Walter Gautschi

List of Publications by Year
in descending order

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48	2,063	623734	315739
papers	citations	14 h-index	38 g-index

53	53	53	939
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Orthogonal Polynomials. , 2004, , .		584
2	Computational Aspects of Three-Term Recurrence Relations. SIAM Review, 1967, 9, 24-82.	9.5	549
3	On Generating Orthogonal Polynomials. SIAM Journal on Scientific and Statistical Computing, 1982, 3, 289-317.	1.5	316
4	A Computational Procedure for Incomplete Gamma Functions. ACM Transactions on Mathematical Software, 1979, 5, 466-481.	2.9	74
5	Orthogonal polynomials (in Matlab). Journal of Computational and Applied Mathematics, 2005, 178, 215-234.	2.0	65
6	On the condition of algebraic equations. Numerische Mathematik, 1973, 21, 405-424.	1.9	39
7	Optimally conditioned Vandermonde matrices. Numerische Mathematik, 1975, 24, 1-12.	1.9	37
8	Gaussian quadrature involving Einstein and Fermi functions with an application to summation of series. Mathematics of Computation, 1985, 44, 177-190.	2.1	35
9	Computational Aspects of Orthogonal Polynomials. , 1990, , 181-216.		34
10	Luigi Gatteschiâ€™s work on asymptotics of special functions and their zeros. Numerical Algorithms, 2008, 49, 11-31.	1.9	27
11	Vandermonde matrices on the circle: Spectral properties and conditioning. Numerische Mathematik, 1990, 57, 577-591.	1.9	24
12	A set of orthogonal polynomials induced by a given orthogonal polynomial. Aequationes Mathematicae, 1993, 46, 174-198.	0.8	22
13	Algorithms: Algorithm 331: Gaussian quadrature formulas. Communications of the ACM, 1968, 11, 432-436.	4.5	21
14	Optimally scaled and optimally conditioned Vandermonde and Vandermonde-like matrices. BIT Numerical Mathematics, 2011, 51, 103-125.	2.0	20
15	Quadrature rules for rational functions. Numerische Mathematik, 2000, 86, 617-633.	1.9	17
16	Generalized Gauss?Radau and Gauss?Lobatto Formulae. BIT Numerical Mathematics, 2004, 44, 711-720.	2.0	15
17	Gauss quadrature routines for two classes of logarithmic weight functions. Numerical Algorithms, 2010, 55, 265-277.	1.9	15
18	Computing the Hilbert Transform of the Generalized Laguerre and Hermite Weight Functions. BIT Numerical Mathematics, 2001, 41, 490-503.	2.0	12

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19	Computation of Bessel and Airy Functions and of Related Gaussian Quadrature Formulae. BIT Numerical Mathematics, 2002, 42, 110-118.	2.0	10
20	Evaluation of Repeated Integrals of the Coerror Function. ACM Transactions on Mathematical Software, 1977, 3, 240-252.	2.9	9
21	A historical note on Gaussâ€“Kronrod quadrature. Numerische Mathematik, 2005, 100, 483-484.	1.9	9
22	The Lambert W-functions and some of their integrals: a case study of high-precision computation. Numerical Algorithms, 2011, 57, 27-34.	1.9	9
23	Barycentric formulae for cardinal (SINC-) interpolants by Jean-Paul Berrut. Numerische Mathematik, 2001, 87, 791-792.	1.9	8
24	Computing the Kontorovichâ€“Lebedev Integral Transforms and their Inverses. BIT Numerical Mathematics, 2006, 46, 21-40.	2.0	8
25	Conjectured inequalities for Jacobi polynomials and their largest zeros. Numerical Algorithms, 2007, 45, 217-230.	1.9	8
26	On a conjectured inequality for the largest zero of Jacobi polynomials. Numerical Algorithms, 2008, 49, 195-198.	1.9	7
27	Sub-range Jacobi polynomials. Numerical Algorithms, 2012, 61, 649-657.	1.9	7
28	Numerical integration over the square in the presence of algebraic/logarithmic singularities with an application to aerodynamics. Numerical Algorithms, 2012, 61, 275-290.	1.9	7
29	The numerical evaluation of a challenging integral. Numerical Algorithms, 2008, 49, 187-194.	1.9	6
30	Variable-precision recurrence coefficients for nonstandard orthogonal polynomials. Numerical Algorithms, 2009, 52, 409-418.	1.9	6
31	Algorithm 521: Repeated Integrals of the Coerror Function [S15]. ACM Transactions on Mathematical Software, 1977, 3, 301-302.	2.9	5
32	Numerical Quadrature Computation of the Macdonald Function for Complex Orders. BIT Numerical Mathematics, 2005, 45, 593-603.	2.0	5
33	Repeated modifications of orthogonal polynomials by linear divisors. Numerical Algorithms, 2013, 63, 369-383.	1.9	4
34	High-precision Gaussâ€“TurÃ¡n quadrature rules for Laguerre and Hermite weight functions. Numerical Algorithms, 2014, 67, 59-72.	1.9	4
35	Error behavior in optimal relaxation methods. Zeitschrift Fur Angewandte Mathematik Und Physik, 1982, 33, 24-35.	1.4	3
36	On conjectured inequalities for zeros of Jacobi polynomials. Numerical Algorithms, 2009, 50, 93-96.	1.9	3

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37	Polynomials orthogonal with respect to exponential integrals. Numerical Algorithms, 2015, 70, 215-226.	1.9	3
38	Ostrowski and the ostrowski prize. Mathematical Intelligencer, 1998, 20, 32-34.	0.2	2
39	New conjectured inequalities for zeros of Jacobi polynomials. Numerical Algorithms, 2009, 50, 293-296.	1.9	2
40	Neutralizing nearby singularities in numerical quadrature. Numerical Algorithms, 2013, 64, 417-425.	1.9	2
41	A guided tour through my bibliography. Numerical Algorithms, 2007, 45, 11-35.	1.9	1
42	Remark on â€œNew conjectured inequalities for zeros of Jacobi polynomialsâ€•by Walter Gautschi, Numer. Algorithms 50:293â€“296 (2009). Numerical Algorithms, 2011, 57, 511-511.	1.9	1
43	On the zeros of subrange Jacobi polynomials. Numerical Algorithms, 2018, 79, 759-768.	1.9	1
44	Orthogonal polynomials relative to a generalized Marchenkoâ€“Pastur probability measure. Numerical Algorithms, 2021, 88, 1233.	1.9	1
45	Orthogonal polynomials relative to weight functions of Prudnikov type. Numerical Algorithms, 2022, 90, 263-270.	1.9	1
46	Polynomials orthogonal with respect to cardinal B-spline weight functions. Numerical Algorithms, 2017, 76, 1099-1107.	1.9	0
47	On the Ismailâ€“Letessierâ€“Askey Monotonicity Conjecture for Zeros of Ultraspherical Polynomials. , 2018, , 251-266.		0
48	A Discrete Top-Down Markov Problem in Approximation Theory. , 2018, , 267-289.		0