactions on Wireless Communications</i> , <b>2009</b> , 8, 5490-5499	9.6	25
84	Ten new primitive binary trinomials. <i>Mathematics of Computation</i> , <b>2008</b> , 78, 1197-1199	1.6	4

83	Faster Multiplication in $GF(2)[x]$ . <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 153-166	0.9	24
82	A multi-level blocking distinct-degree factorization algorithm. <i>Contemporary Mathematics</i> , <b>2008</b> , 47-58	1.6	2
81	Error bounds on complex floating-point multiplication. <i>Mathematics of Computation</i> , <b>2007</b> , 76, 1469-1482	2.6	12
80	Extracting Significant Phrases from Text <b>2007</b> ,		2
79	Fast and Reliable Random Number Generators for Scientific Computing. <i>Lecture Notes in Computer Science</i> , <b>2006</b> , 1-10	0.9	4
78	A primitive trinomial of degree 6972593. <i>Mathematics of Computation</i> , <b>2004</b> , 74, 1001-1003	1.6	0
77	Parallel MCGLS and ICGLS Methods for Least Squares Problems on Distributed Memory Architectures. <i>Journal of Supercomputing</i> , <b>2004</b> , 29, 145-156	2.5	5
76	Note on Marsaglia's Xorshift Random Number Generators. <i>Journal of Statistical Software</i> , <b>2004</b> , 11,	7.3	14
75	Fast Multiple-Precision Evaluation of Elementary Functions <b>2004</b> , 424-433		
74	Some New Algorithms for High-Precision Computation of Euler's Constant <b>2004</b> , 448-455		
73	Algorithms for finding almost irreducible and almost primitive trinomials <b>2004</b> , 91-102		13
72	Random Number Generators with Period Divisible by a Mersenne Prime. <i>Lecture Notes in Computer Science</i> , <b>2003</b> , 1-10	0.9	5
71	Random Krylov Spaces over Finite Fields. <i>SIAM Journal on Discrete Mathematics</i> , <b>2003</b> , 16, 276-287	0.7	26
70	A fast algorithm for testing reducibility of trinomials mod 2 and some new primitive trinomials of degree 3021377. <i>Mathematics of Computation</i> , <b>2002</b> , 72, 1443-1453	1.6	5
69	Adaptive AT2 optimal algorithms on reconfigurable meshes. <i>Parallel Computing</i> , <b>2000</b> , 26, 1447-1458	1	3
68	Recent Progress and Prospects for Integer Factorisation Algorithms. <i>Lecture Notes in Computer Science</i> , <b>2000</b> , 3-22	0.9	19
67	Some New Algorithms for High-Precision Computation of Euler's Constant <b>2000</b> , 448-455		
66	Factorization of the tenth Fermat number. <i>Mathematics of Computation</i> , <b>1999</b> , 68, 429-452	1.6	13

65	4. Stability of Fast Algorithms for Structured Linear Systems <b>1999</b> , 103-116		7
64	Some Parallel Algorithms for Integer Factorisation. <i>Lecture Notes in Computer Science</i> , <b>1999</b> , 1-22	0.9	3
63	Constant Time Algorithms for Computing the Contour of Maximal Elements on a Reconfigurable Mesh. <i>Parallel Processing Letters</i> , <b>1998</b> , 08, 351-361	0.3	1
62	Random number generation and simulation on vector and parallel computers. <i>Lecture Notes in Computer Science</i> , <b>1998</b> , 1-20	0.9	3
61	Fast Multiple-Precision Evaluation of Elementary Functions <b>1997</b> , 424-433		
60	A comparative study of algorithms for computing continued fractions of algebraic numbers. <i>Lecture Notes in Computer Science</i> , <b>1996</b> , 35-47	0.9	5
59	Stability analysis of a general toeplitz systems solver. <i>Numerical Algorithms</i> , <b>1995</b> , 10, 225-244	2.1	12
58	A GENERAL-PURPOSE PARALLEL SORTING ALGORITHM. <i>International Journal of High Speed Computing</i> , <b>1995</b> , 07, 285-301		3
57	Computing Aurifeuillian Factors <b>1995</b> , 201-212		
56	On the periods of generalized Fibonacci recurrences. <i>Mathematics of Computation</i> , <b>1994</b> , 63, 389-389	1.6	33
55	On computing factors of cyclotomic polynomials. <i>Mathematics of Computation</i> , <b>1993</b> , 61, 131-131	1.6	6
54	Algorithmic Fault Tolerance Using the Lanczos Method. <i>SIAM Journal on Matrix Analysis and Applications</i> , <b>1992</b> , 13, 312-332	1.5	18
53	Parallel Algorithms for Toeplitz Systems <b>1991</b> , 75-92		6
52	Parallel Algorithms for Digital Signal Processing <b>1991</b> , 93-110		5
51	A new lower bound for odd perfect numbers. <i>Mathematics of Computation</i> , <b>1989</b> , 53, 431	1.6	8
50	Choosing Small Weights For Multiple Error Detection <b>1989</b> , 1058, 130		1
49	Old And New Algorithms For Toeplitz Systems <b>1988</b> , 0975, 2		4
48	A Theoretical Foundation For The Weighted Checksum Scheme <b>1988</b> , 0975, 10		3

47	Determinants and ranks of random matrices over $Z_m$ . <i>Discrete Mathematics</i> , <b>1987</b> , 66, 35-49	0.7	23
46	The Solution of Singular-Value and Symmetric Eigenvalue Problems on Multiprocessor Arrays. <i>SIAM Journal on Scientific and Statistical Computing</i> , <b>1985</b> , 6, 69-84		191
45	Systolic VLSI Arrays for Polynomial GCD Computation. <i>IEEE Transactions on Computers</i> , <b>1984</b> , C-33, 731-736		61
44	The Solution Of Singular Value Problems Using Systolic Arrays <b>1984</b> , 0495, 7		3
43	Computation Of The Generalized Singular Value Decomposition Using Mesh-Connected Processors <b>1983</b> , 0431, 66		20
42	Some Area-Time Tradeoffs for VLSI. <i>SIAM Journal on Computing</i> , <b>1982</b> , 11, 737-747	1.1	10
41	Succinct proofs of primality for the factors of some Fermat numbers. <i>Mathematics of Computation</i> , <b>1982</b> , 38, 253-253	1.6	4
40	Factorization of the eighth Fermat number. <i>Mathematics of Computation</i> , <b>1981</b> , 36, 627-627	1.6	41
39	An improved Monte Carlo factorization algorithm. <i>BIT Numerical Mathematics</i> , <b>1980</b> , 20, 176-184	1.7	114
38	Fast solution of toeplitz systems of equations and computation of Padé approximants. <i>Journal of Algorithms</i> , <b>1980</b> , 1, 259-295		272
37	Some new algorithms for high-precision computation of Euler's constant. <i>Mathematics of Computation</i> , <b>1980</b> , 34, 305-305	1.6	0
36	The first occurrence of certain large prime gaps. <i>Mathematics of Computation</i> , <b>1980</b> , 35, 1435-1435	1.6	9
35	An AUGMENT Interface for Brent's Multiple Precision Arithmetic Package. <i>ACM Transactions on Mathematical Software</i> , <b>1980</b> , 6, 146-149	2.3	4
34	Some New Algorithms for High-Precision Computation of Euler's Constant. <i>Mathematics of Computation</i> , <b>1980</b> , 34, 305	1.6	11
33	Some New Algorithms for High-Precision Computation of Euler's Constant <b>1980</b> , 448-455		
32	On the zeros of the Riemann zeta function in the critical strip. <i>Mathematics of Computation</i> , <b>1979</b> , 33, 1361-1361	1.6	33
31	A Fortran Multiple-Precision Arithmetic Package. <i>ACM Transactions on Mathematical Software</i> , <b>1978</b> , 4, 57-70	2.3	150
30	Algorithm 524: MP, A Fortran Multiple-Precision Arithmetic Package [A1]. <i>ACM Transactions on Mathematical Software</i> , <b>1978</b> , 4, 71-81	2.3	28

29	High Precision Coefficients Related to the Zeta Function.. <i>Mathematics of Computation</i> , <b>1977</b> , 31, 803	1.6	2
28	Computation of the Regular Continued Fraction for Euler's Constant. <i>Mathematics of Computation</i> , <b>1977</b> , 31, 771	1.6	5
27	Solving Triangular Systems on a Parallel Computer. <i>SIAM Journal on Numerical Analysis</i> , <b>1977</b> , 14, 1101-1113	1.6	64
26	A note on continuation methods for the solution of nonlinear equations <b>1977</b> , 20, 157-164		1
25	Fast local convergence with single and multistep methods for nonlinear equations <b>1977</b> , 20, 254-254		
24	Computation of the regular continued fraction for Euler's constant. <i>Mathematics of Computation</i> , <b>1977</b> , 31, 771-771	1.6	4
23	Fast Multiple-Precision Evaluation of Elementary Functions. <i>Journal of the ACM</i> , <b>1976</b> , 23, 242-251	2	220
22	MULTIPLE-PRECISION ZERO-FINDING METHODS AND THE COMPLEXITY OF ELEMENTARY FUNCTION EVALUATION <b>1976</b> , 151-176		49
21	Correction to: Irregularities in the distribution of primes and twin primes [ <i>Math. Comp.</i> <b>29</b> (1975), 438-46]. <i>Mathematics of Computation</i> , <b>1976</b> , 30, 198	1.6	4
20	Analysis of the binary Euclidean algorithm. <i>SIGSAM Bulletin: A Quarterly Publication of the Special Interest Group on Symbolic &amp; Algebraic Manipulation</i> , <b>1976</b> , 10, 6-7		1
19	Analysis of the Binary Euclidean Algorithm <b>1976</b> ,		4
18	A CLASS OF OPTIMAL-ORDER ZERO-FINDING METHODS USING DERIVATIVE EVALUATIONS <b>1976</b> , 59-73		2
17	$O((n \log n)^{3/2})$ ALGORITHMS FOR COMPOSITION AND REVERSION OF POWER SERIES <b>1976</b> , 217-225		4
16	Some high-order zero-finding methods using almost orthogonal polynomials <b>1975</b> , 19, 1-29		3
15	Table errata: Algorithms for minimization without derivatives (Prentice-Hall, Englewood Cliffs, N. J., 1973). <i>Mathematics of Computation</i> , <b>1975</b> , 29, 1166	1.6	7
14	Irregularities in the distribution of primes and twin primes. <i>Mathematics of Computation</i> , <b>1975</b> , 29, 43-43	1.6	14
13	Fast local convergence with single and multistep methods for nonlinear equations <b>1975</b> , 19, 173-199		18
12	Multiple-Precision Zero-Finding Methods and the Complexity of Elementary Function Evaluation <b>1975</b> ,		6

11	The Parallel Evaluation of General Arithmetic Expressions. <i>Journal of the ACM</i> , <b>1974</b> , 21, 201-206	2	518
10	Algorithm 488: A Gaussian pseudo-random number generator. <i>Communications of the ACM</i> , <b>1974</b> , 17, 704-706	2.5	53
9	Algorithms for Minimization Without Derivatives. <i>Mathematics of Computation</i> , <b>1974</b> , 28, 865	1.6	3
8	The distribution of small gaps between successive primes. <i>Mathematics of Computation</i> , <b>1974</b> , 28, 315-316	1.56	8
7	On the Precision Attainable with Various Floating-Point Number Systems. <i>IEEE Transactions on Computers</i> , <b>1973</b> , C-22, 601-607	2.5	23
6	Some Efficient Algorithms for Solving Systems of Nonlinear Equations. <i>SIAM Journal on Numerical Analysis</i> , <b>1973</b> , 10, 327-344	2.4	131
5	The first occurrence of large gaps between successive primes. <i>Mathematics of Computation</i> , <b>1973</b> , 27, 959-959	1.6	15
4	Reducing the retrieval time of scatter storage techniques. <i>Communications of the ACM</i> , <b>1973</b> , 16, 105-109	2.5	54
3	The Computational Complexity of Iterative Methods for Systems of Nonlinear Equations <b>1972</b> , 61-71		5
2	Optimal iterative processes for root-finding. <i>Numerische Mathematik</i> , <b>1972</b> , 20, 327-341	2.2	23
1	FFT Extension for Algebraic-Group Factorization Algorithms 189-205		1